PARTIAL AWARD

UNDER THE NORWEGIAN ARBITRATION ACT AND THE 2021 ARBITRATION RULES OF THE INTERNATIONAL CHAMBER OF COMMERCE (ICC): ICC case 26623/FS/GL/DTI

Elecnor S.A

Reg.no. CIF-A-48027056

c/o Marques de Mondéjar, 33

28028 Madrid, Spain

Elecnor Servicios y Proyectos, S.A.U.

Reg.no. CIF-A-79486833

c/o Marques de Mondéjar, 33

28028 Madrid, Spain

"Claimants"/"Subcontractor"/"Elecnor"

VS.

Acciona Infraestructuras and Ghella ANS

c/o Acciona Infraestructuras S.A.

Reg.no. 914 890 896

EPC TBM Follo Line Project

Sluttstykket 2

1291 Oslo, Norway

"Respondent"/"Contractor"/"AGJV"

(collectively referred to as the Parties)

Place of arbitration: Oslo, Norway

Date of Partial Award: 28 October 2024

Aribtrators:

Prof. Dr. jur. Amund Bjøranger Tørum (President)

Attorney-at-law Helge Morten Svarva

Attorney at law Peter Vagle

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1 ABBREVIATIONS/DEFINITIONS

AI	Acciona Ingenieria
Amendment 1	Amendment no. 1 to the Contract dated 27 September 2018.
Amendment 2	Amendment no. 2 to the Contract, dated 1 October 2020.
Ankura Expert Report 1	Expert report on delay by Sena Gbedemah, Ankura, dated 20 February 2023.
Ankura Expert Report 2	Expert Second Report on Delay by Sena Gbedemah, Ankura, dated 8 November 2023.

CoC	Conditions of Contract
CSB	Contract Schedule Baselines
D&B	Drill & Blast
DD	Delivery Date under the Contract
Delivery Protocol	The document to be concluded by the Parties in accordance with CoC Art 19.
DoC	Declaration of Conformity
DS	Distribution Stations
DVO	Disputed Variation Orders as defined in CoC article 1.15
EoT/EoT-claim	Extension of Time
EoT-costs	Purely time-dependent costs
EPC	Engineering, Procurement and Construction
EPE	Engineering Package E
EUR	Euro
FSS	Feeding Sub Stations

Hearing	The oral hearing related to the Part 1 Claims that was carried out over 20 court days in the period from 13 March 2024 to 16 April 2024.
HKA Expert Report Delay 1	Expert report of Paraskevas Kontogiannis, HKA, dated 23 August 2023
HKA Expert Report Delay 2	Expert report of Michelle Metz, HKA, dated 5 January 2024
HKA Quantum Expert Report 1	Expert Report of Paul Cacchioli, HKA, dated 16 October 2023
HKA Quantum Expert Report 2	Expert Report of Paul Cacchioli, HKA, dated 5 January 2024
HVAC	Heating, Ventilation, Air Condition
IPS	Infrastructure Power Supply
ITT	Invitation to Tender
Kroll Expert Report 1	Expert report in relation to the prolongation price and costs not paid to Elecnor and the Variation Order Request no. 40 in the Follo Line Tunnel Subcontract, Kroll, 27 November 2023.
Kroll Expert Report 2	Expert report regarding the economic assessment of VOR 33 and VOR80, our response to HKA Expert Quantum Report and an independent analysis of AGJV's Part 2

	counterclaims in the Follo Line Tunnel Subcontract, Kroll, 8 December 2023.
LVS	Low Voltage Systems
MPR	Monthly Progress Report
NOK	Norwegian kroner
NTK 07	Norwegian Total Contract 2007
OCL	Overhead Contact Line
Outlines/Supplemental Outlines	Outlines submitted by the Parties under the Hearing, and supplemental outlines submitted after the Hearing in accordance with section 20 of PO1.
PLC	Programmable Logic Controller
PME	Permanent Mechanical Equipment
PO1	Procedural Order No. 1
PO2	Procedural Order No. 2
RFCC	Ready for Commission Certificate
RS	Railway Systems
SAT	System Acceptance Test

SCADA	Supervisory Control and Data Acquisition
TBM	Tunnel Boring Machine
The Contract	Contract No. UFB-PS-S00055, dated 29. February 2016 between Contractor and Subcontractor.
TPS	Traction Power Supply
Variation or Variation to the Work	A variation to the Work as defined in CoC article 1.32
VO	Variation Order as defined in CoC article 1.30
VOR	Variation Order Request as defined in CoC article 1.31
Work	All work which Subcontractor shall perform or cause to be performed in accordance with the Contract

2 INTRODUCTION

2.1 Outline of the disputed matters, the Parties, the project, and the contract

(1) The case concerns claims and counterclaims related to a subcontract for RS under one of four EPC Contracts in the Follo Line Project in Norway. The Claimants are the subcontractor, and the Respondent is the contractor. To a large extent, this is a dispute about settling the final account under the subcontract.

(2) The Claimants are two companies within the Spanish company group Elecnor. Elecnor S.A. is the parent company of Elecnor Servicos y Proyectos S.A.U. In March 2021 Elecnor S.A. and Elecnor Servicios y Proyectos S.A.U. agreed to universal succession of the two companies, such that Elecnor Servicios y Proyectos S.A.U. acquired the economic unit and range of activities comprised by Elecnor S.A.'s projects and services business.

(3) Elecnor specializes in electrical engineering and installation work. In the following, the terms "Claimants", "Subcontractor" or "Elecnor" will be used for both companies unless otherwise specified.

(4) The Respondent or Contractor, AGJV, is a joint venture between the Spanish construction company Acciona Construccion S.A. (formerly Acciona Infraestructuras S.A.) and the Italian contractor Ghella S.p.A. The joint venture was established in January 2015 as a single-purpose partnership (ANS) under the Norwegian Partnership Act.

(5) The Follo Line Project is one of Norway's largest onshore infrastructure projects. It consists of a new 22 km long double-track railway line between Oslo Central Station and the public transport hub at Ski. The project includes approximately 19 km of twin railway tunnels (the Blix tunnels) between Oslo Central Station and Ski, extensive works at Oslo Central Station, construction of a new station at Ski and necessary realignment of the existing Østfold Line. The Blix tunnel is the longest railway tunnel in the Nordic countries. The project's original budget was approximately NOK 26.3 billion (2014). As of the end of 2022, the total cost amounted to approximately NOK 37 billion.

(6) The original client for the project was the Norwegian National Rail Administration ("Jernbaneverket"), a governmental agency under the Ministry of Transport. On 1 January 2017, Jernbaneverket was reorganized and its obligations were transferred to Bane NOR SF (Bane NOR), a state enterprise owned by the Norwegian state through the Ministry of Transport.

(7) The Follo Line Project was divided into four EPC contracts, all based on NTK 07:

a) EPC Oslo S: This contract, awarded to the Italian company Condotte, covered the area closest to Oslo Central Station.

b) EPC D&B: This is a turnkey contract for conventional tunnelling in Ekebergåsen and was also awarded to Condotte.

c) EPC Ski: This contract was awarded to Obrascón Huarte Lain S.A and comprised the work at the Ski station and the daylight zone towards the Blixtunnels.

d) EPC TBM: The Contractor was awarded this contract, which includes the complete engineering, procurement, and construction of the 19 km Blix tunnels.

(8) The EPC TBM was awarded to Contractor on 2nd March 2015 and was the largest part of the Follo Line Project. The contract comprised all work required to produce the Follo Line railway tunnels with all infrastructure needed to run and operate train traffic (excl. signal works), including, *inter alia*, TBM excavation of the 19 km twin tunnels with all associated works, cross passages, escape tunnels, transport tunnels, rescue area, assembly chambers, mechanical equipment (jet fans, smoke extraction, heating and ventilation etc.), segmental concrete lining inside the tunnel and all associated civil works and several associated tasks such as ground improvement and spoil handling and operating the Site at Åsland (management and facilities).

(9) The EPC TBM also comprised RS. The RS mainly consists of electromechanical systems needed to power the trains through the twin tunnels and the emergency systems in the tunnels.

(10) The electromechanical parts of the RS were subcontracted to Subcontractor by the Contract. Under Appendix A of the Contract, the RS scope under the Contract is divided into the following subsystems:

a) TPS: The power supply lines transport the high-voltage electrical current from the substations to the trains throughout the tunnel.

b) OCL: This line transmits the power from the TPS lines to the trains.

c) IPS: The high-voltage power cables run from the substations to the transformers in the cross passages, where the high-voltage power is converted to low-voltage power. These cables also supply the Follo Line's heat, ventilation, and air-conditioning (HVAC) system. The IPS system consists of 25 distribution stations (DS), two feeding substations (FSS), and 22kV IPS cables.

d) LVS: Low voltage power is distributed from the transformers/main panels and uninterrupted power supply (UPS) in the cross passages in the tunnels to the main panel boards and UPS panel boards. The panels supply the installations in the tunnels and cross passages that use low-voltage power. The scope also included the panel boards and the computers used for the PLC, which controls

and monitors the power distribution in the cross passages, as well as the power distribution capable of providing power to all systems, including PME.

e) Earthing: The system of protective conductors connected to the main electrical bonds that ensure fault currents travel to the earth to avoid potential hazardous electrical discharge.

f) Cable conduits and foundations: The supply and installation of cable ladders.

(11) The Contract also included the right of first refusal for telecom systems and permanent mechanical equipment. Except for Fire Fighting Systems, these parts were subcontracted to companies other than Subcontractor.

(12) The Contract is a lump sum contract with a fixed price of EUR 59 600 000.

(13) The Parties have entered into two amendments to the Contract, Amendment no. 1 of 27th September 2018 and Amendment 2 of 1st October 2020.

(14) When the Parties entered into the Contract, the DD for Subcontractor's work performance was set to "2190 Days after 23 March 2015", cf. Art 2 of Appendix C. Under Amendment 2, the agreed DD in Appendix C was extended to 21st April 2021.

(15) The Delivery Protocol was signed on 13 December 2022. Under this protocol, the Parties agreed that the DD milestone was deemed to have been reached on 21 October 2022, 548 days later than the agreed DD (21 April 2021).

(16) The background for the dispute is that the Parties, during the project, were not able to settle disagreements concerning Subcontractor's right to adjustment of the amount payable and EoT. As the disagreements were not resolved before the completion of the work, the Parties could not settle the final account under the Contract.

(17) The claims filed by the Subcontractor in this arbitration can be divided into 115 individual claims for additional compensation and/or EoT.

(18) The Contractor has disputed all claims filed by the Subcontractor and raised a counterclaim for liquidated damages based on alleged delays on the part of the Subcontractor, as well as counterclaims for intervention costs related to construction and engineering and costs related to an incident that occurred in Tunnel 3 on 23 November 2020.

(19) Although the dispute can be divided into a considerable number of individual claims based on VOs/VORs/DVOs and counterclaims that need to be assessed individually, there are basically four main topics of disagreement.

(20) The first main topic concerns the scope of Subcontractor's engineering under the Contract, including the interface between this scope and Contractor's engineering responsibilities. This is especially relevant for VOR 40, which represents Subcontractor's most significant individual claim, and VO 69, VO 80 and VOR 80. Subcontractor's core view is that Contractor and its consultants AI and Cowi were primarily responsible for engineering the RS, including detailed engineering in the procurement and construction phases.

(21) Subcontractor argues that its engineering responsibilities were limited to coordinating work with Contractor and its designers and providing shop drawings, as-built drawings, and documentation for operations (DFO) from manufacturers. Contractor's core view is that Subcontractor was responsible for delivering the necessary detailed engineering to procure and install a fit-for-purpose installation.

(22) A second main topic is the scope of Subcontractor's planning and coordination obligations related to civil works under the Contract. Subcontractor claims that the Contract requires that the civil works to be performed by Contractor should have been completed before Subcontractor's work under the Contract. Contractor holds that Subcontractor could not expect all civil works to be completed before Subcontractor's scope of work and that Subcontractor could not expect to perform its construction work without planning and coordination towards the civil work.

(23) A third main topic is Subcontractor's commissioning scope under the Contract. This is especially relevant for claims under VOR 71, VOR 74, VOR 108, VOR 131, VO 97 and VO 116. Subcontractor's core view is that Subcontractor's commissioning scope was limited to the commissioning of systems within Subcontractor's scope of work and did not include extended commissioning and performance acceptance tests. Contractor's core view is that Subcontractor was the main responsible party for the commissioning work of the contract object. Subcontractor had the main commissioning work for the EPC TBM scope. It included all individual testing of all equipment installed by Subcontractor, all integrated testing of the RS and mechanical equipment as such, and the final functionality testing of the EPC TBM scope before handover to Bane NOR.

(24) A fourth main topic is Subcontractor's claim for EoT and prolongation costs and Contractor's corresponding counterclaim for liquidated damages. Subcontractor claims a total of 548 days of EoT and, a total of EUR 12,139,957.63, and NOK 12,945,989.88 of prolongation costs, based on the provisions on Variations to the Work under the Contract. Subcontractor also claims direct costs of EUR 6,259,735.17 and costs related to the preparation of the claims, amounting to EUR 150,424.32. Contractor basically rejects that there is a basis for any claim for EoT. Contractor further holds that Contractor is entitled to liquidated damages due to Subcontractor's delay in work performance. Contractor also claims that the liability cap for liquidated damages of 5% of the contract price does not apply because Subcontractor's gross negligence caused the delay and that Contractor is entitled to 15% of the Contract Price in liquidated damages. Subcontractor rejects the counterclaim for liquidated damages based on that Subcontractor was entitled to EoT. Further, Subcontractor rejects that any delay was caused by gross negligence by Subcontractor, and if this had been the case, Contractor must claim compensatory damages instead of liquidated damages.

(25) The dispute regarding Subcontractor's claims for EoT includes several disagreements on the interpretation and application of the provisions concerning the VO system in the Contract. The main disputed issues in this respect are:

a) The interpretation and application of Art 16 of the CoC ("Dispute as to whether a Variation to the Work exists. Disputed Variation Orders").

b) The scope of Art 27 of the CoC ("Contractor's breach of contract").

c) The interpretation and application of Art 12.1 of the CoC regarding the boundaries of the Contractor's right to order variations.

d) The applicable law and contractual principles to determine schedule effects.

e) The applicable law and contractual requirements on substantiation and documentation of claims.

f) Subcontractor's submission that Contractor misused the VO system of the Contract.

(26) In addition to the above, the Parties disagree on the interpretation and application of Art 2.2 of the Conditions of Contract related to Subcontractor's entitlements to benefits

of Contractor's entitlements under the main EPC contract with Bane NOR. They also disagree on the interpretation and application of Art 20.4 of the Conditions of Contract related to the final account.

2.2 The arbitration clause, choice of law, appointment of the tribunal, etc.

(27) CoC Art 38 contains the following provisions on choice of law and dispute resolution:

> "38.1 This Contract shall be governed by and interpreted in accordance with Norwegian law.
>
> 38.2 Disputes arising in connection with or as a result of the Contract, and which are not resolved by mutual agreement, shall be settled by arbitration proceedings unless the parties agree otherwise. Any proceeding shall be settled by arbitration under the Rules of Arbitration of the International Chamber of Commerce by an arbitral tribunal of one or more arbitrators designated in compliance with said Rules. Disputes shall be settled in accordance with Norwegian law, in Oslo (Norway) and in English language.
>
> Subcontractor agrees, at the request of the Contractor, to assist the Contractor and participate in any dispute proceeding between the Contractor and the Company, that would have arose from the execution of the Works."

(28) This means that the Parties have agreed that the Contract is governed by and shall be interpreted in accordance with Norwegian law. Further, the Parties have agreed that disputes shall be settled by arbitration under the International Chamber of Commerce Rules of Arbitration (in force as of 1. January 2021), and the Norwegian Arbitration Act, cf. PO1 item 3.1.

(29) The Parties have also agreed that Oslo shall be the seat of arbitration and English shall be the language. The latter means that all communication in connection with the proceedings, including the award, shall take place in English, cf. PO1 item 6.2.

(30) The Subcontractor initiated this arbitration by submitting a Request for Arbitration dated 29th October 2021 ("RfA"), which the Secretariat ("Secretariat") of the International Court of Arbitration ("Court") of the International Chamber of Commerce ("ICC") notified to the Contractor on 4 November 2021. Contractor submitted an Answer to the RfA with Counterclaims on 14th January 2022. The Subcontractor then submitted the Answer to Counterclaims on 17th February 2022.

(31) The Parties jointly nominated Professor Dr. Juris Amund Bjøranger Tørum as the Presiding Arbitrator. Subcontractor nominated Mr. Peter Vagle as co-arbitrator.

Contractor nominated Mr. Helge Morten Svarva as co-arbitrator. On 3rd March 2022, the Secretary General of the Court confirmed the Tribunal members.

2.3 Outline of procedural matters

(32) The Parties' counsel and the arbitrators have conducted a total of 15 Case Management Conferences ("CMC"). The first was held via Teams on 22nd March 2022, and the last was held on 25 April 2024.

(33) In the RfA and Statement of Claim (C1), dated 25 May 2022, the Subcontractor informed that Elecnor Servicios y Proyectos S.A.U. was nominated as a party to the present case because Elecnor S.A. and Elecnor Servicios y Proyectos S.A.U. had agreed to a universal succession of the two companies as mentioned above. In the Statement of Reply, dated 20 February 2023, AGJV referred to CoC Art 35.2 and held that the Contract could not be assigned without AGJV's approval. AGJV informed that Elecnor S.A. issued a request to AGJV for AGJV's approval for assignment of the Contract to Elecnor Servicos y Proyectos S.A.U., after which the two Elecnor companies would be jointly and severally liable for any obligations, responsibilities and liabilities under the Contract. AGJV informed that the Parties had not yet agreed to such assignment agreement, but requested the arbitration to proceed, and that AGJV, to the extent necessary, would request the Tribunal to decide upon the question at a later stage of the proceedings.

(34) The Terms of Reference ("ToR") were signed by Elecnor S.A. as Claimant 1, Elecnor Servicios Y Proyectos, S.A.U. as Claimant 2, and Acciona Infraestructuras and Ghella ANS as Respondent on 3 June 2022.

(35) PO1 was issued on 19 April 2022. PO1 has been revised five times: on 11th July 2023, 24 January 2024, 8 February 2024, 12 March 2024 and 24 May 2024. The latest version of PO1 is attached to the Partial Award. The ToR has been revised three times: on 11th/12th July 2023, 23rd January 2024 and 6th March 2024. Unless otherwise specified, all references to PO1 and the ToR in the following concern the latest revisions.

(36) The Hearing was initially scheduled to take place in weeks 38–51 2023. Due to the magnitude of the case and the numerous contested items, it was in the autumn of 2023, after extensive discussions between the Parties, agreed to split the claims into "Part 1 Claims" and "Part 2 Claims", cf. item 9 of PO1 and item 4 of the ToR. The aim of the split was to limit the Hearing to the Part 1 Claims, which include the largest and most

complex claims, in addition to selected overarching matters of contractual interpretation with a bearing on a number of claims also for the Part 2 Claims.

2.4 Outline of the claims: Part 1 and Part 2

(37) The Part 1 Claims include the majority of the claims presented by Subcontractor where time impact is claimed, in addition to elements of Contractor's claim related to delay, cf. item 9.4 of PO1 and item 4 of the ToR. These claims were agreed to be decided based on presentations of the claims in the Hearing. The Part 1 Claims include the following claims:

1	VOR 033/DVO 15
2	VOR 035/DVO 16
3	VOR 038/DVO 17
4	VOR 040/DVO 20
5	VOR 071/DVO 41
6	VOR 074/DVO 42
7	VOR 080/DVO 49
8	VOR 108/DVO 73
9	VOR 131/DVO 86
10	VO 058
11	VO 064
12	VO 069
13	VO 080 (VOR 68)
14	VO 097
15	VO 116 (VOR 127)
16	The Counterclaim related to the delay

(38) The Part 2 Claims are the remaining claims in the final settlement account. The Parties have agreed that they are to be decided upon based on written submissions following the Hearing, cf. item 9.4 of PO1, and item 4 of the ToR. The Part 2 Claims include the following claims:

1	VO 004
2	VO 007
3	VO 013
4	VO 059
5	VO 063
6	VO 071
7	VO 077 (VOR 73)
8	VO 078 (VOR 85)
9	VO 089
10	VO 090
11	VO 093
12	VO 095
13	VO 096
14	VO 099 (VOR 53)
15	VO 100 (VOR 52)
16	VO 102
17	VO 106 (VOR 50)
18	VO 111 (VOR 51)
19	VO 117
20	VO 119
21	VOR 005/DVO 1
22	VOR 006/DVO 97
23	VOR 013/DVO 7
24	VOR 017/DVO 9
25	VOR 020/DVO 98
26	VOR 021/DVO 12
27	VOR 029/DVO 31
28	VOR 030/DVO 32

29	VOR 031/DVO 33
30	VOR 037/DVO 18
31	VOR 041/DVO 23
32	VOR 042/DVO 24
33	VOR 043/DVO 26
34	VOR 044/DVO 30
35	VOR 045/DVO 19
36	VOR 046/DVO 25
37	VOR 047/DVO 28
38	VOR 049/DVO 35
39	VOR 054/DVO 35
40	VOR 055/DVO 20
41	VOR 056/DVO 20
42	VOR 058/DVO 36
43	VOR 061/DVO 20
44	VOR 066/DVO 53
45	VOR 067/DVO 20
46	VOR 070/DVO 43
47	VOR 072/DVO21
48	VOR 075/DVO 44
49	VOR 076/DVO 45
50	VOR 077/DVO 46
51	VOR 078/DVO 47
52	VOR 079/DVO 27
53	VOR 082/DVO 51
54	VOR 084/DVO 78
55	VOR 086/DVO 54
56	VOR 087/DVO 29

57	VOR 088/DVO 55
58	VOR 093/DVO 57
59	VOR 094/DVO 58
60	VOR 097/DVO 59
61	VOR 098/DVO 60
62	VOR 099/DVO 61
63	VOR 100/DVO 63
64	VOR 101/DVO 76
65	VOR 102/DVO 69
66	VOR 104/DVO 72
67	VOR 105/DVO 38
68	VOR 106/DVO 39
69	VOR 107/DVO 67
70	VOR 115/DVO 65
71	VOR 116/DVO 81
72	VOR 119/DVO 82
73	VOR 121/DVO 79
74	VOR 122/DVO 66
75	VOR 125/DVO 83
76	VOR 126/DVO 84
77	VOR 129/DVO 75
78	VOR 132/DVO 80
79	VOR 137/DVO 70
80	VOR 138/DVO 8
81	VOR 140/DVO 85
82	VOR 145/DVO 89
83	VOR 146/DVO 6
84	VOR 152/DVO 88

85	VOR 153/DVO 90
86	VOR 157/DVO 92
87	VOR 158/DVO 93
88	VOR 160/DVO 94
89	VOR 162/DVO 95
90	VO 091 (VOR 123)
91	VOR 136/DVO 77
92	VOR 112/DVO 74
93	VO 098
94	VOR 113/DVO 64
95	VO 115
96	VOR 130/DVO 62
97	VOR 135/DVO 96
98	VO 105
99	VOR 154/DVO 68
100	VOR 156/DVO 91
101	The Counterclaim related to intervention costs for construction and engineering.
102	The Counterclaim related to costs for the accident occurred in the Tunnel 3 on 23 November 2020, as presented in the reply to the Final Account.

2.5 Submissions

(39) In accordance with the schedule in PO1, each party has submitted the following main submissions before the Hearing to ensure a front-loaded process:

a) Subcontractor's Statement of Claim, dated 25 May 2022 (C1),

b) Contractor's Statement of Defence with Counterclaims, dated 3 October 2022 (R1),

c) Subcontractor's Statement of Reply, dated 20 February 2023 (C2),

d) Contractor's Statement of Rejoinder, dated 23 August 2023 (R2),

e) Subcontractor's Statement of Reply dated 8 November 2023 (C3), and

f) Contractor's Statement of Reply dated 5 January 2024 (R3).

(40) Subcontractor has in addition submitted the following writs:

a) Writ from Subcontractor, dated 24 May 2023,

b) Writ from Subcontractor - Claim Composition, dated 5 July 2023,

c) Subcontractor's Statement of Evidence, dated 6 September 2023,

d) Writ from Subcontractor, dated 28 November 2023,

e) Writ from Subcontractor, dated 8 December 2023,

f) Writ from Subcontractor, dated 12 January 2023,

g) Writ from Subcontractor, dated 19 January 2023, and

h) Writ from Subcontractor dated 26 January 2023.

(41) Contractor has in addition submitted the following writs:

a) Respondent's Statement of Evidence, dated 6 September 2023,

b) Writ from Respondent – Comments to Claim Composition, dated 16 October 2023,

c) Writ from Respondent – Part 2 Claims, dated 20 October 2023,

d) Writ from Respondent, dated 12 January 2024,

e) Writ from Respondent – VOR 40 cost claim, dated 1 February 2024, and

f) Writ from Respondent – Replies to Document requests, dated 2 February 2024.

(42) During the Hearing, the Parties submitted Outlines in accordance with section 20 of PO 1. After the hearing, the Parties submitted Supplemental Outlines in accordance with section 20 of PO1. The Supplemental Outlines were submitted on 3 May 2024.

(43) The arbitral proceedings for the Part 1 Claims were closed by the Parties' submissions of Supplemental Outlines on 3 May 2024.

(44) After the Hearing , and in accordance with the procedural schedule for Part 2 Claims in Annex 2 to PO1, the Subcontractor submitted the reply (C4) for the Part 2 claims on 30 June 2024. Contractor submitted the reply (R4) for Part 2 Claims on 1 October 2024.

2.6 Abstracts, Core Bundles and document production

(45) Factual Abstracts 1 and 2, and Core Bundles 1 and 2 were submitted on 30 August 2023 and on 19 January 2024 in accordance with the Procedural Schedule for Part 1 Claims, cf. PO1, Annex 1. The Factual Abstracts are approximately 111,400 pages. The Core Bundles are about 4,300 pages. Subcontractor submitted three Legal Abstracts, in total about 4,400 pages. Contractor submitted five Legal Abstracts, in total about 5,150 pages.

(46) During the process, there have been several contested matters regarding document production, which were eventually determined by the enclosed PO2, dated 2 February 2024.

2.7 The Hearing

(47) In accordance with a jointly agreed schedule for the Hearing for the Part 1 Claims between the Parties, the Hearing was carried out over 20 days in the period from 13 March 2024 to 16 April 2024, at the offices of Haavind law firm and SANDS law firm in Oslo.

(48) The following instructions applied for the Hearing regarding the core bundles cf. PO1 Art 12.2:

> To ensure an efficient hearing, the Tribunal will familiarize itself with the written submissions and the documents in the Core Bundle ahead of the oral hearing. The focus of the oral hearing will therefore be on the key questions of fact and law that are at dispute between the Parties. For the avoidance of doubt, the Tribunal may rely on documents included in the Core Bundles, regardless of whether the documents are specifically addressed during the hearing.
>
> To facilitate the efficiency of the Hearing in accordance with point 12.2 above, the Parties will prepare detailed written outlines with references to evidence and arguments, for use during the oral hearing. For the avoidance of doubt, the Tribunal may make use of and rely upon the documents and legal arguments referred to in the outlines, even if not all documents or arguments therein are specifically addressed during the oral hearing.

(49) Further, regarding Counsels' use of outlines during the Hearing, the following instructions applied, cf. PO1 Art 20.1 – 20.4:

> 20.1 Due to the magnitude of the case, the number of claims, pleadings, witness statements etc., it may eventually be a challenge to track all factual, contractual and legal arguments (Norwegian: "anførsler"; hereinafter "Submissions") that are eventually maintained and presented under the hearing, and which are to be determined by the Tribunal in the award. Therefore, the Outlines to be used in the hearing shall be in a format that can easily be used by the Tribunal to summarize the Parties' Submissions in the award. Thus, the Outlines shall include and summarize the essence of all the Submissions to be determined by the Tribunal. The Outline(s) shall on page 1 clearly identify the claims/disputed matters addressed in the Outline, be provided in Word-format, and contain a detailed table of content.
>
> 20.2 To the extent a party wants the Tribunal to determine Submissions that were orally presented under the hearing, but which were not expressly included in the Outlines used in the hearing (if any), such Submissions must be included in updated outlines by way of a written submission ("Supplemental Outline") latest 10 days after completion of the hearing. For the sake of good order, Supplemental Outlines cannot be used to introduce new Submissions, and a Supplemental Outline cannot include Submissions that were not presented under the hearing. However, the Supplemental Outlines may include references to transcripts of the examination of witnesses/expert witnesses. The Supplemental Outlines may also be used to withdraw or narrow down Submissions that were made under the hearing.
>
> 20.3 The Tribunal may disregard Submissions that are neither included in the Outlines nor in the Supplemental Outlines.
>
> 20.4 A Supplemental Outline shall be provided by way of a Word-format mark-up of the Outlines used under the hearing. The additional words of each Party's Supplemental Outlines shall not cumulatively exceed 20 Pages (10.000 words). The Parties will not be allowed to comment on each other's Supplemental Outlines, because the assumption is that the arguments in the Supplemental Outline(s) were made under the hearing (and hence recorded in the transcript) and therefore could have been responded to under the hearing

(50) The Parties' Counsel submitted their respective Supplemental Outlines on 3 May 2024.

(51) In addition to the members of the Tribunal, the following persons attended the Hearing, all or in part:

(52) Subcontractor's Counsel team:

- Vidar Johnsen
- Tor André Farsund Ulsted
- Louise Kroken
- Tommy Arnulf
- Jonas Botillen
- Eirik Rise (on Teams)

- For Subcontractor:
- Amador Sevillano Marino (party representative)
- Martín Calero Vázquez
- Pablo Pastor Neumann (either present or on Teams)
- Rodrigo Alonso Iglesias (either present or on Teams)
- Nadia López Peña (on Teams)
- Antonio Fernández Cruz (on Teams)
- Pablo Flores Alonso (on Teams)
- David Arsenio Fernández Díaz (on Teams)

(53) Contractor's Counsel team:

- Arve Martin Hyldmo Bjørnvik
- Emil Litschutin Risbøl
- Kristine Landgraff Solli
- Anette Gaaseby
- Lars Skonseng
- Josefine Kile Berg
- Aleksander Bø Rognan
- Eline Aubert (on Teams)
- For Contractor:
- Luca Paioletti (party representative)
- Juan Medina Puente (party representative)
- Maria Rodriguez Garcia
- Peter van den Berg (either present or on Teams)
- Jesús Espinosa Goded (on Teams)
- Jaime Carrillo Lopez (on Teams)
- Elena Cadierno Contero (on Teams)
- Maria Rodriguez Garcia (on Teams)
- Robert Diaz Carbonell (on Teams)
- The following expert witnesses were called by Subcontractor and heard:
- Sena Gbedemah, Ankura
- José Albaladejo, Kroll
- Manuel Manso, Kroll

- The following expert witnesses were called by Contractor and heard:
- Dr. Nigel Bish, HKA
- Michelle Metz, HKA
- Paul Cacchioli, HKA

2.8 Disclosure

(54) No objections have been presented by the Parties as to the mandate of the Tribunal to decide all claims presented in this Arbitration. The Parties also confirmed at the start of the Hearing that there were no objections concerning the impartiality or independence of any members of the Tribunal.

(55) The presiding arbitrator, professor Amund Bjøranger Tørum, informed under the Hearing that he had mentored Contractor's counsel, Mr. Aleksander Bø Rognan, on his master's thesis at the University of Oslo. The Parties did not have any objections related to this information. In an e-mail to Counsel dated 19 April 2024, co-arbitrator Helge Morten Svarva informed that Wiersholm had obtained six partners from SAND's office in Trondheim that would join Wiersholm during 2024. The Parties did not have any objections related to this information.

2.9 The scope of the present Partial Award

(56) At the end of the Hearing for the Part 1 claims, the presiding arbitrator, on behalf of the Tribunal, stated that it could be beneficial to render a partial award on specific issues. Such partial award may guide the Parties in further handling of Part 2 Claims. This was further discussed in CMC 15, dated 25 April 2024, where the Parties expressed their support for such a partial award, depending on the scope and timeline.

(57) The Tribunal then issued a proposal for the scope of a separate award, which was supported by the Parties following an e-mail exchange on clarifications. The scope of the present separate award was then included in the fifth revision of PO1 dated 24 May 2024, Art 21 and Annex 4 as follows:

> "21.1 The Tribunal shall render a separate award related to Part I within the scope as set out in the enclosed Annex 4. The purpose of the separate award will be to determine overriding contested matters and hence assist the parties in their efforts to explore amicable solutions concerning Part II.
>
> 21.2 The aim is to render such a separate award ultimo August, provided that ICC is available to quickly scrutinize the award. However, due to time constraints, the Tribunal

will not necessarily be able to determine all the individual claims being included in Part I in the separate award."

(58) The scope of the separate award for Part 1 Claims in Annex 4 of the PO1, which was agreed between the Parties and the Tribunal, reads as follows:

"...

1. **Disputed matters concerning the variation order system**
   a. Article 16
      i. The scope of Art 16.1
      ii. The deadlines for issuing VORs under article 16.1 and DVO/VOs under article 16.2
      iii. Consequences of Subcontractors and Contractors non-compliance with the said deadlines in Art 16.2
      iv. The deadlines in article 16.5, cf. article 16.3 and consequences of non-compliance.
      v. Application of the said deadlines to the claims being a part of Part I

   b. The scope of Art 27 and its applicable deadline

   c. Third paragraph of Art 12.1
      i. Interpretation of the boundaries of Contractor's right to order variations
      ii. The legal effects of exceeding the boundaries: applicable rates and compensation models
      iii. Preliminary application: whether the claims being a part of Part I exceeded the said boundaries in the present project

   d. The applicable law and contractual principles to determine schedule effects
      i. The applicable Norwegian law and the impact of «accumulated net effect» in Art 13.3, including concurrent delays.
      ii. The contested matter of prospective vs. retrospective analysis
      iii. Methods of calculating prolongation costs and whether Norwegian law allows Subcontractors suggested modelled day rate, and, if so, how to determine such a rate in the present case
      iv. Interpretation of the «rolling analysis» mechanism in article 13.3 (3): Does it apply to VORs/DVOs, and what are the consequences of breach (if any) of the rolling analysis requirement. Application of Art 13.3 (3) to the claims being a part of Part I
      v. The scope of Art 15.3 and its applicable deadlines

   e. The applicable law and contractual requirements on substantiation and documentation of claims

f. Elecnor's submissions that AGJV misused the VO-system
   i. Matters of interpretation: «Deemed VO» etc,
   ii. The submissions regarding legal effects of such misuse: no time-bar, relaxed requirements of documentation, «as claimed» etc.
   iii. Application to the individual claims included in Part I

2. **The disputed matters concerning the interpretation of CoC Article 2.2**

3. **Article 20.4 (Final Account)**
   a. Interpretation of the scope of the provision

   b. Interpretation of the break down and documentation obligations

   c. The time-bar effects and whether they apply to claims included in a request for arbitration prior to the Final Account

   d. Application to the claims being a part of Part I
4. **The scope of work**
   a. Interpretation: The contested matter of «detailed engineering» and the relationship between Appendix A and the «Battery Limits»

   b. Interpretation of the scope of Subcontractors planning and coordination obligations under the Contract related to civil works

   c. Interpretation of Subcontractors role regarding commissioning

5. **Assessment of claims included in Part I**
   a. Disputed Variation Order Requests: Determine whether the VORs constitute a variation, and whether any of them are precluded

   b. Variation Orders: Determine direct costs etc.

   c. The Tribunal cannot in a partial award determine the EoT (if any) to be granted under Elecnor's individual claims

   d. Hence, a partial award will mainly determine whether or not the disputed VORs constitute a variation, and not determine the cost and/or schedule impact.

6. **Article 24.2 (liquidated damages) - counterclaim**

Interpretation: Provided that a delay was caused by gross negligence/willful intent by Subcontractor, can Contractor claim liquidated damages above the 5% cap in Art 24.2?

..."

(59) Due to time constraints, it has not been possible for the Tribunal to assess all of the individual claims included in Part 1, cf. article 21.2 of the PO1 and item 5 of the scope of

Annex 4. Therefore, VOR 035/DVO 16 and VO 69 are not addressed in the Partial Award.

2.10 Confidentiality

(60) The question of whether the Tribunal's award should be confidential was addressed in CMC 10 of 9th November 2023, cf. item 17 of the PO1. It was also addressed in the e-mail exchange concerning the scope of the Partial Award. The Parties did not agree to make the award available to others. Hence, this Partial Award is confidential. However, since the case concerns certain unresolved issues in contract law of public interest, the Tribunal encourages the Parties to consider making part of the Partial Award, at least section 7, available in anonymized form.

3 REQUEST FOR RELIEF SOUGHT

(61) The ToR refers to the Subcontractor's request for relief sought in C2 as follows:

> "...
>
> I. In the main claim:
>
> 1. AGJV is ordered to pay to Elecnor the remaining parts of the Contract Price amounting to EUR 262 525,88 plus interest on overdue payments which up until 12th January 2023 are calculated to EUR 183 281,86.
>
> 2. AGJV is ordered to pay for Index regulations the amount of EUR 632 368,16 and NOK 81 160,61 plus interest on overdue payments which up until 12th January 2023 are calculated to EUR 7 725,32 and NOK 584,49.
>
> 3. AGJV is ordered to pay for Variations the amount of EUR 7 381 924,65 and NOK 1 011 754,20 plus interest on overdue payments which up until 12th January 2023 is calculated to EUR 222 378,83 and NOK 196 901,59.
>
> 4. AGJV is ordered to pay for Disputed Variation Order Requests the amount of EUR 33 232 473,03 and NOK 4 143 560,49 plus interest on overdue payments which up until 12th January 2023 is calculated to EUR 2 168 406,59 and NOK 457 816,52.
>
> 5. AGJV is ordered to pay for Other Claims the amount of EUR 1 433 567,47 and NOK 285 107,67 plus interest on overdue payments which up until 12th January 2023 is calculated to EUR 111 263,91 and NOK 57 740,26.
>
> 6. AGJV is ordered to pay the wrongly withheld invoices of EUR 1 794 599,71 and NOK 773 560,94 plus interest on overdue payments.
>
> II. In the Counterclaim:
>
> 1. AGJV's counterclaim is dismissed in its entirety.
>
> III. For both claims:

1. For both the claim and the counterclaim, AGJV is ordered to pay all costs incurred by Elecnor, including fees to counsel and the expert witnesses, and the cost of the arbitration proceedings including fees and expenses to the arbitral Tribunal and the ICC.

..."

(62) The ToR refers to Contractor's request for relief sought, subject to further revisions and adjustments, in R3, where Contractor requests the Tribunal to:

"...

1. Dismiss the Claimant's claims in their entirety.

2. Order Elecnor S.A. to pay NOK 171 389 629, with addition of interest according to the Norwegian Late Payment Act ("Forsinkelsesrenteloven"), from due date until payment occurs.

3. Order Elecnor to pay all the costs incurred by AGJV in these proceedings, with interest in accordance with the Norwegian Late Payment Act, as well as, as between the parties, the costs of the arbitration.

..."

(63) Subcontractor adjusted and specified the amounts related to Part 1 Claims during the Hearing. Since Hearing was limited to Part 1 Claims, and the Part 2 Claims are subject to further submissions, neither party issued complete adjusted prayers for relief for the total Part 1 and Part 2 Claims under the Hearing.

4 OUTLINE OF THE CONTRACT

(64) The Contract consists of the Form of Agreement, the CoC and the following Appendices (including annexes), cf. the second paragraph of the Form of Agreement:

Appendix A: Scope of Work

Appendix B: Compensation

Appendix C: Contract Schedule

Appendix D: Administration Requirements

Appendix E: Company's Documents

Appendix F: Subcontractor's Specifications

Appendix G: Contractor's Deliverables

Appendix H: Sub Subcontractors list

Appendix I: Insurances

Appendix J: Standard Forms of Guarantees

(65) The CoC is based on the NTK 07. The CoC contains some deviations from NTK 07.

(66) The third paragraph of the Form of Agreement regulates the priority between the contract documents in the event of a conflict between them:

> "In the event of any conflict between the provisions of the contract documents listed above, they shall apply in the following order of priority:
>
> a) the Form of Agreement
>
> b) the Conditions of Contract ("**CoC**")
>
> c) all Appendices, except Appendix F, in the order they are listed above
>
> e) Appendix F."

(67) The Contract's compensation scheme is regulated by Appendix B. It is a lump sum contract based on fixed price elements listed in Article 1.2 of Appendix B.

(68) Article 5.10 of Appendix B regulates the rates of liquidated damages for delays in achieving the project milestones within the agreed time limits. The time limits are further regulated in Appendix C.

5 THE TRIBUNAL'S GENERAL REMARKS ON CONTRACTUAL INTERPRETATION

5.1 The legal starting points and key tests under Norwegian law

(69) The present case must be decided based on the principles of interpretation of commercial contracts in Norwegian law.

(70) Contracts between professional parties are often the outcome of extensive negotiations, and the final wording of the contract is frequently scrutinized by qualified persons to ensure that it reflects the parties' agreement. The fact that professional parties are expected – and presumed – to have scrutinized the wording of the contractual documents is a key reason for the starting point for the interpretation of such contracts, namely what follows from the ordinary meaning.

(71) Hence, the *first step* of interpreting commercial contracts is to determine whether a so-called objective interpretation of the contract solves the disputed issue. This starting point entails that the relevant perspective is how a reasonable person would have understood the contract at the time of the contract. If a more literal interpretation of the contract does not provide a clear solution to the disputed issue, the judge must proceed to consider how a reasonable person would have understood the contract in its relevant *context* at the *time of the contract*. The relevant context includes, *inter* alia, the negotiations, drafts, prior practice between the parties, etc. The relevant context also, of course, includes the purpose of the relevant contractual provisions. The context in which the contract was entered into normally prevails over the parties' subsequent conduct.

(72) "Reasonable" refers to a sensible person. Such a person will favour what is sensible and hence avoid an interpretation that seems artificial or opportunistic. The reference is to the "reasonable expectations of honest men". This explains why "business common sense", i.e. how a person familiar with the kind of business or technical issues in question would reasonably have understood the contract, is an inherent part of the objective interpretation. As pointed out in Rt. 2002 p. 1155 (Hansa Borg), "en tolkning som går ut over den naturlige ordlyd, og som forrykker den økonomiske balanse mellom partene, vil ha formodningen mot seg" (English: There is a presumption against an interpretation that goes beyond the natural wording and disturbs the commercial balance between the parties). That the objective interpretation is not an exercise in semantics is also supported by Principles of European Contract Law ("PECL") 5:101 (1), and Draft Common Frame of Reference ("DCFR") II.-8.101 (1), and it was lucidly explained by Lord Hoffmann in the *ICS case* ([1998] 1 WLR 896, [1997] UKHL 28, [1998] WLR 896, [1998] 1 All ER 98) : "The meaning of words is a matter of dictionaries and grammars; the meaning of the document is what the parties using those words against the relevant background would reasonably have been understood to mean."

(73) If the objective interpretation provides a clear solution to the disputed issue, this solution will normally be decisive, even though it may appear as an unfortunate solution. This is established as a "firm" starting point by the Norwegian Supreme Court; see, for example, Rt. 2002 s. 1155 (Hansa Borg) and Rt. 2011 s. 1553 (para 73). The rationale is that such a firm starting point is considered to provide clarity and

predictability in commercial contracts and that the parties did scrutinize the contract wording to ensure that it reflected what they eventually agreed on.

(74) If a party argues an interpretation deviating from the objective interpretation, the *second step* of the interpretation is to determine whether this solution must be deviated from based on the common understanding rule or the good faith standard. The objective interpretation of the contract may only be deviated from for "strong reasons", e.g. if the party arguing an alleged common understanding deviating from this solution is able to *rebut the strong presumption* that the parties ultimately agreed on what follows from an objective interpretation of the contract. This threshold is primarily a matter of standard of proof, and *the degree of proof* required to rebut this presumption primarily rests upon the following three tests:

(i) To what extent does the alleged common understanding deviate from an objective interpretation?

(ii) Does the alleged common understanding provide a sensible and balanced solution?

(iii) Does the alleged common understanding provide a clear solution?

(75) In essence, a heightened standard of proof is required if the alleged common understanding is contrary to an objective interpretation of the contract, particularly if the alleged common understanding is clearly unbalanced or gives no commercial sense. By contrast, if the alleged common understanding might be aligned with an objective interpretation, there is no heightened standard of proof.

(76) In order to deviate from what follows from an objective interpretation based on the good faith standard, it is not sufficient that the other party "should" have been aware of the deviating understanding. This standard only applies if the other party "knew or could not have been unaware of it". This is a significant hurdle in commercial contracts.

(77) If the outcome of these tests does not justify departing from the objective meaning of the contract, the process of interpretation is not necessarily brought to an end. Arguments based on the common understanding rule or the good faith standard often go hand in hand with alleged terms or "assumptions" that are not expressed in the contract. Based on Norwegian case law, as summarized by Bjøranger Tørum in Interpretation of Commercial Contracts (Oslo, 2019) pp. 103-118, the following tests

provide guidance on whether or not such a term or assumption should be implied in a comprehensive and detailed commercial contract:

(i) A minimum requirement for implying a term or assumption is that it is not contrary to an objective interpretation of the contract.

(ii) Even though the term or assumption is not contrary to an express term in the contract, the judge should be cautious about implying it if it would not be compatible with the overall scheme of the contract.

(iii) The judge should also be cautious about implying a term that was addressed during the negotiations, but nevertheless not reflected in the contract. If so, the presumption that the parties did not agree on such a term applies. Provided that the relevant term or assumption is not contrary to an express term or the overall scheme of the contract, the essential question is whether it is necessary to give business efficacy to the contract. This is a strict test: a term should not be implied merely because it appears fair or because one considers that the parties would have agreed on it if it had been suggested to them. Hence, it should not be implied unless the contract, without the term or assumption, would lack commercial or practical coherence. Essentially, the term or assumption must be so obvious that it goes without saying, and an important question in this context is whether it appears evident that the parties hypothetically would have agreed on such a term or assumption.

(78) *Step three* concerns the situation where a *prima facie* objective interpretation does not provide a clear solution to the disputed issue. In such a context, the first question is whether the overall scheme of the contract sheds light on the disputed issue. If neither of the parties has invoked the common understanding rule or the standard of good faith, the judge should proceed directly to such a deeper and broader interpretation of the contract, taking into account the "scheme" of the contract. This is "step two" in the objective interpretation. The scheme of the contract is also an integral part of the initial (*prima facie*) objective interpretation, but the situation here is that the scheme does not, at the *outset*, provide any solution to the disputed matter. The reason that such a deeper and broader interpretation may be particularly relevant to commercial contracts is that they are often comprehensively and carefully drafted. Hence, there is a presumption that the different chapters and provisions in the contract aim to constitute a coherent whole, particularly in standard contracts. And even though a solution to the disputed issue cannot be derived from the overall scheme of the contract, the overall scheme and its inherent logic may be useful to rule out solutions that are not coherent with the contract.

(79) If not even such a deeper and broader interpretation provides a solution to the disputed issue, the judge or arbitrator should proceed to assess whether the *background law or contract practice* provides a solution to the disputed issue. The first test is to determine

whether the relevant background law (or contract practice) provides (i) a clear solution, (ii) a sensible solution, and (iii) whether it is directly applicable or only applicable by analogy. The second test is to determine whether the strong presumption that the solution provided by the background law is applicable should apply. This depends on whether the contract is comprehensive and carefully drafted, and if so, the third test is to determine whether the solution provided by the background law (or contract practice) is compatible with the overall scheme of the contract and to consider whether its silence on the disputed issue may be intentional.

(80) Considering the overall scheme of the contract, the background law and contract practice can also be useful for the judge or arbitrator where the objective interpretation merely suggests or indicates a solution to the disputed issue, but some doubts remain as to the correctness of such interpretation. For example, that the objective interpretation is in accordance with the background law or contract practice can serve as a benchmark against which considerations of fairness can be objectively measured, hence adding to the legitimacy of the judgment or arbitration award. On the other hand, relying on the solution provided by the background law may disrupt the refined scheme and balance of the contract, which may be the outcome of the parties' negotiations. If the disputed question concerns a topic that is extensively regulated in the contract, although it is silent on the disputed issue, relying on the background law may sometimes be equivalent to supplementing the contract with a solution that the parties did not agree on. This is related to the "risk" argument: a provision that, taking into account its alleged purpose, would normally be expressly set out in the contract should not be inserted in hindsight by way of interpretation. Hence, if the solution provided by the background law is close to what a party could, and perhaps should, have explicitly stated in an otherwise comprehensive contract, the judge should be cautious about introducing such a solution by way of "gap-filling" in reliance on the background law.

(81) A particular matter of interpretation, which is contested in the present case, concerns so-called *"conflicts"* or *"inconsistencies"* within the contract. In particular, the Parties disagree on whether Appendix A can be aligned with the "Battery Limits" in Appendix F regarding engineering responsibilities. An inconsistency may occur within the same contractual document, for example, within the terms and conditions. A more recurring situation is inconsistencies between different contractual documents; for example, that

a provision in the standard terms and conditions does not sit well with one of the more tailor-made appendices. If the contradiction is between an older and a younger provision, there is a presumption that the parties eventually agreed on the younger provision; *"lex posterior"*.

(82) The contract may also provide explicit provisions that set out the priority order of the different documents and appendices in the contract, and so does the Form of Agreement and the CoC Art 4. Such provisions presuppose that there *is* a "conflict" between the contractual documents without providing any guidance on what constitutes a "conflict". However, before such a "conflict" can be "mechanically" determined based on the agreed order of priority, it must be determined that there *is* a "conflict". The conflict might sometimes be evident, for example, when one contractual document prescribes a solution that is exactly the opposite of what follows from another document. If so, there is, at the outset, a straightforward contradiction, which obviously qualifies as an "inconsistency" to be determined based on the order of priority.

(83) Such straightforward contradictions are, however, rare. A more typical situation is that it is contested if and to what extent there *is* a conflict. If so, the judge or arbitrator must consider whether there is merely a *prima facie* conflict. Conflicts and inconsistencies within a contract are highly complex matters, and therefore, there is no basis for providing a general formula to determine whether there is an inconsistency. In the context of a comprehensive commercial contract between professional parties, there is, however, a presumption that the parties did not intend to agree on conflicting provisions. Hence, not rarely, the *prima facie* conflict may be avoided through a "harmonising" interpretation.

(84) Another relevant guideline is to make the various provisions operative by avoiding interpretations that make some provisions superfluous. The latter entails that it may be proper to interpret two provisions in a manner that avoids the (apparent) conflict, in particular, if that interpretation does not, in fact, eliminate one of the two provisions. Alternatively, if the wording of the provisions does not allow such a total "harmonisation", it may be preferable to rely on a partial "harmonisation"; e.g. an interpretation narrowing down the conflict or inconsistency to a minimum. Having said that, a total "harmonisation" is rarely possible within a proper understanding of the wording of the two provisions, and a partial "harmonising interpretation" normally

entails – even though one provision does not fully prevail over the other – that more weight is given to one of the provisions.

(85) Hence, a key question is how to determine the provision to be given the most weight in the harmonisation. Again, it is impossible to provide general answers, but in a comprehensive commercial contract, it may be relevant to consider which provision is most in accordance with the overall scheme of the contract. For example, one of the contested provisions in the two appendices is well aligned with the principles set out in the terms and conditions, while the other provision is hard to align with the overall scheme. It will also be relevant to consider which provision is most comprehensive and most tailor-made regarding the disputed matter and hence *"lex-specialis"*; see Tørum, Interpretation of Commercial Contracts, 2019, pp. 141-142.

(86) If neither the overall scheme of the contract nor *"lex-specialis"* provides any guidance, it may be considered which provision is most aligned with the applicable background law and what is generally considered to be a proper solution. It is, however, important to emphasize that there are certain boundaries for a harmonising interpretation. The boundaries cannot be generally phrased, but a harmonising interpretation cannot be used to set aside what follows *clearly* from an objective interpretation of the contract. That would be equivalent to setting aside the relevant contractual provision, which is not a matter of interpretation but subject to the significant threshold for contractual censorship and adaption based on the Contract Act Section 36.

(87) The present dispute concerns a subcontract. All subcontracts have a relationship to a "main contract"; in the present case, the EPC contract between Contractor and Bane NOR. A recurring matter in the interpretation of subcontracts is if and to what extent the subcontracts are based on provisions in the main contract. On this basis, subcontractors and main contractors frequently argue that a particular provision in the subcontract must be interpreted to have the same meaning as in the main contract, and such arguments are often referred to as arguments based on "back-to-back". It goes without saying that the main contract may be relevant for the interpretation of the subcontract, not least when the disputed provision in the subcontract is verbatim to a provision in the main contract. At the same time, it is evident that the two contracts are not entered into between the same parties, and hence, the context and purpose may be slightly different. Furthermore, the purpose of the provision in the main contract may not have been revealed to the subcontractor. In fact, at the time of the contract the

subcontractor may have been unaware that the provision was taken from the main contract.

(88) On this basis, unless it is expressly stated in the subcontract that it shall be interpreted in light of the main contract, there is no legal basis to say that a subcontract *shall* be interpreted in light of the main contract. For the same reasons, there is no particular principle of interpretation "back-to-back" in Norwegian law. Having said that, the main contract sometimes *might* enlighten the understanding of the subcontract. However, in the very end, "back-to-back" is merely a possible name on the outcome of a regular interpretation of a subcontract, typically where a disputed provision in the subcontract is interpreted in light of an identical or similar provision in the main contract. In fact, even when it is explicitly stated in the subcontract that it is or shall be considered "back-to-back", it cannot be considered entirely "back-to-back". There will always be some deviations; at least the price will be different, but the scope of work in the subcontract will normally also be narrower than in the main contract.

(89) The firm starting point is that the relevant context for the interpretation is at the time of the contract. However, the parties' conduct after the contract was entered into may be relevant as an indication of what the parties intended when the contract was entered into. Following the standard of proof set out in Rt. 2002 p. 1155 (Hansa Borg) concerning the parties' pre-contractual negotiations, there must be an even higher threshold for concluding that subsequent events prove that the parties had a common understanding that differed from an objective interpretation. This was essentially set out already in Rt. 1996 p. 1696 (BSF).

(90) In principle, it cannot be ruled out that subsequent events may serve as sufficient proof of a deviating common understanding of a commercial contract, particularly if the alleged common understanding is not clearly inconsistent with an objective interpretation. For example, if both parties have consistently expressed an understanding equivalent to the alleged common understanding, typically in subsequent correspondence, by the implementation of the contract or by their conduct over a period of time. It should, however, be noted that the reason the other party did not object to this understanding may have been to avoid tension between the parties.

(91) Rt. 2012 p. 1267 (Norsk Tillitsmann), concerning the interpretation of a guarantee between professional parties, shows that the parties' subsequent conduct normally only

serves as a supporting argument in the overall assessment. The question was whether a guarantee was an on-demand guarantee. The Supreme Court concluded that the wording of the guarantee provided no clear answer, but the guarantee was drafted by the beneficiary (a trustee) and its legal advisers, who were also the most knowledgeable about such guarantees. In this context – where an objective interpretation did not provide a clear answer, and one of the parties had drafted the unclear provisions – the Supreme Court gave "considerable weight" to the parties' subsequent conduct (Rt. 2012 p. 1267, paragraph 70):

> "In the creditor's statement of claims, the guarantee was consistently not referred to as an on-demand guarantee. This expression was used twelve times, and hence it appears unlikely that it was accidental. The creditor used the same law firm to draft the guarantee and the statement of claim. In this context, it appears likely that the creditor and its law firm had this understanding from the beginning. That it should be considered to be an on-demand guarantee was not invoked by the creditor before years later. In this context, where the guarantee is not clear, considerable weight must be given to this subsequent conduct."

(92) Hence, even though Norwegian law allows evidence of subsequent conduct in the interpretation of a contract, such evidence will rarely be decisive proof of a common understanding contrary to the contract, cf. Bjøranger Tørum, Interpretation of Commercial Contracts, 2019, section 3.23.

(93) A related question, which is relevant in the present case, is *whose subsequent conduct* may be relevant where legal persons enter into the contract. In a large company, several groups of people are often involved in the various phases; the people negotiating the contract, the people approving the final contract (typically the senior management or even the board), and those who are thereafter assigned the job of executing the contract. The subsequent conduct of persons not involved in negotiating the contract will, fairly obviously, not automatically indicate what the parties intended when the contract was entered into; their understanding of the contract will normally be arrived at in hindsight.

5.2 The relevance of the contractual chain as a mean for interpretation and "back-to-back"

(94) The clear starting point is evidently that a disputed matter of contractual interpretation between B and C must be determined based on an interpretation of the contract between B and C, and not based on an interpretation of a contract between, for example, A and B. For example, as a firm starting point, C cannot rely on a contract

between A and B to determine his obligations towards B. In the present context, it is sufficient to point out that the contract between B and C will normally be entered into based on its own premises. However, there might be a link between two or more contracts, and the chain of contracts in large construction projects is illustrative. For example, there is usually a kind of "link" between the main contract between the company and the EPC-contractor, on the one hand, and the subcontracts between the EPC-contractor and his subcontractors on the other hand. There is obviously a functional and commercial link; if the EPC-contractor had not been awarded the main contract, it would not have awarded the subcontracts. There is also a link between the scopes of work in the various contracts in such a chain of contracts. For example, the scope of work in the subcontracts reflects elements of the EPC-contractor's larger scope of work towards the company.

(95) Where a subcontract between B and C more or less mirrors, for example, elements of the scope of work in the main contract between A and B, it is common to say that the subcontract is "back-to-back" with the main contract. From an analytical legal perspective, however, the problem is that the term does not provide any guidance regarding if and to what extent a subcontract shall be interpreted "in light of" a main contract with the term "back-to-back". It merely serves as a more or less imprecise name on a possible outcome of the interpretation of a subcontract, namely where a subcontract is interpreted "in light of" its associated main contract. Hence, unless the subcontract provides an explicit and precise contractual regulation of "back-to-back", which is rare, the judge or arbitrator is better off without the term.

(96) On the other hand, contracts in such a chain might enlighten each other in various manners; from a scale from more or less explicit "back-to-back" to mere context. We may use the term explicit "back-to-back", where a subcontract expressly refers to specific provisions in the main contract, but here, the relevant provisions in the main contract are not merely "enlightening" the subcontract as a mean for interpretation. The relevant provisions in the main contract are an integral *part* of the subcontract. Hence, there will be a presumption that the incorporated provisions shall be interpreted in the same manner as the (equivalent) provisions in the main contract. At the other end of the scale, we have subcontracts making no explicit references to the main contract. The absence of any explicit "back-to-back" entails that there is no strong presumption that the subcontract shall be interpreted in light of the main contract. In

fact, if subcontractor was not aware of the content of the main contract at the time of the subcontract, which is a typical situation, there is no such presumption at all. It goes without saying that the content of a main contract, which was unknown to the subcontractor at the time of the subcontract, cannot have influenced the subcontractor's understanding at the time of the contract. For the same reason, it is difficult to see that a subcontractor who is later given access to the content of the main contract may rely on the main contract in his interpretation of the subcontract. The latter applies reciprocally: A main contractor cannot, in such a situation, rely on the main contract in his interpretation of the subcontract; that would simply be unfair towards subcontractor.

(97) Between these two extreme points on the scale, there is a spectrum of situations from where it is more or less clear that the main contract served as a starting point for drafting the subcontract to a situation that a few provisions in the subcontract are not identical but nevertheless might be influenced by similar provisions in the main contract. The problem in both situations is that it may be very difficult in hindsight to determine if and to what extent the main contractor and subcontractor intended to mirror or modify the similar provisions in the main contract. Because the outcome might be very dependent on whether the subcontractor knew the content of the main contract when the subcontract was drafted and whether there is evidence that both subcontractor and main contractor intended the relevant provision in the subcontract to mirror a similar provision in the main contract, it is difficult to provide general guidelines how to approach such situations.

(98) However, provided that subcontractor was not aware of the content of the relevant provisions at the time of the subcontract, and there is no evidence that both subcontractor and main contractor intended the relevant provision in the subcontract was to mirror (or deviate) from a similar provision in the main contract, it is possible to provide a clear starting point for the analysis: A court or arbitral tribunal must be cautious about having regard to the main contract in the interpretation of the subcontract. The reasoning for the starting point is threefold.

(99) *First*, as pointed out above, a main contract whose content was unknown to the subcontractor cannot have influenced his understanding at the time of the subcontract. For the same reason, it would be unfair if the main contractor could rely on the main contract in his interpretation of the subcontract. For example, if the main contractor

provided the draft, which was used as a template for the negotiations of the subcontract, it cannot argue that subcontractor should have understood that it was more or less directly based on the main contract, unless it was evident that the provision was based on a well-known standard contract.

(100) *Second*, and more importantly, in the absence of evidence that both subcontractor and main contractor intended the contested provision in the subcontract to mirror a similar provision in the main contract, there is a presumption that the parties to a subcontract basically negotiated, drafted and agreed on "their own" contract, which must be interpreted on its own premises. The latter presumption is strong regarding the subcontract's scope of work, because it is necessarily narrower than the main contractor's scope of work under the main contract. The nature of the main contract may also entail that it does not contain the definitions required to define a subcontract's narrower scope of work. For example, where the main contract is an EPC-contract, it rarely contains clear distinctions between the various elements of general design, engineering and detailed engineering simply because all of the said elements are assigned to the main contractor. Therefore, when a main contractor aims to subcontract particular elements of his own scope, it and his subcontractors may have to "slice" and tailor the scope of work in the subcontracts.

(101) The presumption that a subcontract must be interpreted based on its own premises where the parties have basically negotiated, drafted and agreed on "their own" contract is particularly strong if it contains a comprehensive and tailor-made description of the scope of work. If a regular objective interpretation of the subcontract's scope of work in the subcontract provides a clear answer to the disputed matter, that interpretation should, therefore, as a firm starting point, be decisive. Otherwise, it would make a mockery of the negotiations and drafting of the subcontract, and it would open for speculative and opportunistic interpretations based on what might (possibly) be inferred from the main contract or other associated contracts.

(102) *Third*, as the Norwegian Supreme Court pointed out in Rt. 2002 p. 1155 (Hansa Borg), in the course of business, third parties that were not a part of the negotiations must also be able to rely on what follows from an objective interpretation of the contract. The latter entails a high threshold for giving much weight to associated contracts in the contractual interpretation.

6 THE TRIBUNAL'S UNDERSTANDING OF THE VARIATION ORDER SYSTEM IN NTK AND THE COC – GENERAL REMARKS ON THE PRECLUSIVE NOTIFICATION MECHANISM IN ART 16.1 ETC.

(103) Many of the disputed matters in the present case concern the understanding of the variation order system set out in the CoC, which is essentially based on NTK. On this basis, the Tribunal finds it appropriate to provide certain overall remarks on the purpose and mechanics of the variation order system in the CoC Art 12-16, particularly the key provision in Art 16.1.

(104) The first paragraph of Art 12.1 provides the cornerstone of any variation order system, namely a unilateral right to require variations; typically, additional work. The provision reads as follows:

> "Contractor has the right to order such Variations to the Work as in Contractor's opinion are desirable."

(105) The purpose is to ensure flexibility for Contractor, which may be imperative in large and complex projects. At the same time, to ensure predictability for Subcontractor the right to impose variations is made subject to certain limitations, which are set out in Art 12 third paragraph. The understanding of the latter limitations is highly contested in the present case, and the Tribunal will elaborate on this question below in section 7.3.

(106) A key feature of the sophisticated variation order system in NTK is, however, that its scope is not limited to a situation where Contractor explicitly and formally orders Variation to the Work, typically additional work, by issuing a VO. The variation order system also applies, *inter alia*, where Contractor and Subcontractor disagree on whether a specific work is a part of the Work. The latter is a recurring issue in contracts where the scope of work is functionally described, typically because the functional requirements may open for different interpretations of what is a part of the Work. An essential part of the mechanics of the variation order system, which is based on NTK, is to ensure that such disagreements are brought into the dispute resolution system set out in the contract, typically through a preclusive notification mechanism like the one found in Art 16.1. See, for example, Bjøranger Tørum, «Sammenlignende analyser av entreprise og fabrikasjon», *Tidsskrift for Forretningsjus*, 2010, pp. 161-165.

(107) As indicated, Art 12 applies to the situation where Contractor has instructed a specific work by issuing a VO. By issuing a VO, Contractor acknowledges that the instructed work constitutes a Variation to the Work. By contrast, Art 16.1 applies to specific situations where Contractor has instructed Subcontractor to carry out specific work *without* using a VO; namely, where Contractor's Representative has instructed Subcontractor to perform a *"specific piece of work"* by way of a *"written instruction"*. The reason Contractor did not instruct the work by issuing a VO is typically that it does not consider the work to be a Variation to the Work. Instead, it considers the instruction to reflect what already follows from the agreed scope of work. Such an instruction is typically the outcome of a discussion with the Subcontractor, which may have revealed that they disagree on whether the work in question is a Variation to the Work.

(108) The purpose of such an instruction is, therefore, to end the discussion and ensure that the Subcontractor proceeds to carry out the instructed work. If the instruction merely reflects what already follows from the agreed scope of Work, the Subcontractor is obliged to comply with the instruction.

(109) But what if the Parties disagree on whether the instruction was a Variation to the Work? That may be a recurring issue during a complex project, and it may take time to resolve such a disagreement, which eventually may have to be determined by arbitration. A key consideration of NTK is to avoid such disagreements affecting the project's progress. Therefore, Subcontractor cannot decide not to carry out the instructed work until the Parties can agree on whether the contested instruction constitutes a Variation or until the disagreement is determined under the dispute resolution mechanism in the contract. That would *de facto* entitle Subcontractor to unilaterally decide on a kind of "suspension" of the work and hence put himself in an extreme bargaining position, which would subsequently put Contractor in a very vulnerable position both commercially and regarding the progress. The latter explains why NTK 07 provides that Subcontractor shall comply with an instruction from Contractor Representative, even if it disagrees that the instruction is a part of the scope of Work. If it is eventually determined that the instruction was within the scope of Work, the obligation to carry out the work followed from the contract. However, even though it is eventually determined that the instruction constituted a Variation to the Work, the Subcontractor was nevertheless obliged to carry out the instruction, and this obligation arose latest at the time Contractor responded to Subcontractor's VOR by way of a DVO. The latter

"unconditional obligation" to carry out an instruction maintained in a DVO, follows explicitly from Art 16.2 third paragraph.

(110) As indicated, Art 16.1 sets out a preclusive notification mechanism where Subcontractor – as a first step to *maintain* its position that the instructed work constitutes a Variation – must submit a VOR "without undue delay". The two first paragraphs of Art 16.1 read (the Tribunal's emphasis):

> "Contractor's Representative may, *by written instruction*, require the performance of a *specific* piece of work. If the work so required in the opinion of Subcontractor is not part of his obligations under the Contract, then Subcontractor shall submit a Variation Order Request to Contractor and as soon as possible thereafter prepare an estimate in accordance with Art. 12.2.
>
> If Subcontractor has not presented a Variation Order Request *without undue delay* after Contractor has required such work to be performed *in the manner prescribed* in the first paragraph, then he loses the right to claim that the work is a Variation to the Work."

(111) Article 16.1 has several implications. *First*, it explicitly states that if Subcontractor considers the work imposed by such a *"written instruction"* from Contractor's Representative to be a Variation to the Work, Subcontractor must issue a VOR *"without undue delay"*. Without such a timely VOR, the preclusive effect is that the instructed work is *considered* a part of the Work. The latter entails that Subcontractor will not be entitled to any additional time and/or compensation based on the instructed work, *even* if the instruction, in fact, constituted a Variation. The latter follows from Art 16.1, second paragraph i.f.

(112) *Second*, that the provision only refers to a written *"instruction"* from Contractor's Representative entails that Subcontractor has no obligation to carry out work that is merely "requested" (*No. "anmodet"*) by Contractor's Representative. If the Subcontractor, in the absence of an "instruction", performs the work *even* though it was not (firmly) "instructed" by Contractor's Representative, Contractor will have a legitimate reason to believe that Subcontractor eventually chose to perform the work voluntarily as a part of the Work. Therefore, in this context, the preclusive effect of Art 16.1 will only be an issue if Subcontractor has performed work under a "request". The same preclusive effect applies if Subcontractor has chosen to perform work under an "instruction" issued by someone other than Contractor's Representative because Subcontractor was not obliged to do so.

(113) Another situation, which is not governed by Art 16.1, is that Subcontractor – *prior* to carrying out an "instruction" not issued by Contractor's Representative in writing – submits a VOR claiming that the relevant work constitutes a Variation to the Work. We might, for example, imagine that the Parties have discussed a specific work in a meeting and jointly concluded that the work shall be carried out. Even though the said joint conclusion cannot be considered a written instruction from Contractor's Representative, Subcontractor's right to claim that the said work constitutes a Variation to the Work cannot be considered precluded under Art 16.1, provided that Subcontractor submitted a timely VOR. The latter example does not fall within the scope of Art 16.1. Hence, we are back to the firm starting point under NTK and the present CoC, namely that a claim submitted in a timely VOR cannot be considered precluded; see Bjøranger Tørum, «Sammenlignende analyser av entreprise og fabrikasjon», *Tidsskrift for Forretningsjus* 2010, pp. 164-166, which points out that this principle should have been more explicitly stated in the wording of NTK instead of merely relying on numerous cross-references making Art 16.1 second paragraph applicable *mutatis mutandis*; see, for example, CoC Art 6.4, 9.1, 11.2, 27.2 and 28.3. It can also be noted that the reasoning for preclusion under Art 16.1 second paragraph is not applicable if the VOR is submitted before the contested work is carried out, because Contractor then has no reason to believe that Subcontractor considers the contested work to be a part of the scope of Work.

(114) The preclusive deadline in Art 16.1 aims to ensure that disagreements (if any) are identified in a timely manner and brought into the contractual dispute resolution procedure. *First*, it prevents the discussions from dragging out and negatively affects cooperation and progress. *Second*, it ensures that Contractor is made aware – timely, explicitly and in writing on the level of the Contractor Representative and the Subcontractor Representative – that there *is* a contractual disagreement. *Third*, timely notification may be essential for Contractor to monitor the costs and the progress of the project; in particular, in large projects with several subcontracts and complex interfaces that may cause delays, incremental costs and knock-on-effects. *Fourth*, by bringing the claim to the Contractor's attention through a VOR, preferably before the commencement of the work in question, Contractor may consider alternative measures or withdraw the instruction to avoid delays or incremental costs. *Fifth*, timely VORs in the project execution phase may enable the parties to consecutively discuss and agree

on the cost and/or schedule impact (if any) during the project execution, narrowing down the disagreements in the final settlement.

(115) From the perspective of Subcontractor, preclusion is not as such beneficial. However, by issuing a timely VOR, Subcontractor can elevate the disagreement to the level of Contractor's Representative. And by responding to an instruction from Contractor's Representative through a timely VOR, Contractor is obliged to respond with a VO or DVO within "reasonable time". Even if Contractor responds with a DVO, Subcontractor has the benefit that the DVO confirms – and hence clarifies – the duty to carry out the disputed work; see Art 16.2 second para. Upon receipt of a DVO, Subcontractor is also entitled to request a so-called expert decision under Art 16.3. Timely notification of such VORs may also incentivise Subcontractor to collect contemporary evidence of schedule and/or cost impact.

(116) At the outset, the preclusive effect prescribed by NTK Art 16.1 might seem "formalistic" and counterintuitive. For example, it may appear counterintuitive that a Subcontractor shall not be entitled to a VO merely because the Contractor instructed the work by an "informal" instruction; in particular, if it was evident for both parties, including their Representatives, that the work constituted a Variation to the Work. However, on balance – considering the legitimate need for clarity, predictability, and timely identification of disagreements concerning the scope of Work – the provision is considered to strike a fair balance in large and complex projects. One of the reasons that Art 16.1 seems to have worked well in practice is because NTK is mainly used in large and complex contracts between highly professional parties. In onshore projects, NTK has mainly been used in large infrastructure projects like the present Follo Line Project.

7 THE TRIBUNAL'S INTERPRETATION OF THE TERMS AND CONDITIONS

7.1 Must preclusion of an untimely VOR be invoked by a timely DVO?

7.1.1 Outline of the Parties' submissions

(117) Subcontractor holds that an argument of preclusion of a VOR because it was issued too late must be presented in a timely DVO. If not, the argument is lost. Subcontractor argues that this follows directly from the last sentence of the first paragraph of Art 16.2, cf. Knut Kaasen, *Petroleumskontrakter med kommentarer til NF og NTK 05*, 2006 p. 440 (CLA1 p. 2106), Knut Kaasen, *Tilvirkningskontrakter, med kommentarer til NTK 15 og NF*

15, 2018 p. 484-486 (CLA1 p. 3058), Borchsenius, "Norsk Fabrikasjonskontrakt 1987–en kommentar", in *Marius nr. 172* (1989) p. 72 (CLA1 p. 15111), and Bjerkem, *Norsk Totalkontrakt 2015 med kommentarer*, p. 192–195 (CLA1 p. 1508). As an alternative basis for the submission, reference is made to general private law principles of passivity.

(118) Contractor holds that an argument of preclusion shall be included in the DVO, but the preclusion argument is not lost if the DVO is issued late. Preclusion requires a clear regulation in the Contract. The wording of Article 16.2 only states that "[i]f contractor will claim that Subcontractor's request is submitted too late, this must be stated in the Disputed Variation Order". This does not imply that the right to argue preclusion will be lost before the DVO is issued. To lose a claim due to general principles of passivity depends on expectations of loyalty and activity in the specific contractual relationship, cf. HR-2018-383-A (RLA1 p. 1154) and HR-2020-2254-A (RLA1 p. 1225). There is a high threshold for deviating from the contract due to such passivity. Subcontractor has not evidenced any circumstances that would fulfil those requirements.

7.1.2 The Tribunal's assessment

(119) The question is contested between the Parties, and Contractor basically argues that it cannot be inferred from the wording or system of CoC Art 16.2 that Contractor must respond to a VOR by a DVO within the applicable deadline – "within a reasonable time" – to invoke that the VOR is submitted too late.

(120) The Tribunal agrees with Contractor that the wording of Art 16.2 does not provide an entirely explicit and firm answer to the disputed matter. Having said that, when it is stated in the last sentence of the first paragraph of Art 16.2 that preclusion must be "stated in the Disputed Variation Order", which shall be issued within "reasonable time", the most appropriate understanding is that preclusion is subject to a timely DVO. The inherent scheme of Art 16.2 clearly supports the interpretation. When Art 16.2 is read as a whole, the last sentence of the first paragraph setting out that Contractor must invoke that the VOR was submitted too late, the most sensible understanding is that it refers back to the so-called ping-pong system in the beginning of the provision, where Contractor "shall, within a reasonable time" respond to a VOR by a VO and/or a DVO. The most appropriate understanding of the last sentence and the logic of the provision as a whole is, therefore, that Contractor's right to invoke that a VOR was submitted too late is subject to a timely DVO.

(121) On the other hand, as invoked by Contractor, there is case law stating that preclusion of a claim cannot be inferred or implied from a contract; a severe effect as preclusion of a substantive claim for EoT and/or additional compensation must, as set out in Rt. 2009 p. 160, be clearly stipulated in the contract. The inherent logic, which is sound, is that severe effects like preclusion and time-bar should be predictable, and therefore preclusion of a claim should not come as a surprise to a party to the contract. The present question, however, is not about preclusion of a substantive claim on the part of Contractor, but about preclusion of a contractual defense to invoke preclusion against Subcontractor's substantive claim. Hence, the effect is not that Contractor loses a substantive claim, only that Contractor cannot invoke a defense against Subcontractor's substantive claim based on preclusion. The effect of losing such a formal defense based on preclusion must be considered less severe than preclusion of a substantive claim, especially if Contractor is in breach of its obligation to respond within "reasonable time".

(122) On this basis, the Tribunal does not consider it decisive that it is not explicitly and firmly stated in Art 16.2 that Contractor's right to invoke preclusion against a VOR is subject to a timely DVO. In particular, when the Tribunal considers the latter to follow from a reasonable understanding of the provision as a whole. The Tribunal also finds support for the latter interpretation in the purpose of the VO-system. First, as indicated above in section 6 (118), the aim of a timely VOR is to enable Contractor to monitor costs, progress, etc. At the same time, a timely response from Contractor is important for Subcontractor to get an answer to whether Contractor accepts the claim put forward in the VOR. The latter may be of great importance for Subcontractor, particularly where the work addressed in the VOR is on the critical path or necessitates acceleration measures etc. Furthermore, a timely DVO will confirm that Subcontractor, in any case, is obliged to carry out the work, even though it is contested. Second, by considering the preclusion of a VOR to be subject to a timely DVO, a certain balance is upheld between the Parties: While Subcontractor has to submit a VOR "without undue delay", Contractor has to respond within "reasonable time". Third and more importantly, it would be unfortunate if Contractor could breach its obligation to respond within "reasonable time" and at the same time benefit of invoking preclusion of a VOR. The latter could even undermine Contractor's incentives to respond to a VOR timely and hence "allow" speculation on Subcontractor's cost: Contractor could have the cake and eat it, while Subcontractor would be put in a difficult situation.

(123) On this basis, the Tribunal *concludes* that the preclusion of a VOR based on the preclusive deadline in CoC Art 16.1 third paragraph is subject to a DVO submitted within "reasonable time" stating that the VOR was submitted too late. Alternatively, that the VOR was submitted too late can be invoked later in an update of the DVO, but not after the deadline for submitting a DVO expired.

7.2 The legal effects of not timely responding to a VOR: "deemed VO", "as claimed" or passivity effects?

7.2.1 The Parties' submissions

(124) A recurring submission made by Subcontractor in the present case is that the legal effect if Contractor does not respond to a VOR within "reasonable time" is that the claims put forward in the VOR must be considered accepted by Contractor by way of a "deemed VO" or "as claimed"; see, for example, Subcontractor's Opening Statement Part 1, in particular section 9. The submission relies on Contractor's asserted "misuse" of the VO-system, and even though CoC Art 16 does not explicitly provide that the legal effect is "deemed VO" or "as claimed", it must be considered to be an inherent part of the VO-system. As an alternative basis for the submission, reference is made to general private law principles on passivity.

(125) Contractor rejects Subcontractor's submission and holds that there is no provision in the Contract stating that an unanswered VOR automatically becomes a VO or a DVO. Without such clear regulation, an unanswered VOR will not be deemed a VO or a DVO. Under NTK 07, a delayed issue of a reply to a VOR would, as a maximum, constitute a breach of Contract that will give grounds for a new VOR, ref. Art. 27.

7.2.2 The Tribunal's assessment

(126) As set out above in section 7.1.2, the Tribunal has concluded that preclusion of a VOR is subject to a timely submitted DVO.

(127) The present submission by Subcontractor goes one step further regarding the legal effect of not responding timely to a VOR: In addition to being prevented from invoking preclusion, Contractor is considered to have accepted the claims put forward in the VOR. The submission is referred to as "deemed-VO" or "as claimed", and the latter phrase shall be understood to entail that Contractor shall be considered to have accepted that there is a Variation *and* the effects of the Variation regarding schedule and compensation as suggested in the VOR.

(128) The Tribunal fully agrees that such a solution would indeed incentivize Contractor to respond to a VOR within "reasonable time". It would also ensure a more mutual balance between the effect of preclusion of Subcontractor's VOR under Art 16.1 second paragraph ("then he loses the right to claim that the work is a Variation to the Work") and "preclusion" on the part of Contractor. The "preclusion" on the part of Contractor would not any longer be limited to not being entitled to invoke that the VOR was submitted too late.

(129) Interpretation of commercial contracts is, however, not about how a contract should have been drafted or what the Tribunal considers to be the most reasonable solution. Reference is made to the number of Norwegian Supreme Court decisions where it is firmly stated that the objective starting point is particularly strong in the interpretation of "agreed" standard contracts like NTK 07; see, for example, Rt. 2010 p. 1345 (para 59), with further references. A consequence of the latter is a high threshold to imply a provision that has no clear support in the wording of the contract, in particular if the implied provision (read: unconventional interpretation) cannot be aligned with the wording of the contract or the contract appear as a deliberate compromise; see Bjøranger Tørum, *Interpretation of Commercial Contracts*, 2019, paragraph (101).

(130) On this basis, Subcontractor's interpretations cannot prevail. Neither the wording nor the scheme of CoC Art 16.2 supports a "deemed VO"-mechanism. The latter is supported by the fact that NTK 07 Art 16, which the CoC is based on, has not been interpreted to provide any such "deemed-VO" mechanism. Reference is made to Kaasen, Formalisme i komplekse tilvirkninsgkontrakter, Tidsskrift for Forretningsjuss, 2009, pp. 61-62, and Bjøranger Tørum, Sammenlignende analyser av fabrikasjon og entreprise, Tidsskrift for Forretningsjuss, 2010, pp. 193-195. It should also be noted that to incentivize Contractor to respond to a VOR within "reasonable time" it would have been sufficient to insert a "deemed-DVO" mechanism, which at the time of Contract was found in one of NTK 07's siblings, namely Norwegian Standard Contract ("NSC") 05 Art 16.2 third paragraph. If there had been a basis to imply a "deemed" mechanism by way of interpretation, it would therefore be more appropriate to imply a "deemed-DVO" mechanism. By contrast to a "deemed-VO" mechanism it would provide a more neutral solution.

(131) In any case, even if a "deemed-VO" mechanism was considered appropriate, it should only entail that Contractor was deemed to have accepted that there was a Variation.

Subcontractor's submission, however, goes one step further and entails that Contractor shall be deemed to have accepted the effects of the Variation – as suggested by Subcontractor in the various VORs, in principle even if the effects put forward in the VOR were not properly substantiated or inflated. That would be an extremely severe effect which cannot be aligned with the Contract, and it would also be a significant deviation from contract practice more in general.

(132) Based on the above, the Tribunal *concludes* that the CoC Art 16 cannot be interpreted to provide a "deemed-VO" or "as claimed" mechanism.

(133) A similar effect might in principle be achieved based on general private law principles of passivity. The latter is, however, a matter that is not much enlightened in the context of each of the claims in the present case, and therefore the Tribunal has no proper basis to consider that as a part of the individual claims being a part of the present partial award. In any case, because such passivity effects will not sit well with the comprehensive regulation of preclusion and time-bar in CoC Art 15 and 16, which leaves little room to rely on general principles of passivity, there must be a significant threshold considering Contractor – merely based on passivity – to have accepted that a VOR constituted a Variation, and there must be an even higher threshold considering Contractor – merely based on passivity – to have accepted that a VOR constituted a Variation *and* the suggested effects set out in the VOR. The threshold entails that there must be a requirement that Contractor by way of statements from the Contractor Representative or by his behavior gave Subcontractor legitimate and unambiguous reasons to believe that the claim and its suggested effects were accepted. Those requirements will not be met if Subcontractor knew or should have known that a VOR, despite no timely DVO, was contested.

(134) On a separate note, without any bearing on the Tribunal's conclusion, it can be mentioned that at the time of Contract, the successor of NTK 07, NTK 15, had been launched. To ensure a swift response to VORs, NTK 15 Art 16.2 first paragraph i.f. introduced a "deemed DVO"-mechanism. If NTK 07 had been considered to already include a "deemed"-mechanism, it would hardly be necessary to introduce such a mechanism in NTK 15. That NTK 15 introduced a "deemed *DVO*"-mechanism is also hard to align with the assertion that NTK 07 shall be construed to include a "deemed *VO*"-mechanism or "as claimed". As set out above, NTK 07 has not been interpreted to provide any "deemed VO" or "as claimed" mechanism.

(135) A third line of argument related to "deemed-VO" and "as claimed" is Subcontractor's asserted "relaxed standard of proof", which is a recurring submission; see, for example, Subcontractor's Opening Statement Part 1, in particular section 9. The Tribunal cannot see that the effect of not timely responding to VOR's or any other kind of "misuse" of the system in CoC Art 12-16 may trigger a "relaxed standard of proof". The applicable standard of proof is that Contractor, at the balance of probability, must prove the effects put forward in the VORs. The Contract does not provide any basis to allow Subcontractor to rely on a lower standard of proof. However, if Contractor does not respond to a VOR within "reasonable time", that may be considered a breach under Art 27, but Art 27 neither stipulates a relaxed standard of proof nor a switched burden of proof.

7.3 The limits of Contractor's entitlement to impose Variations to the Work under Art 12.1 of the CoC

7.3.1 *The Parties' submissions*

(136) As a separate basis for the Part 1 Claims, Subcontractor holds that Contractor has ordered Variations to the Work that exceeds the limit set out in the third paragraph of Art 12.1 of the CoC. The provision reads as follows:

> "Nevertheless, Contractor has no right to order Variations to the Work which cumulatively exceeds that which the parties could reasonably have expected when the Contract was entered into."

(137) Subcontractor holds that the threshold was reached in July 2019 and thus applies to all Part 1 claims. Subcontractor argues that although the threshold for the limitation to impose Variations to the Work under the third paragraph of Art 12.1 is to some extent subject to "discretionary" assessment and not based on a fixed percentage, examples from other contractual standards provide guidance. A 15% limit has been recognized internationally in onshore standard contracts and in Norwegian standards such as NS3430, NS 8405/8407, cf. Helge Jakob Kolrud, "Kommentar til NS 3430", (1992) p. 230 (CLA1 p. 1634) and "NS 8405 Kommentarutgave" (2004), p. 222 (CLA1 p. 1641). NS 8415/8417 uses a 20% limit. Subcontractor holds that the Variations to the Work that the Part 1 claims are based on, exceed this threshold

(138) Subcontractor further argues that the fact that Subcontractor, during the negotiations of the Contract in January 2016, suggested including a limit on Variations of +/- 10% of the Contract Price, cf. e-mail from Mr Fernandez of 15 January 2016 (FA 25 p. 987) and

draft CoC with comments (FA25 p. 1045), supports that the Variations to the Work exceeded what the Parties could reasonably have expected.

(139) Furthermore, in support of their position, Subcontractor has referred to Contractor's letter to Bane NOR on 25 April 2022 (FA25 p. 5908), where Contractor claimed that VOs corresponding to 30% of the contract price under the Main Contract had been carried out and that this exceeded the limit for VOs in the corresponding provision in Art 12.1 of the Main Contract.

(140) Subcontractor rejects that the limit in Art 12.1 only applies to VOs and not VORs. The limit applies to all Variations to the Work. This also includes VO 26 and VO 30, which relate to work under Subcontractor's right of first refusal. It was not foreseeable for the Parties that work under a right of first refusal could be ordered.

(141) Subcontractor argues that the consequence of exceeding the threshold for Variations to the Work under Art 12.1 is that the compensation provisions and rates in Appendix B do not apply to Subcontractor's work under the VOs and VORs in the dispute. Subcontractor refers to LA-2017-194079 (CLA1 p. 947) and TOSL-2020-99720 (CLA1 p. 1378) and claims that they are entitled to compensation as claimed. Further, the exceedance implies that Subcontractor's claims cannot be time-barred since the time-bar provisions apply to Variations to the Work within the limit. For the same reason, Subcontractor cannot be considered in breach of the rolling analysis requirement in Art 13.3, the limit to initiate court proceedings in Art 15.3 and provisions on documentation requirements since these provisions also apply to Variations to the Work within the limit of Art 12.1. In addition, the exceedance of the limitations in Article 12.1 is relevant for assessing whether a Variation exists.

(142) Contractor rejects that the limit in the third paragraph of Art 12.1 has been exceeded. Contractor has not imposed Variations to the Work that cumulatively exceed what the Parties could reasonably have expected when the contract was entered into. The reference point regarding when "the contract was entered into" is March 2016. The relevant comparison is what the "Parties" could reasonably have expected. The wording "could" implies the relevance of both foreseeable and unforeseeable Variations to the Work, and the term "cumulatively" implies that the net effect of Variations is relevant.

(143) Contractor holds that the purpose of the limit in Art 12.1 is to secure the need for flexibility. The purpose is not to limit the applicability of the pricing mechanism in Appendix B nor to form a basis for contract revision.

(144) Contractor asserts that only "real" (no: "ekte") Variations are relevant when assessing the limit. The limit is irrelevant for claims based on impediments, breach of contract, force majeure incidents or law changes, cf. Knut Kaasen "Tilvirkningskontrakter med kommentarer til NTK 15 og NF 15", (2018) s. 388 (RLA1 p. 3112) og Sofie Komissar, "Uekte endringer", Marlus nr. 434, (2014) avsnitt 4.3.2 (RLA1 p. 3427). Based on this, Contractor holds that the relevant Variations when assessing the limit are only regular changes in Subcontractor's scope of work issued through a VO based on Art 12.1/16.1 of the CoC are relevant. Contractor also holds that the limit in Art 12.1 does not apply to VOs issued to activate a "right to first refusal".

(145) Contractor argues that the Parties had reasonable grounds to expect a significant amount of Variations when the contract was entered into. Subcontractor's proposal during the negotiations of the Contract to quantify the limit to 10 % (FA25 p. 1030 and p. 1045) was rejected by Contractor. Further, the Follo Line project is Norway's largest and most complex infrastructure project ever planned and built, and the Subcontractor's scope was extensive. During the pre-qualification phase, Subcontractor signaled its great capacity, and Subcontractor never took any reservations regarding the increase in scope nor the applicability of the variation rates.

(146) Contractor asserts that they did not impose Variations to the Work beyond the limit. The relevant Variations to the Work are all directly connected to Subcontractor's scope of work. The Variations in the case are cumulatively within what the Parties could have reasonably expected. Most Variations were issued early in the project when the Parties could expect larger and more fundamental Variations to the Work.

(147) Contractor rejects that the limit can be calculated in percentages. VOs before the finalization of EPE in July 2019 are irrelevant to the assessment. The same applies to VO 26 and VO 30, which were given as part of the right to first refusal. Further, none of the disputed VOs should be included in the assessment. If the Tribunal finds that a VOR is a Variation to the Work, only "real" Variations are relevant. The letter from Bane NOR (FA25 p. 5908) is of no relevance for assessing the limit in Art 12.1

(148) If the Tribunal deems that the limit in Art 12.1 is exceeded, Contractor asserts that the rates in Appendix B apply. There is no support in the wording or the contractual system for Subcontractor's position that Appendix B does not apply in this situation. Subcontractor's interpretation would mean that the limit in the third paragraph of Art 12.1 serves as a basis for contract revision. Contractor disagrees with the conclusions and legal interpretation in the judgments in LA-2017-1940079 and TOSL-2020-9970.

(149) If the Tribunal finds that Art 12.1 also limits the applicability of Appendix B, Contractor asserts that the valuation of the works must be assessed based on the reimbursable principle according to Norwegian background law.

7.3.2 The Tribunal's interpretation

(150) The first two paragraphs of CoC Art 12.1 read (the Tribunal's emphasis):

> "Contractor has the *right* to order such Variations to the Work as in Contractor's opinion are *desirable*.
>
> Variations to the Work may include an *increase or decrease in the quantity*, or a change in character, quality, kind or execution of the Work or any part thereof, as well as Appendix C."

(151) The first paragraph of Art 12.1 provides a unilateral and discretionary right for Contractor to order Variations to the Work, while the second paragraph clearly indicates that the right is extensive both qualitatively and quantitatively. The latter is confirmed by the last part, stating that Contractor is also entitled to order changes to the schedule.

(152) Most construction contracts provide a unilateral right to order certain Variations to the Work, typically additional work. Contractor's right to order Variations to the Work under NTK 07 Art 12.1, however, goes beyond what is common in regular construction contracts. There are several reasons for the significant flexibility provided to Contractor in the first and second paragraphs. *First*, certain flexibility is required to enable Contractor to adapt to changed circumstances or needs after the contracts were entered into. *Second* and more importantly, in the present context, in large and complex EPC contracts with a functionally described scope of work, the design and engineering are rarely completed at the time of the contract. The latter entails a risk that the design has to be modified after the contract was entered into; in particular, if the design was merely conceptual at the time of the contract. Such design modifications, which frequently occur as a part of the design development process, may again require changes to the

procurement and construction. *Third*, unforeseen events, for example in other contracts in the same project, may require changes in the scope of work or in the sequence of the work to ensure the project's overall progress.

(153) The cost of the great flexibility provided to Contractor in Art 12.1 is limited predictability for Subcontractor, who must reserve the capacity required to handle Variations. It would, however, be most unfortunate if there were no boundaries to Contractor's right to order Variations to the Work. Therefore, to strike a fair balance between the Parties, the third paragraph of Art 12.1 provides the following exception (hereinafter the "Exception") (the Tribunal's emphasis):

> "Nevertheless, Contractor has no right to order Variations to the Work which *cumulatively* exceeds that which the *parties* could *reasonably* have expected *when the contract was entered into.*"

(154) The Exception is not structured around a firm quantitative limit, for example certain percentages of the contract sum at the time of contract. By contrast to the offshore construction contracts NF/NTK, the standard onshore construction contracts ("NS-contracts") have traditionally provided a quantitative limit on company's right to order Variations to the Work. See, for example, NS 8405 Art 22.1. Instead, the wording of the third paragraph of Art 12.1 clearly provides a more discretionary and complex test. In such a context, where the Contract verbatim incorporates the discretionary Exception in NTK Art 12.1, and there are no indications that the Parties were able to agree on and replace the discretionary limit with a limit set out in percentages, the firm wording must prevail. The latter understanding is to some extent supported by the fact that Subcontractor in January 2016 suggested to include a limit in percentages of the Contract Price, but with reference to the protection provided by the discretionary Exception, no such limitation was eventually accepted by Contractor. Reference is made to Contractor's e-mail dated 29 January 2016 (FA6 p. 1367). For the same reasons, Subcontractor cannot be heard with its submissions that the Exception shall be interpreted in light of the percentages in the NS-contracts.

(155) The wording of the third paragraph of Art 12.1 is phrased as a limitation for Contractor: "Contractor has no right to order" Variations which "cumulatively exceed". When it is read in conjunction with the first paragraph, however, it is clear that the Exception must be invoked by Subcontractor. The purpose of the Exception supports the latter; to protect a subcontractor against excessive and burdensome Variations. The need for

clarity and predictability calls for the same interpretation. If a subcontractor considers a further Variation or Variations to trigger the Exception, contractor should be explicitly made aware of that. In the absence of such a notice from subcontractor, contractor should be entitled to assume that subcontractor is obliged to carry out the further Variation(s) under the first paragraph.

(156) On this basis, the Tribunal concludes that the Exception must be invoked by Subcontractor, typically as a part of the VOR where it is asserted that the work is considered a Variation. Once Subcontractor has invoked the Exception, however, it should not be necessary to reiterate the same in subsequent VORs because it goes without saying that if Subcontractor considered Variation No. I-XX to trigger the Exception, it also considers Variation No. XXI, etc., to trigger the Exception.

(157) Basically, the key legal test compares an *ex ante* and an *ex post* perspective. The *first part of the test* is to determine a "baseline" based on an ex ante perspective: what the Parties could reasonably expect at the time of the Contract. After having established what the Parties could reasonably expect at the time of the Contract, which is highly dependent on the particular facts of the case in question, the *second part of the test* is to consider whether the Variations to the Work ordered by Contractor after the contract was entered into in fact turned out to exceed what the Parties could reasonably expect at the time of contract.

(158) The first part of the test refers to what the "parties" could "reasonably expect" at the time of the Contract. The "parties" cannot be understood as a reference to what the parties actually understood. When "parties" is read in conjunction with "reasonably" expect, it must be understood as an objective assessment of what they should – in the capacity of professional parties, and based on the available information about the contract and the project – have understood at the time of contract.

(159) The reference to "Variations" entails that only work *eventually* considered to be a "Variation", typically by way of an expert decision or by an arbitral award, shall be taken into account under the Exception. The latter follows clearly from the defined term "Variations", which is used in the third paragraph of Art 12.1. Hence, Subcontractor cannot unilaterally trigger the Exception merely by asserting that a specific work constitutes a Variation, and Contractor cannot unilaterally undermine the Exception by issuing a DVO. For the same reasons, it is not relevant to consider whether the

Parties, at the time of the Contract, could expect a number of VORs and DVOs, which may also turn out to be due to subsequent commercial and legal considerations.

(160) The Tribunal finds it clear that pre-agreed options – e.g. work that Subcontractor on a separate contractual basis, regardless of the first paragraph of Art 12.1, can be ordered to be carried out as per the option, typically at Contractor's sole discretion – shall not be taken into account under the Exception. The purpose of the latter discretionary Exception is to provide certain boundaries concerning work *unknown* at the time of the Contract. However, if a subcontractor has pre-agreed on optional work in a contract, and contractor chooses to exercise such an option, subcontractor must have reserved capacity for the optional work since it accepted the option.

(161) That optional work shall not be taken into account also follows from the wording of the third paragraph of Art 12.1. Exercising a pre-agreed option cannot reasonably be considered a "Variation" under the third paragraph of Art 12.1. In the context of Art 12.1, it is evident that "Variations" refers to changes imposed by Contractor under the first paragraph of Art 12.1. That an option, for practical reasons, might be exercised by using the format of a VO does not change the latter, provided that it follows from the "VO" that the instructed work is based on a pre-agreed option and not the first paragraph of Art 12.1.

(162) Similarly, the Tribunal does not consider a pre-agreed "right of first refusal" to be a "Variation" under Art 12.1, albeit a "right of first refusal" has no firm meaning. Typically, it gives subcontractor a right to match or refuse an offer made by another subcontractor, and hence, it is a kind of option for the Subcontractor, which evidently cannot trigger the Exception. Sometimes, however, the term is also, less precisely, used as an option for contractor towards subcontractor to order additional work. However, both meanings of the term entail that the (pre-agreed) option is not unknown at the time of contract, and it cannot in any case be considered a "Variation".

(163) The effect of triggering the Exception in the third paragraph of Art 12.1 is a highly contested matter that strongly affects the calculation of the subcontractor's claims.

(164) The Exception states that if Variations "cumulatively exceeds that which the parties could reasonably have expected when the Contract was entered into", Contractor is not entitled to order further Variations. The Tribunal considers the latter to follow explicitly and clearly from an objective interpretation of the phrase "Contractor has no

right". Hence, from the time the Exception is triggered because the Variations "cumulatively exceed", Subcontractor can unilaterally refuse to carry out further Variations. The Parties may nevertheless agree that Subcontractor shall carry out further Variations. Because Subcontractor is not obliged to carry out further Variations after the Exception is triggered, it will be in a strong bargaining position: Subcontractor is free to suggest particular (more lucrative) commercial terms than set out in the contract for further Variations. Contractor is, however, not obliged to accept Subcontractor's suggested commercial terms, and it might be that the Parties eventually cannot agree on the commercial terms for further Variations. If so, Contractor may have to engage another subcontractor to carry out further Variations.

(165) But what happens if a Subcontractor proceeds to carry out further Variations despite no agreement on particular commercial terms? In the absence of clear indications that the Parties eventually agreed on particular commercial terms for further Variations, the Tribunal considers the principle in CoC Art 13.2 to apply accordingly: "Unless otherwise agreed between the parties, the price for Variations to the Work shall be determined in accordance with Appendix B".

(166) *First*, if Subcontractor decides to proceed carrying out further Variations without any agreement on particular commercial terms, it has voluntarily chosen to do so. In the absence of agreement on particular commercial terms for further Variations, Subcontractor had no reason to believe that it would be compensated beyond the agreed commercial terms for Variations as per Art 13.2.

(167) *Second*, the need for clarity and predictability calls for applying Art 13.2 accordingly. In the absence of agreement on the suggested particular commercial terms, it is evident that an arbitral tribunal cannot just apply non-agreed terms unilaterally suggested by a Subcontractor. The latter would de facto entail that a subcontractor could dictate the commercial terms for further Variations and get in the same position as if the suggested terms were accepted by contractor. In this context, it is difficult to see that there is a more appropriate default solution than relying on the prices already agreed for Variations as per the principle in Art 13.2. The latter presumably reflected a proper price at the time of the contract, and more importantly, the Parties agreed on those prices, and hence, it serves as an appropriate benchmark also for further Variations. Alternatively, a tribunal would have to determine the applicable prices for further

Variations based on various considerations; typically, "cost-plus" or "market prices". An arbitral tribunal is, however, not well placed to determine prices.

(168) *Third*, technically, it might be difficult to draw an exact line between Variations that could have been "expected when the Contract was entered into" and Variations that "cumulatively exceed" the latter, in particular in projects with numerous minor Variations. The latter problem would, however, be even more compelling by another default solution than suggested, namely that the prices agreed for Variations do not apply to further Variations.

7.3.3 *The Tribunal's overall remarks*

(169) When the Tribunal applies *the first part of the test* to the present contract and project, it was evident to the Parties that the Contract was a part of a very large, complex and long-term project. In fact, it was one of the largest infrastructure projects in Europe. The complexity of the project was also a recurring topic in the negotiations between the Parties leading up to the Contract, and the complexity was also elaborated on in the Contract; not least in the ITT included in Appendix E of the Contract. Also, the scope of the present Contract was indeed complex; see, in particular, the summary set out in Art 1.4 of Appendix A in the Contract. The latter was also illustrated by the comprehensive regulation of engineering responsibilities in Art 3 of Appendix A of the Contract and the Design Coordination Manual referenced in Art 3.1 i.f.

(170) More importantly, Art 3.1 first paragraph of Appendix A in the Contract explicitly stated that "Engineering Package E" (EPE) would be developed and completed after the time of the Contract, and that Subcontractor was to provide detailed engineering "based on" the said EPE. Hence, at the time of Contract it must have been clear for the Subcontractor that the design and engineering was far from completed, and Art 3.1 fifth paragraph stated that Subcontractor should contribute to the design development process. Furthermore, the scope of work in the Main Contract and the Contract were to a large extent functionally described; see, for example, Art 5 of Appendix A in the Contract, in particular, Art 5.2.11.5 providing a high-level description of the LVS.

(171) On this basis, in particular the incomplete design at the time of Contract, the Tribunal considers that the Parties, at the time of Contract, could "reasonably expect" numerous Variations to the Work, including several large Variations. Due to the incomplete

design at the time of the Contract and the scale of the project, the Parties could also expect certain complex Variations.

(172) The next step for the Tribunal is to consider *the second part of the test*: whether the Variations to the Work ordered by Contractor after the contract was entered into eventually exceeded what the Parties could reasonably expect at the time of the Contract. The reference to "Variations to the Work which *cumulatively* exceeds" refers to the (cumulative) Variations ordered by Contractor *when* Subcontractor invoked the Exception. The term "cumulatively" clearly indicates that the second test relies on an assessment of the cumulative effects of the Variations. Hence, the first Variations, for example, Variations No. I-X, may not trigger the Exception, while Variations No. XI-XX may, together with Variations No. I-X trigger the Exception. More importantly, the cumulative approach points towards a chronological assessment. The latter entails that it is hardly possible for the Tribunal to properly consider whether Variations No. XI-XX trigger the Exception without at the same time considering the cumulative effect of Variations No. I-X, unless it is evident that Variations No. XI-XX alone are sufficient to trigger the Exception.

(173) As set out above, the Exception in the third paragraph of Art 12.1 only takes into account what is eventually considered to be "Variations". Hence, the Tribunal must, as an inherent part of the second test, consider whether the Disputed Variation Orders constitute Variations. Part 1 Claims and the present partial award, however, do not include all the VORs and DVOs that are contested between the Parties. For the same reason, there is no proper basis for the Tribunal to determine as a part of the present partial award if and when the various VORs and DVOs – if they are eventually considered Variations – "cumulatively" exceeded what could reasonably be expected at the time of Contract. The Tribunal can only provide an overall and highly preliminary assessment based on the claims included in Part 1 Claims – without prejudice to Part 2 Claims. The most appropriate method to provide such an overall and highly preliminary assessment seems to be to consider whether the claims being a part of I constitute Variations. However, to the extent a Part 1 claim is not considered a Variation, it cannot *per se* trigger the Exception.

(174) The Tribunal has above concluded that in the absence of clear indications that the Parties eventually agreed on particular commercial terms for further Variations, the principle in CoC Art 13.2 applies accordingly: "Unless otherwise agreed between the

Parties, the price for Variations to the Work shall be determined in accordance with Appendix B". Furthermore, the Tribunal cannot see that there are any indications that the Parties agreed on particular commercial terms for further Variations. Hence, even if Subcontractor is heard with its submission that the Variations under the present Contract in total triggered the Exception in the third paragraph of Art 12.1, the particular commercial terms suggested by Subcontractor will not – in the absence of a mutual agreement – apply. Instead, the applicable prices referenced in CoC Art 13.2 apply in the absence of such agreement. The Contract does not provide any support that Subcontractor, if it invokes the Exception, is entitled to unilaterally determine new commercial terms for the excessive Variations. New commercial terms are subject to mutual agreement. The Exception must, however, be understood to entail that it is entitled not to carry out further Variations.

(175) The Tribunal cannot see that it is required or appropriate – as a part of the present partial award – to consider if and when the Exception was triggered based on the Part 1 Claims. As indicated, an assessment of the Exception merely based on the Part I claims would, in any case, be highly preliminary. As indicated above, however, it should be noted that the Part 1 Claims-VORs not considered to be Variations in the present partial award cannot *per se* trigger the Exception. It should also be noted that the conclusions below in sections 8.3 and 9 regarding the distribution of engineering responsibilities and VOR 40 may have a bearing on the Exception.

(176) The Tribunal has noted that Subcontractor submission that Contractor by "misuse" of the VO-system – e.g. rejecting legitimate VORs and not making timely payments under the Variation Orders – used Subcontractor as a "bank" for Contractor. As set out above, however, it follows from the CoC Art 12.1 that the Parties agreed on an extensive right for Contractor to issue Variation Orders. That it could take time to be paid for Variation Orders where the effects of a Variation are contested could not have been a surprise. Furthermore, it follows clearly from the CoC Art 16.2 second paragraph that Subcontractor also have to carry out work set out in Disputed Variation Orders. It could not have been a surprise that the latter could entail a burden of liquidity; that it could take time to be paid for Disputed Variation Orders. The latter is a recurring issue in many large and complex projects, and cannot as such be considered equivalent to "misusing" Subcontractor as a "bank".

7.4 Schedule impact I: Starting points to determine schedule effects

7.4.1 Outline of the Parties' submissions

(177) Subcontractor holds that the calculation of the claim for EoT must be based on a "contemporaneous approach", where the actual progress must be compared to the progress Subcontractor would have had in a hypothetical event where the Variation or interruption did not occur, cf. Rt. 2005 p. 788 paragraph 51 (CLA1 p. 669). The assessment shall be specific and individual. The Tribunal is not bound by what the Parties originally or during the project considered the critical path, cf. LB-2011-95644 (CLA1 p. 1122-1123). Work outside the critical path may be relevant if it binds up resources that would have been used on the critical path, cf. LB-2011-95644 (CLA1 p. 1122).

(178) Subcontractor further holds that the starting point for the contemporaneous approach is the situation when each VOR was presented. From this starting point, the activities affecting the contemporaneous longest critical path are identified using the MPRs. The EoT is then calculated based on the contemporaneous effect on the schedule until the event is no longer on the longest critical path.

(179) Contractor rejects Subcontractor's methodology for calculating EoT. Contractor holds that Subcontractor is only entitled to EoT for actual effect on the contract schedule. According to Art 13.3, cf. Art 11.1, Subcontractor is entitled to EoT if Variations cause *accumulated net effects* on the contract schedule. An objective interpretation of this provision implies that an actual cause is required, cf. Kaasen, Tilvirkningskontrakter, 2018 p. 421-423 (RLA1 3145). If no agreement can be made for each VO, the effects of Variations to the Work must be assessed factually and *retrospectively*. The causation must be established by the steps laid out by the Supreme Court in HR-2019-1225-A (RLA 1196).

(180) Contractor further argues that there is no case law or legal theory supporting Subcontractor's method of calculating EoT. It is directly in contrast with HR-2019-1225-A. It is detached from reality and is solely based on the input of their own programmes.

7.4.2 The Tribunal's overall remarks

(181) Determining the *in casu* schedule effects of Variations is not a part of Part 1. For the same reason, the Tribunal finds it most appropriate to only provide certain overall

contractual and legal remarks on some of the disputed matters related to schedule effects. The latter entails that the below remarks merely address certain selected contractual and legal starting points to determine schedule effects of Variations, which entail that it may be necessary to determine further contractual and legal matters in Part 2.

(182) The first question is whether CoC Art 12-16, which governs Variations to the Work, provides starting points to determine schedule effects. The first paragraph of Art 12.2 states that "When Contractor issues a Variation Order, Subcontractor shall without undue delay submit an estimate to Contractor". The second paragraph of Art 12.2 (a)-(e) provides what the said estimate shall contain, and item (d) states that it shall set out "The effect on the Contract Schedule as far it is possible in the specific case". The Tribunal considers Art 12.2 to merely govern what the estimate shall contain. Therefore, item (d) in Art 12.2 does not provide guidance on how the Tribunal shall determine the schedule impact if the Parties disagree on the schedule impact.

(183) Another question is whether CoC Art 13 provides guidance regarding the contested matter. The heading of CoC Art 13 reads the "Effects of a Variation to the Work". While Art 13.2 provides the principles for determining the "price for Variations", Art 13.3 governs the "effects of Variation to the Work on the Contract Schedule". The first paragraph of Art 13.3 reads (the Tribunal's emphasis):

> The effects of a Variation to the Work on the Contract Schedule shall be *agreed* upon on the basis of the *accumulated net effect* of the individual variation or as further described in Appendix B. The effect on the Contract Schedule shall be *agreed* in the *individual* Variation Order to the extent possible in the specific case.

(184) Except for the alternative "or as further described in Appendix B," the provision is identical to NTK 07 Art 13.3 (second para). The Parties, however, have not invoked the alternative "or as further described in Appendix B" in the present context.

(185) The two references in the first paragraph of Art 13.3 to "shall be agreed" seem to entail that the provision does not govern the situation where the Parties cannot agree on the schedule impact (if any) of a Variation Order. The provision, particularly the second sentence, merely appears as a directive to the Parties to try their best to agree on the schedule impact (if any) in the context of each Variation. By contrast, the first sentence also refers to the "accumulated net effect", which goes beyond considering the schedule impact of the present Variation Order. However, the first sentence is also phrased as a

directive to the Parties, cf. "shall be agreed upon". The latter indicates that the Parties, in addition to considering the schedule impact of the present Variation, shall consider the "accumulated net effect".

(186) Based on the phrase "*shall be agreed* upon based on the *accumulated net effect*" (Tribunal's emphasis), the provision cannot be considered to explicitly govern the situation where the Parties cannot agree on the schedule impact. The Tribunal nevertheless considers the provision to have a bearing on the disputed matter. Even though the provision is phrased as a principle for how the Parties shall try to agree on the schedule impact, it would not be appropriate if an arbitral tribunal – if the Parties are not able to agree on the application of the principle of "accumulated net effect" – were not to be guided by the same principle.

(187) The next question is whether the principle "accumulated net effect" provides any guidance with regard to a "contemporaneous approach" or a "retroactive" approach.

(188) When Art 13.3 states that the "... effects of a Variation to the Work on the Contract Schedule shall be agreed upon based on the *accumulated* net effect of the individual variation ..." (Tribunal's emphasis), the Tribunal considers the term "accumulat*ed*" (Tribunal's emphasis) to have a retrospective approach. It seems to refer to the cumulative schedule impact that has already occurred as a consequence of previous Variations. At the same time, Art 13.3, particularly the second sentence, directs the Parties to try to agree on the schedule impact of the present Variation – at the time of the Variation Order, which must necessarily be a prospective analysis. Hence, the provision does not provide a "contemporaneous approach" *or* a "retroactive" approach. The provision relies on both perspectives.

(189) With regard to a contested matter in the present case, however, the Tribunal cannot follow the approach taken by Subcontractor in the C1, where the schedule impact was essentially calculated based on adding together the *estimated* schedule effect at the time of *each* VO. Even though Art 13.3 cannot be considered to provide a "contemporaneous approach" *or* a "retroactive" approach, it cannot be correct to calculate the EoT *only* based on adding together the *estimated* schedule effect at the time of *each* VO. First, considering the "gross effect" of previous Variations could easily entail that Subcontractor was granted *more* EoT than the delays *de facto* caused by the Variations. The latter would entail obvious concerns. A "gross effect" could undermine

Subcontractor's incentives to mitigate the schedule impact of Variations; typically, by trying to absorb and carry out the Variation within the schedule. Furthermore, by granting EoT beyond the delays actually caused by Variations and providing a kind of "grace period", the incentives for liquidated damages would be less efficient. Second, such a "gross" approach would not sit well with the fact that Art 13.3, as set out above, also includes a retroactive perspective which also takes into account what actually happened after the time of each Variation.

(190) In any case, the assessment of schedule impact must also take into account the "rolling" mechanism set out in Art 13.3.

7.5 Schedule impact II: The "rolling" mechanism in Art. 13.3 (2) – scope and effects

7.5.1 Outline of the Parties' submissions

(191) A recurring issue of disagreement under the individual claims is the scope and effect of the "rolling" analysis mechanism in the second and third paragraphs of Art 13.3 of the CoC.

(192) Subcontractor holds that the rolling analysis requirement in the second and third paragraphs of Art 13.3 of the CoC applies only to VOs, not VORs. The first paragraph refers to what is "agreed in the individual Variation Order", and the second paragraph refers to what is "not possible to agree on in the individual Variation Order". Subcontractor also holds that this is supported by the fact that Art 13.3 is connected to Art 15.3 of the CoC, which states that the views of both Parties on disagreements on the effect on the contract schedule "shall be recorded on the Variation Order". Further, Subcontractor argues that the conclusion is supported by an antithetical interpretation of Art 16.4 of the CoC, which states that an expert opinion shall be "treated as a Variation Order in accordance with Art. 15 until the dispute has been resolved". In addition, the time limit for court proceedings for EoT is in art. 15.3 compared to the time limit for court proceedings for DVOs in Art 16.5 supports this interpretation. It makes no sense to force court proceedings on EoT before court proceedings on DVOs. The Subcontractor also holds that the interpretation is supported by Kaasen, NTK 15 p. 429, footnote 37 (CLA1 p. 3003).

(193) Subcontractor further holds that the rolling analysis requirement only applies when the Parties disagree on the effects of the Variation, cf. the wording "not possible to agree

on in the individual Variation Order" in the second paragraph of Art 13.3. No analysis is necessary if the effect is "to be agreed" or similar.

(194) Subcontractor also asserts that the provision only regulates a situation where an analysis *has been* sent in time, cf. Art 13.3 third paragraph where it is stated that Subcontractor cannot claim that "Variation Orders that *have been agreed* or *are comprised by the analysis* as mentioned shall have effects on the Contract Schedule beyond what has been agreed or stated in the analysis". Hence, non-compliance with the deadline does not have preclusive effect.

(195) Subcontractor further argues that Art 13.3 does not contain specific regulations on how the analysis shall be presented, as long as it is written by the party representative. Hence, analysis of EoT in the MPRs and CSBs is relevant in assessing the rolling analysis requirement in Art 13.3. Subcontractor also holds that the requirement for the content of the analysis is not strict. The term "exhaustive" means a professional description of the effect, cf. Kaasen (2018) p. 430 (CLA1 p. 3004). However, a lack of exhaustive analysis or mitigation proposal is not preclusive.

(196) Subcontractor argues that they have presented timely analyses for all the VOs in accordance with Art 13.3.

(197) Contractor holds that Art 13.3 applies to both VOs and VORs based on the purpose of Art 13.3, which is to provide contemporaneous and concurrent updates on the EoT that will be claimed. A collective claim of the net effects containing an "exhaustive analysis" makes no sense if it does not include all relevant impacts, cf. Kaasen, Tilvirkningskontrakter (2018) p. 429 (RLA1 p. 3153) and Bjerkem, Norsk Totalkontrakt 2015 med kommentarer (2018), comments to art. 13.4 second paragraph, (RLA1 p. 2425). Contractor also argues that a lack of timely presentations of claims will have evidentiary consequences because it indicates a lack of contemporaneous evidence and weakens the credibility of an EoT claim presented much later. It also prevents Contractor from taking actions under Art 11 and 13.

(198) Contractor rejects that Art 13.3 only applies in the event of disagreement on the relevant VOs prescribed in the relevant three-month period. Each 13.3 analysis shall contain all VOs. There is no need for an actual dispute. In any case, when a VO states "to be agreed", there has been no agreement, i.e. when the analysis is due, it has not been possible to agree on the effects. Subcontractor's interpretation completely escapes the

purpose of the schedule analyses, which is to provide an exhaustive analysis of the schedule impacts incurred during the relevant period. This is impossible when Subcontractor limits the analysis to include only VOs and only VOs that have formally been disputed.

7.5.2 *The Tribunal's assessment of the scope of the "rolling mechanism": Is it limited to Variation Orders, or does it also include Disputed Variation Orders?*

(199) The heading of CoC Art 13 reads the "Effects of a Variation to the Work". While Art 13.2 governs the "price for Variations", Art 13.3 governs the "effects of Variation to the Work on the Contract Schedule". The first, second and third paragraphs of Art 13.3 read (The Tribunal's emphasis added):

> "The effects of a Variation to the Work on the Contract Schedule *shall be agreed upon* on the basis of the accumulated net effect of the individual variation or as further described in Appendix B. The effect on the Contract Schedule *shall be agreed* in the individual Variation Order to the extent possible in the specific case.
>
> Effects that are *not possible to agree* on in the individual Variation Order, shall be claimed collectively by Subcontractor after the expiry of each three-month period starting from the signature of the Contract. Such claim shall cover *every effect* of the *Variations* to the Work prescribed over the relevant three-month period. The claim shall contain an *exhaustive* analysis of the schedule consequences that Subcontractor considers such variations *will* entail. The analysis shall state which special measures that can be implemented in order to comply with the Contract Schedule and what effect it will have if such measures are not implemented.
>
> A claim containing such analysis must be *submitted no later* than 15 days after the expiry of the three-month period that the analysis concerns. Subcontractor cannot subsequently claim that Variation Orders that have been agreed or are comprised by the analysis as mentioned shall have effects of the Contract Schedule *beyond* what has been agreed or stated in the analysis. Contractor must give notification of its *decision* within reasonable time after receipt of the claim."

(200) The first contested matter to be determined by the Tribunal concerns the scope of the "rolling" mechanism set out in the second and third paragraphs: Are the provisions limited to the schedule impact of Variation Orders, or are they also applicable to Disputed Variation Orders?

(201) The heading of Art 13 reads "EFFECTS OF A VARIATION TO THE WORK." Articles 13.1 and 13.2 refer to "Variations," while the first paragraph of Art 13.3 uses the terms "Variation" and "Variation Order." Hence, even though the terminology is not consistent, a common feature is that the provisions do not use the term "Disputed Variation Orders."

(202) The first sentence of the second paragraph of Art 13.3 – "Effects that are not possible to agree on in the individual Variation Order" – must be understood to refer back to the last sentence in the first paragraph, where the starting point is that the Parties *shall try to agree* on the schedule impact and record such agreement in the "individual Variation Order". Both the first sentence of the second paragraph of Art 13.3 and the last sentence of the first paragraph use the term "Variation Order". In fact, both provisions refer to the "individual Variation Order". When the latter term is read in conjunction with the rest of the first sentence of the second paragraph, stating that schedule effects shall be notified and submitted every third month, the meaning of the second paragraph seems to be to provide a *default* mechanism where the Parties have failed to agree on the schedule impact under the first paragraph; e.g. where the Parties have failed to agree and record the agreement in the "individual Variation Order".

(203) So far, when the first sentence of the second paragraph is read in conjunction with the first paragraph, the Tribunal understands the provision in the second paragraph to govern how to notify and submit schedule effects of a *Variation Order*; e.g. the situation where Contractor admits that there is a Variation and therefore issues a Variation Order. In particular, the reference back to the second paragraph, where an agreement on the schedule impact shall be agreed (recorded) "in" the "individual Variation Order", supports that understanding. By contrast, recording agreement on the schedule impact "in" a Disputed Variation Order would make no sense.

(204) The second sentence of the second paragraph, using the more general term "Variations", might indicate a broader scope. However, at the same time, the second sentence starts with the phrase "Such claim", and "such" refers back to the previous sentence using the term "individual Variation Order". So does the third sentence, except it uses the term "variations" without a capital letter. The last sentence of the second paragraph provides no guidance on whether the provision is limited to Variation Orders.

(205) On this basis, the Tribunal considers the second paragraph – read as a whole – to clearly indicate that the scope of the provision is limited to Variation Orders. The next question is whether the third paragraph enlightens the disputed matter of interpretation.

(206) The third paragraph's first sentence provides limited guidance on whether the provision is limited to Variation Orders. The term "such analysis", however, refers back to the second paragraph, which seems to merely address Variation Orders.

(207) The last sentence of the second paragraph provides no guidance on whether the provision is limited to Variation Orders. The second sentence of the third paragraph, however, explicitly refers to "Variation Orders." When the latter is read in conjunction with the second paragraph — as a whole — the Tribunal considers an objective interpretation to provide an answer to the disputed matter: The scope of the provisions in the second and third paragraphs of Art 13.3 is limited to Variation Orders.

(208) Based on the above, the only indications that the scope of the provisions in the second and third paragraphs of Art 13.3 are not limited to Variation Orders are the terms "Variations" and "variations" in the second and third sentences of the second paragraph. However, as indicated, the said terms do not seem to entail a different meaning, which is supported by the fact that the terms refer back to the first sentence of the second paragraph.

(209) On the other hand, the purpose of the "rolling" mechanism in the second and third paragraphs of Art 13.3 is to narrow down the disputed schedule effects to certain windows, each running over three months. In principle, the latter is easier to determine than "rolling up" the whole project period. On this basis, it may be argued that the "rolling" mechanism should also apply to Disputed Variation Orders. The Tribunal is inclined to agree that it should also cover Disputed Variation Orders. The latter would also avoid the difficult "interface" between schedule effects that have to be notified and submitted under the "rolling" mechanism, namely schedule effects of Variation Orders and schedule effects of Disputed Variation Orders. In practice, there might be a significant overlap between such schedule effects, but only schedule effects due to Variation Orders are subject to preclusion under the third paragraph of Art 13.3. That the "rolling" mechanism perhaps *should* apply also to Disputed Variation Orders, however, is not sufficient to conclude that it does apply to Disputed Variation Orders as a matter of interpretation. In particular not in a context where such interpretation is hard to align with what follows from an objective interpretation.

(210) The latter interpretation — that the "rolling" (preclusive) mechanism cannot reasonably be understood to include Disputed Variation Orders — is supported by case

law stating that the preclusive effects of a contract require clear support in the wording of the contract. Hence, preclusive effects cannot be based on analogy or implied from the structure of the contract. See Bjøranger Tørum, Interpretation of Commercial Contracts, 2019, p. 173 (para 36), with references to case law.

(211) The Tribunal's analysis above can be summarized as follows: When the second sentence of the third paragraph is read in conjunction with the second paragraph, both using the term "Variation Order", the Tribunal considers an objective interpretation to provide an answer to the disputed matter: The scope of the provisions in the second and third paragraphs of Art 13.3 is limited to Variation Orders.

(212) Based on the above, the Tribunal *concludes* that the provisions in the second and third paragraphs of Art 13.3 merely apply to the schedule effects of Variation Orders. Hence, the schedule effects of Disputed Variation Orders are not subject to the "rolling" mechanism.

7.5.3 The Tribunal's understanding of the "rolling" schedule effect analysis

(213) The Parties disagree on the understanding of the "rolling" mechanism in the second and third paragraph of Art 13.3, in particular regarding the "exhaustive analysis".

(214) The second paragraph of Art 13.3 provides a particular notification mechanism for the situation where the Parties are not able to agree on the schedule effects as a part of a Variation Order: Subcontractor shall, after the expiry of every third month after the time of the Contract, exhaustively claim all schedule effects that were caused by or will be caused by Variation Orders within the said time window. Hence, provided that there are Variation Orders where the Parties have not agreed on the schedule effects, Subcontractor must every third month provide an analysis of the schedule effects of previous Variation Orders in the whole time window of three months (hereinafter "Rolling Schedule Effect Analysis"). The provision must be understood to entail that Rolling Schedule Effect Analysis No. 2 essentially shall be an update of Rolling Schedule Effect Analysis No. 1 etc. An example may illustrate the latter: If Subcontractor as a part of Rolling Schedule Effect Analysis No. 1 notified that Variation Order No. 1 caused schedule effects X and Y, and considers schedule effects X and Y to cause schedule effects also in the next time window, schedule effects X and Y must be included as a part of Rolling Schedule Effect Analysis No. 2. Otherwise, the various Rolling Schedule Effect Analysis will not provide a representative picture of the development of the

schedule effects and they will certainly not be "exhaustive". From a practical point of view, an important purpose seems to be that the consecutive Rolling Schedule Effect Analysis together will provide "snapshots" of the schedule effects of Variation Orders in each time window, which may make it easier to understand and determine the schedule effects than considering the project execution period as a whole.

(215) An intriguing question is how to understand the requirement in the third sentence of the second paragraph of CoC Art 13.3 stating that "The claim shall contain an exhaustive analysis of the schedule consequences that Subcontractor considers such variations will entail". What is an "exhaustive analysis"? As indicated above, "exhaustive" must be understood to entail that a Rolling Schedule Effect Analysis shall mention the schedule effects invoked by Subcontractor. The latter should be no problem for Subcontractor with regard to schedule effects that have already occurred. But the provision also refers to schedule effects that "such variations *will* entail" (Tribunal's emphasis). Taken literally, the wording would entail that Subcontractor would have to imagine and puzzle out all possible schedule effects that might arise as a consequence of Variation Orders. The latter could, however, easily become a speculative exercise, and it would indeed incentivize inflated Rolling Schedule Effect Analysis where Subcontractor, in fear of omitting anything, would have to include sweeping and ambiguous language. Such a speculative exercise would be burdensome for Subcontractor, and it would not be beneficial for Contractor to receive a notification of "possible" (but unlikely) schedule effects. Including "possible" but unlikely schedule effects will certainly not facilitate amicable solutions but rather escalate the disagreement. Therefore, the most sensible interpretation of the term "will" is that Subcontractor must include schedule effects that, at the time of the Rolling Schedule Effect Analysis, were *likely* to arise as a consequence of the Variation Orders. Hence, if schedule effect X was not likely at the time of Rolling Schedule Effect Analysis No. 1, but became likely in the subsequent time window, it should be sufficient to notify schedule effect X as a part of Rolling Schedule Effect Analysis No. 2.

(216) Another question is how to understand exhaustive "analysis". The wording does not provide much guidance in this respect, but the context provides that an "analysis" must at least point out that specific Variation Orders *have* caused or "will" cause schedule effects. Another question is whether the "analysis" requires a description of how and to what extent each of the Variation Orders has caused schedule effects to specific critical

paths, etc. Analyzing schedule effects is a highly complex matter, in particular where schedule effects are caused by a number of different Variation Orders in a chain of events ("knock-on-effects") or by a combination of different Variation Orders and circumstances on the part of Subcontractor. Furthermore, the "rolling" mechanism provides no guidance on the applicable methodology to analyze schedule effects. At the same time, there is no widely recognized method to analyze schedule effects in Norwegian law, perhaps with the exception that a method should at least consider the effects on critical paths. Further, the context is that the Parties have not been able to agree on the schedule effects. Furthermore, the first sentence of the third paragraph provides that Subcontractor has only 15 days to submit a Rolling Schedule Effect Analysis.

(217) The above considerations call for a realistic understanding of what can be reasonably expected by such an "analysis". The fact that the context is that the Parties have not been able to agree on the schedule effects of Variation Orders entail that the schedule effects must be considered a contentious matter that might end up being determined by arbitration. In such an arbitration, typically after the completion of the project when all schedule effects are known, the schedule effects will often be enlightened by schedule analysis provided by independent expert witnesses. It is evident that a Rolling Schedule Effect Analysis cannot be expected to meet the same "scientific" requirements as such expert reports, which must – based on consistent reliance on a particular methodology – be expected to elaborate on why, how and to what extent each of the Variation Orders caused schedule effects to specific critical paths etc., and if and to what extent Subcontractor should have mitigated the schedule effects. In fact, it is hardly possible to provide such a "scientific" analysis within 15 days. Furthermore, even such "scientific" analysis rarely succeeds in calculating the schedule effects in detail because there is no reliable method to precisely quantify schedule effects. For the same reasons, the "analysis" included in a Rolling Schedule Effect Analysis cannot be expected to contain more than an outline of how Subcontractor *prima facie* considers Variation Orders to have caused schedule effects in the previous time window. With regard to schedule effects that "will" occur (read: likely to occur), but are yet to materialize, it is evident that they cannot be detailed or quantified.

(218) On this basis, the Tribunal concludes that the "analysis" included in a Rolling Schedule Effect Analysis cannot be expected to elaborate on how and to what extent each of the

Variation Orders has caused schedule effects to specific critical paths, etc., or whether Subcontractor should have mitigated the schedule effects. Furthermore, it should be noted that Art 13.3 provides no formal requirements for a Rolling Schedule Effect Analysis. Hence, in principle, for example progress reports may qualify as a Rolling Schedule Effect Analysis, provided that they meet the said requirements, cover the relevant periods and were timely submitted.

(219) The latter entails that one of the most important functions of the Rolling Schedule Effect Analysis is to ensure that Subcontractor provides regular updates on how it considers schedule effects of Variation Orders to develop during the project, preferably supported by contemporary evidence.

(220) The second sentence of the third paragraph of Art 13.3 provides that (Tribunal's emphasis):

> "Subcontractor *cannot subsequently claim* that Variation Orders that have been agreed or are comprised by the analysis as mentioned shall have effects of the Contract Schedule *beyond* what has been agreed or stated *in* the analysis."

(221) The first part of the sentence provides a twofold preclusive effect. *First*, it is explicitly and clearly stated that a schedule effect that was included in a Rolling Schedule Effect Analysis cannot be invoked "*beyond* what has been agreed or stated in the analysis" (Tribunal's emphasis). The latter is a quantitative preclusive effect. Hence, if Subcontractor in, for example, Rolling Schedule Effect Analysis No. 1 invoked a total schedule effect of 10 days based on Variation Orders No. 1 and 2, it cannot, as a part of Rolling Schedule Effect Analysis No. 2, increase the total schedule effect of Variation Orders No. 1 and 2 comprised by the third-months window covered by Rolling Schedule Effect Analysis No. 1 (unless the increased schedule effect was unlikely at the time of Rolling Schedule Effect Analysis No. 1). *Second*, a schedule effect that should have been included in a Rolling Schedule Effect Analysis cannot be included in a subsequent Rolling Schedule Effect Analysis.

(222) The last sentence of the third paragraph provides that "Contractor must give notification of its *decision* within reasonable time after receipt of the claim". The purpose is to ensure that Contractor responds to each of the Rolling Schedule Effect Analysis, because it may contribute to narrowing down the disagreement on the schedule effects of Variation Orders. There are no indications that Contractor's failure to respond within "reasonable time" has any preclusive effects.

7.6 Schedule impact III: The effects of concurrent delays

7.6.1 Introduction

(223) As a part of the present partial award, the Tribunal has been requested to consider the legal effects of so-called concurrent delays under the present Contract, which is based on NTK 07. On this basis, the Tribunal must address three questions: (i) what should be considered "concurrent delays", (ii) what is the applicable starting point under Norwegian law to resolve concurrent delays, and (iii) has NTK 07 a bearing on how to resolve concurrent delays.

7.6.2 Outline of the Parties' submissions

(224) Subcontractor holds that Contractor must prove concurrency. Contractor must prove that Subcontractor's delay was caused by Subcontractor's own errors or omissions.

(225) Subcontractor further argues that the Norwegian approach to the EoT effect of concurrent delays is the Malmaison approach, as depicted in the SCL Delay and Disruption Protocol section 10 (CLA1 p. 3771), which is that Subcontractor's concurrent delay should not reduce any EoT due.

(226) Concerning prolongation cost, Subcontractor argues that to the extent the Tribunal finds that Subcontractor is entitled to EoT, they are also entitled to compensation for prolongation costs.

(227) Subsidiarily, Subcontractor asserts that they are entitled to EoT and prolongation costs based on the Parties' contribution to the delay, cf., for example, LA-2013-17355 (Teigar ungdomsskole). In such case, Subcontractor holds that they are entitled to all or at least a considerable amount of EoT and prolongation cost based on Contractor's lack of information and misleading information.

(228) Contractor holds that in the event of concurrent delays, Subcontractor still carries the risk and is not entitled to EoT and prolongation costs. Contractor argues that this follows from an objective interpretation of Art 13.3 of the CoC: If Subcontractor is delayed due to their own reasons, the variation causes no "effect" on the schedule. Contractor also refers to Art 27 of the CoC, which states that schedule adjustment shall reflect the consequences of delay caused by Contractor's breach. If Subcontractor was delayed, no consequences will be "caused" by Contractor's breach. The conclusion is supported by Knut Kaasen, Tilvirkningskontrakter (2018), p. 424, Rt. 2005 s. 788

(Oslofjord), as referred to in Nordtvedt et al. p. 482 (RLA1 p. 482), and LB-2019-121038 (RLA1 p. 1811).

(229) Alternatively, Contractor holds that Subcontractor is entitled to relief of liquidated damages, but not prolongation cost, in accordance with the Malmaison principle, cf. Næss, *Konkurrerende årsaker til forsinkelser,* Marius nr. 504 (RLA1 3729 on p. 3809), LB-2023-44642 (RLA 1 p. 2059) and LH-2020-131143 (RLA1 p. 1921).

(230) If the Tribunal finds that neither of the approaches above are applicable, Contractor holds that the delay consequences, including EoT, costs and liquidated damages, must be distributed between the parties, cf. Kaasen, Tilvirkningskontrakter (2018) p. 610–611 and Næss, Marius 504 (RLA1 p. 3859).

7.6.3 The Tribunal's general remarks

(231) What is to be considered as "concurrent delays" is not entirely settled under Norwegian construction law. Nor is there any widely recognized definition of "concurrent delays" in the international literature on construction law. For the present purpose it is, however, sufficient to point out that a "concurrent" delay typically occurs where delay X has at least two independent causes, where at least one of the causes (A) is the risk of Subcontractor, while at least one of the causes (B) is the risk of Contractor. That each of the causes A and B would have caused delay X, entails that the whole delay X would have occurred even in the absence of cause A *or* cause B. In real life, however, cause A and cause B are rarely running over exactly the same period: Cause A may have effect from date 10 to date 20, while cause B only have effect from date 14 to date 20, and hence the "concurrent" period is from date 14 to date 20. The latter is often referred to as "partial" concurrence, and the problem of "concurrent delay" is then limited to the overlapping period of 6 days from date 14 to date 20.

(232) In practice, it might be a complex exercise to determine if and to what extent there is a concurrent delay. Subcontractor must prove that it is entitled to an extension of time, typically by providing evidence that it was delayed due to circumstances on the part of Contractor; for example, Variations with schedule impact. For the same reason, the Tribunal considers that Subcontractor must prove that there is a concurrent delay. If Subcontractor is not, at the balance of probability, able to prove the alleged concurrent delay on the part of Contractor, the Tribunal finds it clear that Subcontractor carries the burden of proof.

(233) The contested matter in the present case concerns how to resolve the problem "concurrent" delays. Subcontractor's position is that it is entitled to EoT *and* additional payment, while Contractor's position is that Subcontractor is only entitled to EoT.

(234) The question has been touched upon in certain Norwegian arbitration awards, but few of the awards have been published, and the reasoning is not very explicit. On this basis, the contested matter cannot be considered settled under Norwegian law, and the Tribunal finds it appropriate to carry out a broader analysis, taking into account the discussions in the Nordic literature, which again considers the elaborative discussions in English law.

(235) The discussions in Norwegian law are basically centered on three models. First is the *dominant cause model*, widely. The reasoning that it is ruled out as an appropriate model is that because "concurrence" presupposes that delay X would have occurred even in the absence of cause A or cause B, neither cause A nor cause B can be considered "dominant".

(236) Having ruled out the dominant cause model, the Tribunal is at the outset left with two models: Various "distribution models" and the so-called *Malmaison*-model ("time, but no money"). The *Malmaison*-model is a settled starting point under English law; see *Henry Boot Construction (UK) v Malmaison Hotel (Manchester) Ltd.* QB 388 & [1999] 70 Con LR 32.

(237) Both models entail a compromise. In the example above, with a concurrent delay from date 14 to date 20, the starting point under a distribution model will be that Subcontractor and Contractor are "responsible" for 3 days each. Hence, Contractor will be entitled to liquidated damages for 3 of the 6 days, while Subcontractor will be entitled to extension of time for 3 of the 6 days. Under the *Malmaison*-model, the compromise entails that Subcontractor will be entitled to EoT for the whole period with concurrent delay (6 days), but no additional payment.

(238) Furthermore, both models require an assessment if and to what extent there *exists* a concurrent delay, which may be a complex exercise. After determining whether a concurrent delay exists and its extent, the *Malmaison*-model offers a straight-forward and predictable solution. Subcontractor will automatically be entitled to extension of time – and hence be relieved of liquidated damages – but no additional payment in the "concurrent" period.

(239) By contrast, a discretionary distribution model may entail a more open-ended and flexible assessment. The Tribunal will, however, like to note that in the context of concurrent delay, a discretionary distribution model cannot be about distributing the concurrent delay based on the Parties "contributions" – from a purely causation perspective. As indicated above, a concurrent delay presupposes, by contrast to a contributory delay where each of the Parties has caused a part of a delay, that the whole concurrent delay would have occurred even in the absence of cause A *or* cause B. For the same reason, a discretionary model cannot reasonably consider cause A to be more "important" than cause B from a causation perspective, or vice-versa. Hence, the "discretionary" element cannot be about causation. It must be a more typical normative test. At the outset, the latter entails that a discretionary distribution model will be less predictable than the *Malmaison*-model.

(240) The Tribunal, however, cannot see that a discretionary distribution model must necessarily be much less predictable than the *Malmaison*-model. In fact, it might be a problem that the *Malmaison*-model provides no flexibility by automatically granting an extension of time equivalent to the whole period of concurrent delay, typically where Subcontractor's is significantly more to blame than Contractor for the delay. In such a case, it is not evident that Subcontractor should automatically be granted EoT equivalent to the whole period of concurrent delay. In particular, if Subcontractor's delay is caused by gross negligence, while Contractor's concurrent delay is not due to negligence at all. In such cases, the Tribunal considers the *Malmaison*-model to lack the required flexibility. Furthermore, there will be no available remedies against Subcontractor, which might undermine liquidated damages, and hence Subcontractor's incentives to ensure progress. Norwegian legal literature suggests that a model based on discretionary distribution may provide a kind of "safety valve" in such cases. In this respect, see, in particular, Kaasen, Tilvirkningskontrakter, 2018, pp. 610-612, referencing two Norwegian arbitral awards. The Tribunal will, however, emphasize that the latter is a normative consideration and not (merely) a matter of causation. As indicated above, provided that there is a "concurrent" delay, there is no basis to consider cause A more important than cause B from a purely causation perspective.

(241) Furthermore, for two reasons, the Tribunal considers it possible to strike a fair balance between predictability and flexibility under the discretionary distribution model. *First* and foremost, predictability is significantly enhanced by providing a firm starting point

for the distribution: equal distribution. Such a starting point has some support in Norwegian law; see, in particular, Kaasen, Tilvirkningskontrakter, 2018, pp. 610-612, with references to, *inter alia*, ND 1989 p. 296. *Second*, by combining such a starting point of equal distribution with the said "safety valve", the model cannot be considered open-ended. As indicated, it should also be noted that predictability is, in any case, a complex matter in the present context. In practice, the outcome of a dispute on concurrent delays is typically far more dependent on establishing the facts based on assessment of evidence; the various delay drivers and when and how they contributed to particular delays. The latter assessment might be further complicated by disagreement on if and when Subcontractor should have mitigated the delay or absorbed the delay within the "float", and certain delays may have to be disregarded because it was not invoked in a timely VOR. Furthermore, it should be noted that it may be very difficult in practice to distinguish between concurrent delays and contributory delays. For the same reason, it will be beneficial if the legal starting points for distribution are the same, namely equal distribution.

(242) Danish law does not provide an unambiguous picture in respect of concurrent delays. However, a much cited arbitral award of 2017 (C-14040) seems to provide some support for a discretionary distribution model. The Danish literature is, however, divided. Iversen seems to rely heavily on general considerations of causation and interpretation of the contract in question (Entrepriseret, 2016, section 6.2), while Cavaleri, in her extensive summary of Danish case law, concludes that it predominantly supports a discretionary distribution model (Concurrent delay in Construction Disputes, 2015, p. 208). Mortensen and Christiansen nevertheless suggest that Danish law, to enhance predictability, *should* rely on the Malmaison-model ("Parallelle forsinkelser – når tid ikke er penge", Tidsskrift for Bolig- og Byggeret, 2016, pp. 696 f.). In a context where Danish law does not clearly support a particular approach to concurrent delay, it is hard to see that Danish Law can be given any weight in the present case.

(243) As indicated, considering whether an interpretation of the contract in question has any bearing on how to address concurrent delay is the starting point of the analysis. In English law, the *Malmaison*-model is often considered to reflect what follows from an interpretation of English standard contracts. A Swedish Supreme Court decision from 2012, NJA 2012 p. 597, seems to be the most relevant Nordic Supreme Court decision in this respect. The latter decision, however, does not very explicitly address the particular

problems associated with "concurrent delays" or the discussions about a discretionary distribution model, *Malmaison*-model, etc. Instead, it proceeds more or less straight to interpreting the contract in question (the Swedish standard contract AB 92). On this basis, the Swedish Supreme Court considered the key question to be whether the contract *supported* that contractor was to be *relieved* from its obligation to pay liquidated damages in case of a delay. The Swedish Supreme Court also relied on principles of delict to determine causation, but without elaborating on how those principles might guide the distribution. In any case, the outcome was that the contractor had to pay liquidated damages even though the delay was not solely due to him. In the absence of a more explicit analysis of concurrent delay, however, the Tribunal cannot see that the judgment can be given any weight in the present case. Furthermore, in the absence of clear indications that the purpose of a contractual clause was intended to have a bearing on concurrent delays, the Tribunal is not inclined to infer a particular intention. The Tribunal finds it more appropriate to rely on what must be considered Norwegian background law regarding concurrent delays.

(244) The next question is whether the present CoC, which is based on NTK 07, provides any guidance on the disputed matter of how to address concurrent delays. It is evident that the preclusive effect of Art 16.1 may have a bearing on the delay drivers to be considered. Hence, a concurrent delay on the part of Contractor that was not timely submitted by Subcontractor in a VOR will be disregarded. The latter, however, has no bearing on how to address a concurrent delay – if there *is* a concurrent delay.

(245) Another question is whether Art 27 (Contractor's breach) has any bearing. Article 27.1 (1) reads (Tribunal's emphasis):

> "If Contractor is late in providing deliverables as set out in Appendix G, in making decisions or in performing other of his obligations under the Contract, then Subcontractor *shall* be entitled to an adjustment of the Contract Schedule and/or Contract Price in accordance with the provisions of Art. 12 to 16. Such adjustment shall *reflect* the consequences of the delay *caused* to Subcontractor by Contractor's breach of Contract."

(246) At the outset, the first sentence, in particular the phrase "shall be entitled to", might be understood to entail that Subcontractor is automatically entitled to additional time and/or additional payment in case of a delay on the part of Contractor. However, the term "and/or" cannot be aligned with the *Malmaison*-model under which Subcontractor is only entitled to additional time. More importantly, the Tribunal understands the second sentence to entail that the adjustment shall "reflect" the actual

consequences of the delay caused by Contractor's breach. The latter is hard to align with a concurrent delay, which presupposes that the delay would have occurred even in the absence of Contractor's delay. On this basis, the Tribunal cannot see that Art 27 has any bearing on how to address concurrent delays.

(247) The next question is whether Art 28 (Force Majeure) has any bearing on how to address concurrent delays. Article 28.1 (1) reads:

> "Neither of the parties shall be considered in breach of an obligation under the Contract to the extent the party can establish that fulfilment of the obligation has been prevented by Force Majeure."

(248) The inherent starting point of the provision is "neutrality"; to the extent a breach is due to Force Majeure, it is not considered a breach. The said "neutrality" is supported by Art 28.3 (1), stating that "Except as set out below, each party shall cover its costs caused by a Force Majeure situation", which might be understood to support a *Malmaison*-model. The Tribunal cannot, however, see that Art 28 can be reasonably understood to have any bearing on addressing concurrent delays not due to Force Majeure. The said starting points in Art 28.1 (1) and Art 28.3 (1) merely reflect general principles in Norwegian contract law, and for the same reason, it is hard to infer from the said provisions that they have any bearing on concurrent delays not associated with Force Majeure. Nor can the Tribunal see any basis to infer any such bearing from the "system" of Art 27 and 28. It should also be noted that the predominant understanding is that NTK 07 is not considered to address "concurrent delays".

(249) Based on the above, the Tribunal considers the starting point under Norwegian law to be a distribution model with equal distribution of concurrent delays, combined with a narrow exception where one party is significantly more to blame for the delay than the other party. The present Contract, which is based on NTK 07, does not provide any basis to deviate from this starting point.

(250) The majority of the Arbitral Tribunal has respectfully noted that co-arbitrator Mr. Vagle has made some particular remarks on the matter of concurrent delays. The Majority's reasoning is set out above, but we will nevertheless provide some remarks to Mr. Vagle's reliance on the *Malmaison* model. First, the majority would like to note that the *Malmaison* approach does not provide any flexibility, despite the fact that the reason for each Party's delay may differ significantly from no negligence at all to gross negligence or willful misconduct. Hence, the *Malmaison* model lacks an appropriate

"safety valve". The latter may lead to unfortunate solutions, for example, where a party is delayed due to negligence, while the other party is not. For the same reason, the *Malmaison* approach can only be considered a "neutral" solution where neither of the parties are to blame for their delay or both of them are equally to blame. Furthermore, if a contractor can claim EoT based on the *Malmaison* model even if its delay is due to gross negligence, there will be no available remedies, which might undermine contractor's incentives to ensure progress. Second, the Majority cannot follow the considerations pertaining to "wasted" acceleration costs, because they seem to presuppose that contractor will not comply with its obligation to duly inform subcontractor that contractor is or will be delayed.

(251) *Peter Vagle's particular remarks:*

(252) I share the overall view on this issue held by the Tribunal and agree in large part with the general remarks above. Thus, I acknowledge that the legal sources are sparse and that the Contract does not provide clear guidance. Therefore, the assessment has to rely heavily on what is considered the most sensible starting point. In my opinion, the *Malmaision* approach provides the most balanced and "neutral" solution, and it also sits better with general legal principles regarding causation. It should therefore, at least as a starting point, be preferred to the "equal distribution model" set out by the Tribunal.

(253) Important for my understanding is that a delay regularly leads to extra costs and corresponding claims on both sides. On the one hand, Contractor's delay may provide Subcontractor with grounds for a claim for extension of time, and a corresponding claim for adjusted compensation (typically for increased overhead costs, rigging and operation). On the other hand, Subcontractor's delay will typically provide Contractor with grounds for a claim for liquidated damages. The outcome of such claims depends on who is eventually considered responsible for the relevant delay; Contractor or Subcontractor. In case of a concurrent delay, however, the assumption is that both Parties are responsible. In addition to both Parties being responsible, the situation is characterized by the fact that the delay would have incurred even in the absence of the other party's delay.

(254) From my point of view, a pure causation argument strongly supports the *Malmaison* approach, allowing both Parties extension of time, but no compensation for extra costs or liquidated damage. Accepting Subcontractor's claim for compensation for extra costs

would violate basic causational theory as the costs would have been incurred regardless of Contractor's delay. Conversely, Contractor's claim for liquidated damages due to delay is for the same reasons difficult to justify since the delay would have occurred also in the absence of Subcontractor's delay. In both cases, granting the "offended" party compensation would entail an arbitrary advantage which it is difficult to justify. The latter effect is avoided by letting each of the Parties having to carry its own costs. In my opinion, this is sufficient to justify the *Malmaision* approach as the starting point.

(255) However, the same starting point is supported by more overarching considerations pertaining to project economy. In a potential delay situation, the Subcontractor typically has a choice between being delayed and hence incur liability for liquidated damages or invoking acceleration measures to avoid or mitigate the delay. Acceleration measures are, however, often costly and should be avoided unless the delay is in fact mitigated. However, unless a *Malmaison* approach is applied, Subcontractor will have a strong incentive to accelerate (to avoid delay and corresponding liquidated damages) even though the potential upside on the Contractor's side – an earlier completion - does not exist due to Contractor's own delay. The acceleration thus entails a shift in responsibility between the two Parties, but the costs are in reality "wasted" since the progress is exactly the same. By applying a *Malmaison* approach, Subcontractor may instead, without having to consider the risk of liquidated damages, choose the progress that is best suited to the execution. Maintaining that each party in a concurrency situation loses its own claim entirely will in the long run also provide the strongest incentive to both Parties to reduce the costs and/or mitigate the losses.

(256) Finally, I find that the equal distribution model in many cases will provide an unbalanced result, namely when there is a disparity between the accumulated liquidated damages and the corresponding extra costs on Subcontractor's side. The model implies a trade-off of 50 % of the two respective claims. Each party will, as a starting point, be responsible for 50 % of the liquidated damages and 50 % of Subcontractor's extra costs. Should Subcontractor's actual costs exceed the day rate of the liquidated damages, the solution will *de facto* entail a net transfer of compensation from Contractor to Subcontractor. However, should Contractor's claim for daily rates exceed the incurred, documented and timely notified costs on Contractor side, the transfer would go in the opposite direction. In either case, provided that the liquidated

damage rates and the actual Subcontractor's cost are not exactly the same, one party will contribute more than it gains whilst the other will gain more than it contributes.

(257) My view seems best in line with recent Norwegian appeal court practice (cf. LH-2020-131143, LB-2021-145051, LB-2023-44642 and LH-2023-69674). All these decisions pertain to disputes under NS-contracts. However, in my view there is no reason to treat concurrency issues differently in the two contract formats. The decisions therefore add some weight to the other arguments laid out above.

7.7 Schedule Impact IV: "Modelled" day rate?

7.7.1 Introduction and the Parties' submissions

(258) Subcontractor's economic claims under the individual VOs/VORs are divided into two main categories: Direct costs and EoT costs, cf. CAD 3-2. The EoT costs consist of the prolongation costs, i.e., the higher management personnel-, facilities-, and running costs for the contractor's operation due to the claimed extension of time.

(259) Subcontractor's calculation of prolongation costs is based on the expert evaluation performed by Kroll in the Kroll I report of 27 November 2023 (FA23 p. 161). Kroll uses a so-called "day-effect" method described in item 5.2 of the report (FA23 p. 178–181). By this, the EoT costs are, in practice, calculated as a "modelled" rate per day of the total EoT claimed. Kroll has calculated the rate to be EUR 17.410,67 and NOK 21.551,1 per calendar day, cf. item 5.3.4 paragraph 188 of the report (FA23 p. 218). However, in their calculation of the EoT costs, Subcontractor has applied the higher rates, EUR 22.153,21 and NOK 23.624,07, cf. CAD 3-2. According to Subcontractor, the reason for the difference is that Kroll sets out a stricter level of proof than the rules for substantiating claims under the Contract and Norwegian law. Subcontractor holds that this method of calculating EoT costs based on daily rate is accepted under Norwegian law; cf., for example LH-2020-1311 43 (CLA1 p. 750).

(260) Contractor rejects the method applied by Subcontractor and Kroll for calculation of prolongation costs. Contractor asserts that it represents a global claim based on a top-down approach, where the daily rate is equal through the entire period regardless of resources and performance. There is no legal basis for such a top-down approach in the Contract or under Norwegian law. The method is inappropriate for proving causation between the delay and actual costs under Norwegian law, cf HR-2019-1225-A para 78 et seq. (RLA1 p. 1202). The relevant difference is not Subcontractor's planned vs. actual

costs, but the comparison between actual costs vs. the costs that would have been incurred without the delay, cf. Rt. 2005 s 788 (RLA p. 972). Subcontractor has the burden of proof, and must demonstrate the actual costs that would have been avoided if it was not for Contractor. Contractor further holds that the baseline and input parameters for the calculation of the prolongation costs are flawed. They also hold that the actual site conditions and the price level of the Contract indicate that Subcontractor's daily rates are highly inflated. Contractor also refers to the HKA Quantum Expert Report 2 (FA 23 p. 6566) and holds that the report addresses flaws and weaknesses supporting Contractor's view on Subcontractor's and Kroll's calculation of prolongation costs.

7.7.2 *The Tribunal's assessment I. The effect of CoC Art. 13.3 and Appendix B*

(261) The present matter concerns the cost effects of schedule effects, e.g. time-dependent costs. It is not contested that Subcontractor is entitled to be compensated incremental costs due to a Variation or a breach on the part of Contractor. The Tribunal considers the latter to follow from CoC Art 13 and Art 27, as well as Norwegian contract law. Nor is it, in principle, contested that the same principle applies to purely time-dependent costs, typically where delays are due to Variations and/or breaches on the part of Contractor. It might, however, in practice, be difficult to calculate such time-dependent costs, which explains why it is not uncommon to include a particular day rate to be mechanically applied to determine such costs, typically regarding rigging and operation, overhead costs, etc. The great advantage of including such a pre-agreed generic day rate to mechanically determine time-dependent costs is that breaking down and documenting such costs is unnecessary. The disadvantage is that the generic nature entails that the compensation might differ from the actual incremental costs in the relevant periods.

(262) The contested matter in the present case is how to determine such time-dependent costs where the Contract does *not* stipulate a pre-agreed day rate to determine such costs mechanically. Contractor submits that the latter entails that Subcontractor must prove the incurred incremental time-dependent cost, while Subcontractor has suggested a "modelled" day rate. Subcontractor relies on the day rate modelled in the Kroll Report I dated 27 November 2023, p. 58, para 188 (FA23 p. 218): EUR 17.410,67 and NOK 21.551,12 (hereinafter the "Modelled Day Rate"). The contractor asserts that neither the Contract nor Norwegian law allows Subcontractor to rely on such a "modelled" day

rate unless it is mutually agreed between the Parties. In the absence of such an agreed day rate, the default mechanism under the Contract and Norwegian law is that Subcontractor must prove its actual incremental time-dependent costs in the relevant periods.

(263) The Tribunal considers that the Contract is the firm starting point for the analysis. Hence, the first question to be determined by the Tribunal is whether the Contract provides how to determine time-dependent costs. The CoC does not explicitly govern how to determine time-dependent costs regarding Variations but sets out a principle in Art 13.3: "Unless otherwise agreed between the parties, the price for Variations to the Work shall be determined in accordance with Appendix B".

(264) On this basis, a key question is whether Appendix B – explicitly or implicitly – provides how to determine such time-dependent costs. As indicated, Appendix B does not contain any pre-agreed day rate to determine time-dependent costs.

(265) When CoC Art 13.3 refers to Appendix B, it must mainly be understood as a reference to the provisions in section 4 of Appendix B governing "Pricing of Variations to the Work". The latter is explicitly stated in Art 4.1 of Appendix B: "*Unless* otherwise agreed between the parties, the value of each Variation to the Work *shall* be settled by means of the pricing *principles* in this Appendix" (Tribunal's emphasis). The Tribunal, however, reads the reference to the "principles in this Appendix" to mean that the pricing of Variations is not necessarily limited to the principles set out in section 4; for example, where section 4 does not provide a price directly applicable to the Variation in question.

(266) While the Contract Price is based on the various lump sums and preliminaries outlined in section 1 of Appendix B and detailed in Attachment 1 of Appendix B, the "Pricing of Variations to the Work" in section 4 relies on two principles. First, by providing the following starting point in Art 4.3: "Except where otherwise stated in this section 4, the value of each Variation to the Work shall be by means of an agreed LS".

(267) Second, and more importantly, where the Parties have not agreed on a lump sum as per Art 4.3: Article 4.4 provides that Variations shall be compensated on a "reimbursable" basis. Hence, Art 4.4.1 explicitly states that "Contractor may demand Variations to the Work are compensated on a reimbursable basis according to the Rates in Attachment 3". Attachment 3 provides the "Variation Rates", which provide hourly rates ("Variation

Rates") for various personnel, including head office personnel off site. Article 4.4.2 details the reimbursable element regarding "Man-hour Rates", and the first paragraph provides that the Variation Rates set out for Subcontractor (in Attachment 3) shall apply accordingly for Subcontractor's subcontractors, etc. The second paragraph, *inter alia*, states that Subcontractor shall implement a time control system "to record when equipment and personnel start and stop working". Furthermore, Art 4.4.3 regarding "Procurement" provides that "Subcontractor shall invoice *actual* cost of materials supplied by Subcontractor or any Sub-Subcontractor as *substantiated* by copies of invoices ..." (Tribunal's emphasis). Finally, Article 4.4.5 provides the principles for reimbursement for "Subcontractor's equipment". The first paragraph provides that equipment brought to Site(s) exclusively for the performance of Variation Orders, which is not included in the said Variation Rates, "shall be charged to Contractor *at cost*" (Tribunal's emphasis). The second paragraph states that Equipment used exclusively for the performance of Variation Orders "shall be charged to Contractor at the Rates given in Attachment 1, section 8".

(268) The Tribunal considers the principles in Art 4.4 of Appendix B to reflect key elements of so-called reimbursable work. First, the costs to be reimbursed shall be calculated based on pre-agreed commercial terms, typical hourly rates. Furthermore, the number of hours shall be monitored and substantiated in a transparent manner. Finally, invoices shall reflect the actual costs. The latter must be understood to require an *individual* approach where Subcontractor's claims for reimbursement of Variations *in casu* shall be broken down and substantiated in hours and/or actual costs.

7.7.3 Tribunal's assessment II: "Modelled" day rate?

(269) Before the Tribunal proceeds to consider whether a modelled day rate may be aligned with the present Contract, it is beneficial to address the challenges associated with introducing a modelled day rate after a contract is entered into. *First*, the reason that a contract does not provide a day rate for time-dependent costs may be that the parties were not able to agree on such a day rate, which must necessarily be approximate. In this context, there are evident concerns associated with requesting an arbitral tribunal to determine a day rate the parties could not agree on. In particular, if it is proven that the parties tried to negotiate such a day rate but could not agree. In such context, introducing a "modelled" day rate in hindsight might be equivalent to setting aside an agreed contractual mechanism; that time-dependent costs shall be documented

individually is *de facto* replaced by a mechanical approach to determine such costs in which subcontractor does not have to substantiate such costs. On the other hand, it may be argued that a modelled day rate will indeed make it easier to determine time-dependent costs. Where the parties to a contract have not included such a day rate in a contract, however, it is hard to see that the latter technical argument is relevant. The argument's flip side is as follows: If the parties considered it important to avoid the challenges associated with compensating time-dependent costs in casu, they would have agreed on such a day rate in the contract.

(270) *Second*, after time-dependent costs have become a contested matter, it may be even more difficult to "model" such a rate because the parties in a contentious context have incentives to overestimate and underestimate the costs. Further, a modelled day rate must necessarily be approximate. Even though it may rely on an extensive review of the incurred costs per day in the relevant period, time-dependent costs may vary significantly during a project. In particular, if the contested time window runs over a long period. Furthermore, a modelled day rate running over a longer period must rely on estimated or average hours per day of by an estimated or average number of personnel. It should also be noted that determining such a day rate based on the actual incurred costs will require more or less "open books" regarding Subcontractor's time-dependent costs, which may be commercially sensitive information. For the same reason, the information on which the modelling is based will rarely be fully available in a contested context.

(271) *Third,* in principle, introducing a modelled day rate in hindsight may overlap with payments already made for time-dependent costs. In the absence of such a day rate in a contract, time-dependent costs during the project may have been compensated through various Variation Orders or settled through Addendums, Side Agreements, etc. Hence, if a modelled day rate is introduced in hindsight, it may be necessary to calculate and, after that, subtract all such compensation before a modelled day rate is applied. The latter may, however, be a very difficult task. Not at least, where time-dependent costs have been compensated in Variation Orders or settlements by way of lump sums, of which the time-dependent costs are a non-quantified part.

(272) Modelling such a day rate in hindsight is, however, not merely associated with the said challenges. More importantly, introducing a modelled day rate based on the actual incurred costs after the time of the Contract (ex-post) may be hard to align with the

Contract. In particular, where a contract provides rates and prices applicable to Variations, which entails that the Parties have ex ante pre-agreed on certain rates and prices also for Variations. That the actual incurred costs after a contract was entered into might eventually exceed the agreed rates is here a commercial risk firmly placed on Subcontractor. In such a context, it is evident that a subcontractor cannot unilaterally choose to rely on its actually incurred costs to achieve a more beneficial compensation than following the pre-agreed rates.

(273) The latter entails that a fundamental requisite to rely on a modelled day rate to determine time-dependent costs is that it can be aligned with the contract in question. The Tribunal cannot, for two reasons, see that the suggested Modelled Day Rate can be aligned with the Contract. *First*, as set out above, the Tribunal considers the price format in Art 4.4 of Appendix B – reimbursable work – to entail that Subcontractor's claims for reimbursement of Variations according to Appendix B shall be broken down and substantiated in hours and/or actual cost. The latter does not sit well with a generic "modelled" day rate. *Second*, the suggested Modelled Day Rate is not based on the rates and prices set out in the Variation Rates in Appendix B. Instead, Kroll has – contrary to CoC Art 13.3 and Appendix B – determined the Modelled Day Rate based on "updated rates" suggested by Subcontractor (Kroll I p. 17), which significantly exceed the agreed rates. As set out above, the actually incurred costs after the Contract is entered into might eventually exceed the pre-agreed rates for variations, which is a commercial risk placed on Subcontractor. The Tribunal cannot see any contractual or legal basis to rely on such "updated rates"; reference is made to the conclusion above in section 6 regarding Contractor's right to order Variations.

(274) The said two reasons are sufficient to conclude that the Tribunal cannot rely on the suggested Modelled Day Rate, but the challenges pointed out above support the same conclusion. The suggested Modelled Day rate covers a period running over more than two years (from 4 October 2020 to 21 October 2022 (Kroll I p. 19, FA23 p. 179), which entails that it must necessarily be highly approximate. For example, the Modelled Day Rate is based on a rough estimated personnel average; see, for example, Kroll I p. 23, Table 4: "Elecnor personnel". It should also be noted sections 5.3.2 and 5.3.3 of Kroll I demonstrate that Kroll has not carried out an independent analysis of the time dependent costs already paid by Contractor or claimed by Subcontractor in other claims (inter alia VOR 40). Instead, Kroll has relied on the "transmitted" numbers provided by

Subcontractor. The Tribunal has no proper basis to consider the merits of those "transmitted" numbers.

(275) Based on the above, the Tribunal *concludes* that it cannot rely on the suggested Modelled Day Rate.

(276) In principle, the Tribunal could instead try to determine a "conservative" day rate on the basis that it should reflect the level of costs that "at least must have occurred". Such an approach could, in principle, be preferable to granting no time-dependent costs, namely where an arbitral tribunal is confident that a certain level of time-dependent costs have occurred due to delays on the part of Contractor. The Tribunal will not rule out that there might be cases where such an approach might be appropriate. Such an approach should, however, be the last resort and subject to two cumulative requirements.

(277) *First* and foremost, that a modelled day rate can be aligned with the contract in question. If a contract provides that compensation for Variations shall be documented on a reimbursable basis – e.g. based on the actual incurred costs – a subcontractor cannot unilaterally decide to introduce a generic day rate that was not agreed in the contract. A generic day rate will evidently not provide the same level of transparency as documentation of the actually incurred costs.

(278) *Second*, a "conservative" approach presupposes proper evidence of the alleged minimum level of costs. Hence, it cannot be sufficient that subcontractor asserts that at least a certain level of costs "must" have occurred. The asserted costs must be supported by evidence, and budgets (*ex ante*) cannot serve as evidence for actually incurred costs (*ex post*). Without such evidence, a "conservative" approach will be equivalent to a kind of "guesstimate", which a Tribunal should not rely on. The latter illustrates the inherent paradox of such a "conservative" approach. Even a "conservative" approach requires sound evidence of the costs; however, relying on a "conservative" approach should not be necessary if the evidence is proper. Hence, that it may be evident that certain incremental time-dependent costs may have occurred does not mean that the level of such costs is evident. Again, as indicated above, this may vary significantly during the project.

(279) Subcontractor has referred to a decision by the Hålogaland Court of Appeal (LH-2020-131143). The Tribunal cannot see that it is relevant in the present case. It is not a decision

by the Norwegian Supreme Court. More importantly, the judgment seems to rely heavily on the provision in NS 8406 section 23.4 (4), where the compensation shall be determined based on the costs that the employer "must have understood" would occur, which might be understood to support a "conservative" approach. It is, however, evident that the present Contract does not provide any such contractual provision.

(280) Based on the above, the Tribunal concludes that determining the EoT costs, e.g. the time dependent costs, based on the suggested "modelled" day rate suggested by Kroll cannot be aligned with the Contract.

7.7.4 The Tribunal's assessment III: General remarks on how to "document" costs

(281) However, to provide some guidance for the Parties, the Tribunal would like to provide some overall remarks on whether the Claim Composition of 5 July 2023 (with attachments) (FA17) can be considered to provide the required "documentation" of the time-dependent claims. It is not possible for the Tribunal to answer this question in general by yes or no. As set out above in section 7.7.2, however, the principles for reimbursable work set out in Art 4 of Appendix B provide the relevant benchmark for whether a claim set out in the Claim Composition can be considered proven.

(282) The latter entails that the costs, as a firm starting point, shall be documented by *recorded* man-hours and *invoices* for actual costs. Man-hours and costs put forward without any such substantiation cannot be considered documented according to the requirements in Appendix B. Hence, the fact that certain costs are set out in the Claim Composition (see, for example, FA17 pp. 58-59) does not *per se* serve as documentation or evidence of the claim. The Claim Composition merely serves as an assisting document compiling various information. Whether a cost can be considered proven must, therefore, be based on an overall assessment of the documentation supporting the calculations set out in the Claim Composition. To the extent a cost put forward in the Claim Composition is not supported by documentation, it must, as a clear starting point, be disregarded. The latter goes without saying where there are strong indications of no such documentation; see, for example, Kroll Report I p. 54 (FA23 p. 214) regarding "Head office general costs" and "Warranties".

(283) In addition, to prove that the documentation is relevant, it must be possible to infer from the documentation that a cost regards the claim in question. For example, a claim for time dependent costs related to head office costs may be documented by recorded

hours by relevant head office personnel in the relevant period. Hence, to the extent a claim in the Claim Composition relies on the applicable agreed rates and provides adequate documentation (typically contemporary records of incurred man hours and/or invoices of the incurred costs), the claim will presumably be considered properly documented.

(284) As indicated above in section 7.7.3, the latter reservation for applicable *agreed* rates is important. To the extent Appendix B *provides* an applicable rate or price for the relevant Variation, typically the Variation Rates in Appendix B, a Variation claim shall be calculated based on such rates. The latter follows from CoC Art 13.3 and Appendix B. Hence, Subcontractor cannot, in the absence of mutual agreement, introduce more beneficial rates. The said agreed rates should also apply where the rate is not directly applicable but basically concerns the same kind of personnel or work. Otherwise, it would be too easy to circumvent the agreed Variation Rates by renaming the personnel or costs. Furthermore, where Appendix B provides an applicable rate, Subcontractor cannot unilaterally choose to document the claim by an unsubstantiated and non-transparent lump sum.

7.8 Preclusion under Art. 20.4 based on insufficient "documentation"?

7.8.1 Outline of the Parties' submissions

(285) Contractor argues that all disputed claims submitted by Subcontractor are time-barred due to non-compliance with the final account provisions in Art 20.4 of the CoC. In this respect, Contractor holds that the proposal for Final Account did not contain the documentation necessary for Contractor's assessment of the claims submitted. The proposal did not include any documentation showing costs incurred or explaining how the claims had been calculated. The proposal contained no documentation to substantiate any of the figures Subcontractor had listed as their claim.

(286) Contractor further argues that they requested Subcontractor to provide all relevant documentation within 15 days from receipt of Contractor's letter of 8 March 2023, pursuant to the CoC Art 20.4 first paragraph. Subcontractor failed to deliver a proposal for the Final Account within the deadline, and all claims are therefore time-barred. In the absence of an explicit provision in Art 20.4 stating that the preclusive effect set out in the first paragraph is not applicable if a claim is already submitted to arbitration,

such a solution cannot be implied by way of interpretation or by relying on any background law.

(287) Subcontractor holds that the proposal for the final account included sufficient documentation in accordance with Art 20.4 of the CoC. The time-bar provision in Art 20.4 only refers to "claims" not being included and not insufficient documentation. Subcontractor argues that the provision must be interpreted based on the aim, which is to clarify which claims are disputed and the related amount. Insufficient documentation may be a reason to object to a claim but not to time-bar a claim that is presented and certainly not the final account as such.

(288) Subcontractor also submits that the principle in the Prescription Act (*No:* foreldelsesloven) Section 15 regarding claims already under arbitration or court proceedings must also apply to NTK and thus the Contract.

7.8.2 The Tribunal's interpretation

(289) The contested matter concerns the understanding of the preclusive effects of the "final account" mechanism in CoC Art 20.4. The Parties seem to agree that Subcontractor, to avoid preclusion of a claim under the last sentence of the first paragraph, must have included the claim in its proposal for the final account. The key question to be determined by the Tribunal is whether Subcontractor, to avoid preclusion of a claim under the last sentence of the first paragraph, also must provide "documentation" of the claim as a part of the proposal for final account.

(290) The contested provision in the first paragraph of CoC Art 20.4 reads (Tribunal's emphasis):

> "Within 30 Days after issue of the Completion Certificate, Subcontractor shall submit his proposal for the final account. The proposal *shall* contain a *breakdown* of the total compensation for the Work, including all claims to be made by Subcontractor, less any liquidated damages and other amounts due to Contractor. The proposal *shall* contain *documentation* relating to *each* item included in the breakdown. If Subcontractor has not submitted its *proposal* for the final account within the deadline set out above in this Article, Contractor may request that such *proposal* is submitted within 15 Days. If Subcontractor exceeds *this* deadline, he shall lose his right to any claim against Contractor."

(291) The last sentence providing the preclusive effects uses the term "claim", which indicates that the preclusive effect merely concerns the claim as such. However, the last sentence regarding the preclusive effect refers to "this deadline", which is a reference to the

previous sentence, which again refers to the "proposal for the final account". Furthermore, the second and third sentence provides that the proposal for the final account shall include a "breakdown" of the compensation and provide "documentation" for each of the items in the breakdown. Hence, when the last sentence explicitly refers to "this deadline", it might be understood to also include "documentation" in the third sentence.

(292) The Tribunal cannot, however, see that "documentation" of each claim in the proposal for the final account is required to avoid preclusion. First, the preclusive effect described in the last sentence merely refers to "claim", not the absence of "documentation".

(293) Second, the system of the CoC supports the same interpretation. The system of the CoC entails that Subcontractor, to avoid preclusion under other provisions than Art 20.4, may have to submit a contested claim, typically a DVO, to arbitration to avoid time-bar, see for example, CoC Art 15.3 second paragraph and Art 16.5. Provided that Subcontractor has submitted a claim to arbitration within such deadlines prior to the final account, which is a recurring situation in large and long-term projects, Contractor is well aware that those claims are contested, and it is evident that those claims will have to be properly "documented" as a part of the arbitration proceedings. For the same reason, there is no need – from the perspective of the Contractor – for further "documentation" of such claims as a part of the final account. From the perspective of the Subcontractor, it would be counterintuitive if it despite having submitted a claim to arbitration, had to provide "documentation" of the same claim as a part of the proposal for the final account. Hence, when the CoC is read as a whole it would give no sense to consider the requirement of "documentation" in Art 20.4 to be a preclusive requirement regarding claims already submitted to arbitration. The absence of an explicit provision in Art 20.4 stating the latter, for example based on NS 8405 section 33.1 third paragraph, can therefore not be decisive in this respect, because the same must be considered to follow from the inherent system of the CoC. For the same reasons, a claim already submitted to arbitration at the time of the proposal for the final account should not be considered precluded under Art 20.4 even though it is not included in the final account. By having submitted a claim to arbitration, Subcontractor must be considered to have duly notified Contractor that the claim is upheld.

(294) Third, the Tribunal cannot in any case, regardless of whether a claim is already submitted to arbitration at the time of the final account, see that the requirement of "documentation" in Art 20.4 can be considered preclusive. In the absence of any guidance in Art 20.4 on the required level of "documentation", it would be very hard for Subcontractor to know how to comply with such a preclusive requirement. Knowing that whether a claim is properly "documented" may indeed be a very complex matter, the latter would be most unfortunate and not sit well with the required predictability regarding such a practical and imperative deadline. A preclusive effect related to "documentation" of the claims included in the proposal for the final account would also give Subcontractor incentives providing excessive "documentation" to comply with such a requirement. The latter would be burdensome and be a waste of resources. Neither Subcontractor nor Contractor would benefit if the proposal for the final account was to include excessive "documentation". The latter is evident with regard to claims that are not contested when Subcontractor put together the proposal for the final account, but the wording of Art 20.4 first paragraph does not provide any distinction between documentation of contested and non-contested claims.

(295) Based on the above, the Tribunal concludes that the requirement of "documentation" in the first paragraph of Art 20.4 cannot be interpreted to be preclusive.

(296) On a separate note, without any bearing on the Tribunal's assessment and conclusion, the first three sentences of the CoC Art 20.4 are identical to NTK 07 Art 20.5 first paragraph, except for the number of days of the deadline in the first line. While an interpretation of CoC Art 20.4 does not provide a straight-forward answer to the contested matter, the regulation of the preclusive effect in the third paragraph of NTK 07 Art 20.5 provides no support that there is a preclusive effect of the requirement of "documentation".

7.9 Does Art 24.2 allow liquidated damages beyond 5%?

7.9.1 Outline of the Parties' submissions

(297) Contractor has submitted a claim for liquidated damages corresponding to 15 % of the final Contract Price. Contractor holds that the cumulative liability cap of 5% of the Contract Price in Art 24.2 of the CoC does not apply "if the delay is caused by Subcontractor's willful intent or gross negligence".

(298) Contractor argues that in the event of willful intent or gross negligence of Subcontractor, Contractor can either claim compensatory damages or liquidated damages above the 5% liability cap. This is an alteration made to the Contract compared to NTK 07 and NTK 15. This solution, following the wording of Art 24, is also supported by legal theory related to the corresponding provision in NS 8407, cf. Nordtvedt mfl., NS 8407 p. 608 (RLA1 p. 3725). The same conclusion also follows from NS 8405, cf. Bruserud/Hagstrøm p. 351 and 402 (RLA1 p. 2502).

(299) Subcontractor rejects that Art 24.2 allows liquidated damages beyond 5%. Subcontractor holds that the correct interpretation of Art 24.2 is that in the event that a delay was caused by gross negligence or willful intent by the subcontractor, the Contractor may only choose to claim compensatory damages "instead" of liquidated damages. Contractor has not claimed compensatory damages, and liability for liquidated damages is thus limited to the 5% cap.

7.9.2 The Tribunal's interpretation

(300) The contested provision in CoC Art 24.2 reads as following (Tribunal's emphasis):

> "If the Work is delayed in relation to the penalty milestones set forth in Appendix C, then Subcontractor shall pay liquidated damages to Contractor as prescribed in Appendix C.
>
> Subcontractor's cumulative liability for liquidated damages for delay under this article 24.2 is limited to 5 % of the Contract Price. *This* limitation of liability does not apply *if* the delay is caused by Subcontractor willful intent or gross negligence, *in which* Contractor may *choose* to claim compensatory damages *instead* of liquidated damages."

(301) The Tribunal shall not as a part of Part 1 consider whether the exception set out in the second paragraph's second sentence (hereinafter the "Exception") is applicable *in casu* due to "willful intent or gross negligence". The question to be determined by the Tribunal in the present context merely concerns the interpretation of the exception *if* it is considered applicable. Provided that the exception is applicable, the contested matter to be determined by the Tribunal as a part of Part 1 is whether Contractor – *above* the 5% liability cap – only can claim "compensatory damages", e.g. actual and proven losses, or whether Contractor alternatively can *choose* to claim liquidated damages.

(302) The Tribunal will first carry out an objective interpretation based on the wording and system of CoC Art 24.2. Thereafter, the Tribunal will consider the deviations from NTK.

(303) The first sentence of the Exception is phrased as a general exception from the cap of 5%. However, when the first sentence is read in conjunction with the second sentence, which provides the effect of the Exception being applicable, the Tribunal considers the wording to provide an answer to the contested matter. The effect is that Contractor is entitled to claim compensatory damages above the cap of 5% - "instead of" liquidated damages. The term "instead" cannot be reasonably understood to entail that Contractor – as an alternative to claiming damages beyond the cap – can choose to claim liquidated damages above the cap.

(304) The answer following from the wording of the Exception is also supported by the system of Art 24.2 and what must be considered to be a normal understanding of such a clause. Contractor's interpretation will apparently entail that there is a "gap" in Art 24.2: If the Exception is applicable, Subcontractor would as long as the Work is delayed in principle be exposed for an uncapped and hence unlimited liability for liquidated damages. The latter would be highly uncommon and does not sit well with how a reasonable person with a proper understanding of such clauses would understand such an Exception. By contrast, the Exception must be understood to entail that compensatory damages above the cap are subject to (i) causation between the delay and "willful intent or gross negligence" and (ii) causation between the said delay and a proven actual loss on the part of Contractor. The Tribunal cannot see that the said "gap", as indicated by Contractor, can be filled by introducing a reasonable cap for liquidated damages based on the Contract Act Section 36. That it may be necessary to introduce such a cap is, however, not an argument for doing so. It is an argument to avoid an interpretation requiring such a measure.

(305) The Contractor emphasizes that the Exception deviates from NTK 07 and NTK 15, and that the deviations support Contractor's interpretation of the CoC Art 24.2.

(306) The Tribunal fully agrees that there are significant deviations from NTK 07/15 in respect of the regulation of liquidated damages, but cannot see that the deviations shed light on the contested matter. First, it is not enlightened why the Parties made such deviations, which entails that there is no basis to rely on a common understanding deviating from an objective understanding of CoC Art 24.2. Second, the regulation of liquidated damages and caps in the present CoC is so different from NTK 07/15 that it is hard to see that it may support a particular interpretation of the CoC Art 24.2. Most importantly, the regulation of liquidated damages in NTK 07/15 Art 24 does not

explicitly address if and when compensatory damages may be an alternative to liquidated damages. On a separate note, without any bearing on the Tribunal's assessment and conclusion, by contrast to the "global caps" in NTK 07/15 Art 32.2, the CoC Art 32.2 provides an explicit exception for "willful intent or gross negligence".

(307) In general, what possibly might be inferred from a comparison of the CoC Art 24.2 and NTK 07 and NTK 15 is less relevant in a situation where an objective interpretation of in CoC Art 24.2 provides a clear answer to the disputed matter. In fact, the only thing that may be safely derived from a comparison of the CoC Art 24.2 and NTK 07/15, is that the CoC Art 24.2 was tailor-made by the Parties. That it is a tailor-made clause also entails that it is hard to see that legal literature on the interpretation of "similar" clauses may have a bearing on the interpretation – in a situation where an objective interpretation provides a clear answer to the disputed matter.

(308) Based on the above, the Tribunal concludes that the Exception in CoC Art 24.2 only allows for compensatory damages above the cap. Contractor has not claimed compensatory damages, and hence in the present case there cannot be any claim above the cap based on the Exception.

7.10 The scope of Art. 2.2

7.10.1 Outline of the Parties' submissions

(309) A recurrent submission by Subcontractor under the individual claims is that the third paragraph of Art 2.2 of the CoC constitutes a separate and stand-alone legal basis for the claim in question. The main argument is that the provision is far-reaching: Subcontractor is entitled to receive the benefit of "any right or entitlement under the Main Contract ... related to the Works" or "to any of the Contractor's rights under this Contract". The word "Contractor" in the latter quote is a misspelling for "Subcontractor". This means that Subcontractor is entitled to any such benefit expressly described or implied, if available to Contractor.

(310) Subcontractor holds that the term "right or entitlement" covers every privilege and benefit to the Contractor under the Main Contract, including any extra payment, extra time or any relief of obligations or if such relief is the effect. Furthermore, if Contractor is exempted from claims under the Main Contract, it is prohibited from presenting or upholding such claims towards Subcontractor provided it impacts Subcontractor's scope of work or entitlements under the Contract.

(311) Subcontractor argues that this means that Art 2.2 of the CoC represents a separate and stand-alone basis for Subcontractor's claim for Extension of Time and compensation. Subcontractor is entitled to receive extension of time and corresponding compensation to the extent Contractor is granted extension of time or compensation by Bane NOR related to Subcontractor's work or rights under the Contract.

(312) Correspondingly, Contractor is not entitled to claim liquidated damages for periods where Contractor is released from the obligation to pay liquidated damages to Bane NOR under the Main Contract. Since Bane NOR granted Contractor relief from liquidated damages until 30th October 2022, Contractor is not entitled to any liquidated damages from Subcontractor.

(313) Further, Subcontractor argues that Art 2.2 is not limited to rights and entitlements existing at the time of the Contract, as Contractor holds. It also applies to subsequent rights and entitlements available to Contractor under separate agreements with Bane NOR, such as settlement agreements entered into after the time of the Contract. Due to the stand-alone nature of the provision, it is also irrelevant whether the rights or entitlements are granted in response to or conditional upon Contractor's enhanced obligations or withdrawal of claims. All entitlements in agreements between Contractor and Bane NOR, including extension of time and compensation, that are attributable to Subcontractor's rights under the Contractor shall be passed on to Subcontractor. This is a direct flow-down regulation. Subcontractor is not obligated to present claims or prove causation. Contractor must ensure that Subcontractor is fully compensated and accommodated.

(314) Consequently, Subcontractor is entitled to extension of time for the full period as claimed, i.e., up until 21 October 2022, and the cost compensation as claimed.

(315) Contractor holds that Subcontractor has received all the benefits they are entitled to under Art 2.2 of the CoC. The wording is unclear. However, if certain conditions are met, the provision provides a basis for a back-to-back transfer of rights from Contractor to Subcontractor. Only rights Contractor has received from Bane NOR, directly related to Subcontractor's scope of work under the Contract, can be subject to any transfer of rights or entitlements under Art 2.2. Further, the term "to the extent available to the Contractor from Company" implies that any right or entitlement cannot be precluded, time-barred, waived, settled or in other ways inaccessible for Contractor.

(316) Contractor further argues that the term "under the main Contract" in Art 2.2 implies that the rights or entitlement must have a basis in the EPC TBM Contract between Contractor and Bane NOR. Other contractual or commercial relationships between Contractor and Bane NOR are not included. Hence, Subcontractor does not have automatic entitlement to the rights Contractor has negotiated under its settlement agreements with Bane NOR.

(317) Thus, Contractor rejects that Art 2.2 applies to Settlement Agreement no. 1 dated 3 May 2019 (FA25 p. 1905), Settlement Agreement no. 2 dated 15 January 2021 (FA25 p. 3410) and Contract Amendment 8 dated September 2022 (FA25 p. 5946), as claimed by Subcontractor. Article 2.2 is not applicable to such commercial agreements between Contractor and Bane NOR. Furthermore, Settlement Agreement no. 1 and Settlement Agreement no. 2 are not related to Subcontractor's scope of work. The same applies to Contract Amendment 8, with the exception of a UPS matter which was handled through VO 80.

7.10.2 The Tribunal's general remarks on the interpretation

(318) As pointed out above in section 5.2, , the term "back-to-back" typically serves as a more or less imprecise name on an outcome of the interpretation of a subcontract, namely where a subcontract is interpreted "in light of" its associated main contract. CoC Art 2.2, however, does not regard whether the Contract shall be interpreted "in light of" the Main Contract. The contested matter is whether Art 2.2 gives Subcontractor a right to "benefits" of "entitlements" Contractor has received under the Main Contract.

(319) Basically, Subcontractor asserts that Art 2.2 serves as a "stand-alone" basis for the following "right or entitlement" under the Main Contract, provided that it is "related" to Subcontractor's Work or "rights" under the Contract. The most contested categories of claims put forward by Subcontractor based on Art 2.2 are (i) additional compensation, (ii) extension of time, (iii) relief of obligations, and (iv) side agreements, settlements etc. entered into after the Contract and/or the Main Contract. Subcontractor's submissions regarding items (i) and (ii) entail, for example, that if Contractor is awarded extension of time and additional payment, Contractor automatically has a corresponding entitlement towards Contractor under Art 2.2. Hence, to the extent Contractor is entitled to extension of time for a specific period

towards Company, Contractor cannot claim liquidated damages from Subcontractor for the extended period of time. Company granted Contractor relief from liquidated damages until 30th October 2022, and Subcontractor asserts that Contractor is therefore not entitled to any liquidated damages from Subcontractor until 30th October 2022. Regarding item (iv), Subcontractor asserts that Art 2.2 is not limited to rights and entitlements existing at the time of the Contract, but also applies to rights and entitlements available to Contractor under agreements entered into with Company after the time of Contract and/or Main Contract, such as settlement agreements etc.

(320) The Tribunal notes that Art 2.2 has no equivalent in NTK and seems to be tailor-made, and there is barely any pre-contractual evidence enlightening the scope of the provision. On this basis, the first question to be determined by the Tribunal is whether an objective interpretation of Art 2.2 provides an answer whether it applies to the claim categories items (i) – (iv).

(321) The objective interpretation entails that the relevant perspective is how a reasonable person would have understood Art 2.2 at the time of the Contract. As set out above in section 5.1, 'reasonable' refers to a sensible person, which will favor what is sensible and avoid an interpretation that seems artificial or opportunistic. To the extent an objective interpretation provides limited guidance, the Tribunal must seek for an interpretation providing consistency within the Contract, business common sense, and makes Art 2.2 and the Contract as a whole operative from a practical point of view. Reference is made to Bjøranger Tørum, Interpretation of Commercial Contracts, 2019, pp. 223-227.

(322) Article 2.2 reads (Tribunal's emphasis):

> "To the extent any right or entitlement of the Contractor under the *Main* Contract is *related* to the Works or to any of the Contractor's rights under this Contract (*whether or not expressly* so described in this Contract as an entitlement of the *Subcontractor*), the Subcontractor *shall* be entitled to *receive the benefit* of such entitlements, *to the extent available* to the Contractor from the Company."

(323) The Tribunal considers Art 2.2 to be a so-called "flow-down-mechanism" under which Subcontractor may be entitled to a "benefit" of "entitlements" available to Contractor under the Main Contract. Such clauses are relatively rare, and their purpose and scope may vary significantly, from a narrow mechanism limited to specific VORs to more general mechanisms. The typical purpose of a "flow-down-mechanism" is, however, to ensure that a subcontractor receives "his part" of claims made by a main contractor

against the client. Such a flow-down mechanism may be narrow and directly linked to the Subcontract, for example, where a main contractor has basically forwarded subcontractor's claim to the client. In the latter situation, where a main contractor's claim against the client essentially mirrors subcontractor's claim, there is typically a very distinct "ratio" between main contractor's entitlement upstream and subcontractor's claim downstream. Such a narrow mechanism is sometimes accompanied by an extensive regulation of procedural provisions governing if, how and when a main contractor shall pursue claims derived from the subcontract towards the client.

(324) On the other hand, a "flow-down-mechanism" may have a broader scope of application, where there is not necessarily such a distinct "ratio". Instead, it may be sufficient with a connection between main contractor's entitlement upstream and the subcontract. There is no requirement that main contractor has forwarded subcontractor's claim to the client, and hence, it may be sufficient that main contractor has an entitlement under the main contract, provided that there is *nevertheless* a "connection" to the subcontract.

(325) Article 2.2 appears to be a variant of a broad "flow-down-mechanism", and the requirement of connection between main contractor's entitlement under the Main Contract and the Contract is phrased as a matter of "related" to one of two alternatives under the Contract: The "Works" or "rights under this Contract".

(326) Before the Tribunal elaborates on the required level of connection, it would like to point out that Art. 2.2 is structured around *Contractor's* "right or entitlement" under the "Main Contract". Subcontractor may be entitled to receive the "benefit" of such entitlements, which entails that Subcontractor's "benefit" is *derived* from the Main Contract. The Tribunal considers the derived nature of Subcontractor's right under Art 2.2 to have several implications. *First*, the key question under Art 2.2 is not whether Subcontractor has a "right or entitlement" under the Contract, but whether Contractor is entitled under the Main Contract. The flipside of the latter is that Subcontractor may be entitled to such a "benefit" based on Art 2.2 regardless of whether Subcontractor has a corresponding "right or entitlement" under the Contract, provided (i) that Contractor is entitled under the Main Contract and (ii) the benefit is "related" to the Contract.

(327) *Second,* the Tribunal considers the derived nature of Subcontractor's right under Art 2.2 to have a bearing on the contested matter of preclusion under CoC Art 16.1. When Subcontractor's right under Art 2.2 is not subject to a corresponding claim towards Contractor, the clear *starting point* under Art 2.2 must be that it is irrelevant under Art 2.2 whether or not a corresponding claim from Subcontractor against Contractor is precluded under Art 16.1. Otherwise, Subcontractor's right under Art 2.2 would *de facto* be subject to a timely corresponding VOR towards Contractor. Concerning claim category (iii) – relief – we might, for example, imagine that Company has granted an extension of time, albeit neither Contractor nor Subcontractor requested an extension of time. The latter may be the situation where Company, *without* any prior Variation Order Request, issues a Variation Order with a suggested extension of time, and Contractor accepts the suggested extension of time. If so, Company cannot invoke liquidated damages against Contractor for the extended period of time. In such a context, the starting point under Art 2.2 should be that Subcontractor is entitled to the same "benefit" from Contractor; e.g. the same extension of time as granted Contractor under the Main Contract. In such a context, where an extension of time/relief of liquidated damages is granted by Company without a prior Variation Order Requests from Contractor or Subcontractor, it would make no sense to make Art 2.2 subject to a timely VOR submitted by Subcontractor towards Contractor. A similar starting point should apply where Company, as a part of a Variation Order and without any prior Variation Order Request, has granted additional compensation to Contractor that is "related to" the Subcontract, provided that Contractor has not already compensated Subcontractor for the same; typically, by issuing a Variation Order towards Subcontractor. Without the latter qualification, Subcontractor could be overcompensated based on Art 2.2.

(328) As indicated, however, that it is irrelevant under Art 2.2 that Subcontractor's claim towards Contractor is precluded under Art 16.1 can only be a starting point. We might, for example, imagine that Subcontractor claimed extension of time towards Contractor for a certain period but failed to submit a timely VOR under Art 16.1, while Contractor – triggered by Subcontractor's claim – succeeded with a timely VOR towards Company for exactly the same period. May, in such a situation, Subcontractor, based on Art 2.2, benefit from Contractor's time extension under the Main Contract? The Tribunal cannot see that the wording of Art 2.2 provides an answer. In the present context, where an objective interpretation provides limited guidance, the Tribunal must consider the

Contract as a whole and seek an interpretation providing consistency within the Contract. The preclusive mechanism in CoC Art 16.1 serves fundamental purposes in the Contract. As set out above in section 6, a key purpose of Art 16.1 is to enable Contractor to monitor costs and progress during the project. Timely VORs also facilitate consecutive discussions regarding cost and/or schedule impact (if any) during the project, which may narrow down disagreements in the final settlement. Those purposes would, however, not be taken care of if Subcontractor could rely on Art 2.2 where his corresponding claim against Contractor is precluded under Art 16.1. Such an interpretation could undermine the preclusive deadline in Art 16.1. Even though Art 2.2 is a tailored provision not found in NTK, there are no indications that the Parties' aim of Art 2.2 was to provide a loophole undermining the paramount provision in Art 16.1. On this basis, the Tribunal concludes that Subcontractor cannot rely on Art 2.2 to circumvent Art 16.1, where Contractor's successful claim under the Main Contract was triggered by Subcontractor's claim towards Contractor. This exception from the starting point should be applicable where it is evident that Contractor's claim was "triggered" by Subcontractor's claim towards Contractor, typically where Subcontractor's VOR was submitted first and Contractor's claim towards Company basically mirrors Subcontractor's claim.

(329) Concerning time-bar, the Tribunal would also like to point out that Subcontractor cannot rely on Art 2.2 where a claim is time-barred under the deadline for legal proceedings in CoC Art 15.3 of the Contract. After the expiry of such an essential time-bar mechanism between the Parties, Contractor has a legitimate reason to believe that Subcontractor's claim is time-barred. Furthermore, there are no indications that the aim of Art 2.2 was to serve as a loophole undermining the paramount deadline in Art 15.3.

(330) Based on the above, the key test to determine the scope of Art 2.2 is the required level of connection under Art 2.2 – the understanding of "related to". The matter is heavily contested between the Parties. A key question is whether the wording of Art 2.2, particularly the two referenced alternatives "Works" and "rights", provides guidance in this respect.

(331) The Tribunal understands the first alternative for connection, "Works", to require overlap between the scope of work of the Main Contract and the scope of work of the Contract. For example, if Company, by way of a Variation Order, orders Contractor to

carry out additional work unrelated to Subcontractor's scope of work under the Contract but related to another subcontractor's work, it will normally not be considered "related" to the Contract. Hence, Subcontractor is only entitled to additional compensation and/or extension of time based on this alternative if the Variation Order affects Subcontractor's Work. For example, where Subcontractor had to wait for another subcontractor to complete the additional work before Subcontractor could proceed with his Works. The interpretation also provides business common sense. It is hard to see that Subcontractor may have any legitimate need to rely on Art 2.2, where additional work under the Main Contract had no effect on Subcontractor's work. Furthermore, otherwise, Art 2.2 would be very open-ended and hard to operate from a practical point of view, which could again make the provision litigious.

(332) The second alternative, "Contractor's rights under this Contract", is less straight forward. The Tribunal considers the term "Contractor's" in the second line of Art 2.2 to be a misspelling for "Subcontractor's". The latter is supported by the text in brackets, which expressly refers to "an entitlement of the *Subcontractor*" under "*this* Contract" (Tribunal's emphasis). The question is what "rights" refers to. That the term is used as an alternative to "Works", cf. the term "or", clearly indicates that the requirement of connection under Art 2.2 may also be fulfilled where there is no overlap between the scope of work of the Main Contract and the scope of work of the Contract. We might, for example, imagine that Contractor towards Company has a "right" to additional compensation due to changes in law and regulation under CoC Art 5.1 and that the same changes in law and regulation have an effect on the Contract. Another example may be that a breach by Company under Art 27 towards Contractor causes a similar breach between Contractor and Subcontractor, affecting the Contract.

(333) If the requirement of connection ("related to") is met under one of the two alternatives, Art 2.2 provides the following effect: Subcontractor is entitled to "receive the benefit of such entitlements" under the Main Contract "to the extent *available* to the Contractor from Company" (Tribunal's emphasis). The latter provides another requirement in addition to connection.

(334) The Tribunal considers the phrase "to the extent available to the Contractor from Company" to be vague. At the outset, the term "available" might entail that Contractor's claim against Company must have merits and cannot be precluded or time-barred. That understanding would, however, make the term "available" superfluous beside the

phrase "right or entitlement", which seems to presuppose that Contractor's claim against Company has merits and is not precluded or time-barred. Alternatively, the term to the "extent" available to Contractor might be understood as a quantitative guideline; that Subcontractor is entitled to receive the whole "benefit" of such "entitlements". The latter could be proper, where Contractor has merely forwarded Subcontractor's claim to Company. However, the latter would make no sense where Contractor's "right or entitlement" concerns a right or entitlement solely related to the relationship between Contractor and Company. For example, where 50% of the compensation provided by Company's Variation Order is related to the Contract, while the other 50% is solely related to a part of the scope of work under the Main Contract, not overlapping the scope of the Contract. There is no reason that Subcontractor should benefit from the latter 50%. The latter free rider-argument also has a bearing on the quantum of Subcontractor's benefit under Art 2.2. To the extent Appendix B of the Contract provides an applicable rate, the Tribunal finds it evident that Subcontractor cannot rely on Art 2.2 to achieve more beneficial rates based on the rates set out in the Main Contract (if any).

(335) Based on the above, the most sensible interpretation of the phrase "to the extent available to the Contractor from Company" (Tribunal's emphasis) is that Company has literally made the "right" or "entitlement" available for Contractor, typically by granting additional compensation and/or extension of time by issuing a Variation Order. Alternatively, the "right" or "entitlement" may be "available" after Contractor has succeeded with legal proceedings against Company. On this basis, the Tribunal understands the phrase "to the extent available to the Contractor from Company" to mean that Subcontractor cannot claim any "benefit of such entitlements" until the "benefit" is made "available" to Contractor. Hence, "available" serves as a kind of due date mechanism for when Subcontractor, at the earliest, may have a claim against Contractor under Art 2.2.

(336) A contested matter is the quantum of the "benefit" belonging to Subcontractor. As indicated, the Tribunal understands the phrases "to the extent" and "related to" in the first line of Art 2.2 to provide the principle in this respect: Subcontractor is only entitled to "receive the benefit" to the "extent" it is "related to ... the Contract". Hence, the level of connection also has a bearing on the quantum. Applying the principle may be straightforward regarding the distribution of *compensation* between Contractor and

Subcontractor. For example, where it is evident that the additional work instructed under Company's Variation Order in its entirety was performed by Subcontractor. However, where the additional work ordered by Company was partly performed by Contractor himself and partly performed by Subcontractor, it may be less straightforward to determine the part of the Variation Order "related" to the Contract. In particular, where the compensation provided in Company's Variation Order is a non-transparent lump sum; e.g. an amount that is not broken down into its various cost elements. If the compensation for Subcontractor's part of the additional work was quantified or estimated as a part of a Variation Order Request towards Contractor, that may serve as a sensible starting point to determine the quantum belonging to Subcontractor. In the very end, the distribution between Contractor and Subcontractor must be determined based on assessment of evidence.

(337) The quantum of the "benefit" belonging to Subcontractor regarding extension of time may be more straightforward. By contrast to additional compensation, which is a limited amount made available by Company to Contractor, it is not required to "share" the extension of time granted by Company between Contractor and Subcontractor. Hence, if Contractor is granted a time extension of 10 days, Subcontractor may be granted the same number of days in time extension. The Tribunal considers the latter to be the starting point under Art 2.2. The wording of Art 2.2 refers to Contractor's entitlement under the Main Contract, and it does not indicate that Subcontractor has to prove to what extent a time extension under the Main Contract is relevant under the Contract, provided that it is "related to" the Contract. Such a starting point also provides an operable solution because it avoids an *in casu* assessment of to what extent it has any bearing on the progress under the Contract, which may be a complex matter.

(338) The starting point also provides business common sense, in particular regarding the extension of the completion date. When Contractor has agreed on a provision like Art 2.2, it would be awkward if Subcontractor did not benefit from the same extension of the completion date. For example, it would make no sense if Subcontractor had to accelerate the work to avoid liquidated damages under a completion date that no longer applies to the Company. The said starting point, however, seems to presuppose that the schedules in the two contracts are relatively similar, which may entail that a time extension under the Main Contract may not be relevant under the Contract. We might, for example, imagine that Company has granted extension of time regarding a

milestone in the Main Contract that is not found in the Contract, but no extension of time regarding the completion date. It is hard to see that Subcontractor may benefit from the extension of a milestone not found in the Contract.

(339) Based on Subcontractor's reliance on CoC Art 2.2 with regard to its individual Part 1-Claims, the contested item (iv) – subsequent side agreements, settlements etc. – is important. When the wording of Art 2.2 explicitly and clearly refers to "*right or entitlement* ... under the *Main Contract*" (Tribunal's emphasis), it cannot reasonably be understood to include subsequent side agreements, addendums, settlements etc. The clear and firm wording is sufficient to conclude, but the Tribunal notes that the interpretation also provides a balanced and proper solution. A settlement under a "side agreement" is typically a mutual and amicable commercial settlement where parties give and take, and it is often combined with an incentive/bonus scheme. To achieve such a settlement, a contractor must typically withdraw certain disputed Variation Order Requests, for example, in exchange for an extension of time and/or a bonus scheme.

(340) It would be inappropriate and imbalanced if Subcontractor could automatically invoke such a settlement or bonus scheme between Contractor and Company based on Art 2.2, without having made any admissions towards Contractor. In particular if Subcontractor has rejected a similar proposal towards Contractor where Subcontractor had to withdraw certain claims to achieve extension of time and/or a bonus scheme. Furthermore, at the time of the Contract the wording of Art 2.2 gave Subcontractor no reason to believe that it could benefit from other contracts than the Main Contract.

8 THE CONTESTED MATTER OF "DETAILED ENGINEERING"

8.1 Subcontractor's submissions

(341) Subcontractor claims that Contractor/AI was responsible for the engineering of the RS. Subcontractor's engineering responsibilities were limited to coordination, i.e., assisting Contractor during the design development by providing support to EPE, submitting necessary information (shop drawings) from suppliers for Contractor/AI to progress with its design, and providing red mark-ups for the installation performed on-site.

(342) Subcontractor's submits that its view is supported by the natural understanding of the wording of the Contract, the pre-contractual phase, Contractor's contract with Bane NOR and the subsequent events.

(343) In the MoU dated 8 July 2013, it was stated that (FA6 p. 22):

> "ELECNOR will participate in the design process to optimise the most economical solution to the design of the Project but, for the avoidance of doubt ELECNOR will not be responsible for design."

(344) These were prerequisites for Subcontractor's involvement in the project and for the engineering development. Subcontractor had a coordination role, but Contractor was responsible for design coordination. This follows from the Design Coordination Manual dated 16 April 2015 (FA8 p. 726), which was later included in the Contract. Contractor was the main design coordinator. AI and Cowi formed the RS design team.

(345) The list of documents included in EPE, agreed in the early engineering development stage, included detailed design. When AI sent the EPE update of the Master Document Plan ("MDP") to Contractor and Subcontractor on 30 August 2015 (FA6 p. 676), Contractor asked Subcontractor for comments (FA6 675). Subcontractor commented on the MDP list on 22 September 2015 (FA6 p. 674, cf. p. 678). In a meeting with AI on 24 September 2015, it was agreed that the MDP "need to be refined in detail", cf. Subcontractor e-mail of 24 September 2015 (FA6 p. 703). Contractor/AI made no objections to Subcontractor's comments to the MDP. This shows that the EPE documents in the MDP should include detailed engineering and all necessary details to carry out the installation.

(346) The revisions of Appendix A during the contract negotiations support Subcontractor's position. In revision 01 of Appendix A dated 23 December 2014 (FA6 p. 242), most of the engineering scope was deleted. In revision 03 dated 12 May 2015 (FA6 p. 307), it was included that Subcontractor's engineering input was to be "based on the approved design", and not "for subjects that are under its scope" (FA6 p. 319).

(347) Appendix F complements Appendix A on the scope of work. It was Contractor's initiative to create the Design Coordination Manual and other Attachment 1 documents in Appendix F. Minutes of the meeting of 27 January 2016 show that Attachment 1 documents of Appendix F were included as a clarification of Subcontractor's scope of work. It is stated (FA21 p. 1394) that "Contractor requests Subcontractor to include the

following concepts: Interface diagram where Subcontractor's scope can be identified in a simple but clearer manner." Subcontractor's view on understanding Appendices A and F was clear, cf. Subcontractor's e-mail of 7 March 2016 (FA21 p. 1441).

(348) Subcontractor's limited engineering scope follows from the interpretation of Appendix A and F of the Contract. The Contract is not an ordinary EPC contract. A fit-for-purpose obligation is not equivalent to having agreed on an EPC contract. The Parties agree that the design scope of Subcontractor is not back-to-back with Contractor's contract with Bane NOR. The wording of the engineering work scope in Chapter 3 of Appendix A in Contractor's contract with Bane NOR is mainly removed in the Contract (FA8 p. 52, cf. FA9 p. 43). Appendix A does not contradict but complements Appendix F. It is essential to understand what parts of the RS engineering scope are *not* included in the Contract.

(349) Under section 3.1 of Appendix A of the Contract (FA8 p. 52), Contractor shall provide the "general engineering to the project including integration responsibilities, adapting the information to the Client's need", while Subcontractor shall "provide the detail and construction engineering based on the design of (...) Engineering Package E". The latter refers to Subcontractor providing shop drawings and red mark-ups to Contractor.

(350) Subcontractor's engineering scope is further clarified under "General comments" in Appendix F (FA8 p. 738): "Subcontractor will be responsible to submit to the Client (Designers) the information necessary (Shop Drawings) from those suppliers to finalize the Detailed and As-Build documentation."

(351) Subcontractor's limited engineering scope was confirmed in Audit 21-2017 of 30 November 2017. The wording explicitly references Subcontractor's provision of shop drawings and red mark-ups (FA25 p. 1455, 1460, 1461).

(352) Contractor's responsibility for general engineering, "including integration responsibilities, adapting the information to the Client's needs" under Art 3.1 of Appendix A (FA8 p. 52) means that Contractor was responsible for integrating manufacturer's info from Subcontractor into their design. This is confirmed by the "General Comments" of Appendix F (FA8 p. 738). Contractor was also responsible for implementing info from the red mark-ups to finalize the as-built drawings.

(353) Subcontractor's responsibility for assistance with coordination during the design phase is included in the last part of Art 3.1 of Appendix A (FA8 p. 53). This included assisting Contractor with design coordination, e.g., providing feedback on design development. The provision makes reference to Appendix F for more information.

(354) Subcontractor's obligations related to "Design reviews and 3D-model" in Art 3.3 of Appendix A (FA8 p. 53) was limited to "provide information", while Contractor's corresponding responsibility in Art 3.3 of Appendix A to the main contract with Bane NOR (FA9 p. 45) was to establish and implement "3D model reviews and design reviews of all parts of the Contract Object". This provision also states that reviews shall be carried out "within required areas such as (...) constructability" (FA9 p. 46).

(355) Appendix F (Subcontractor's Specifications) is divided into two sections (FA8 p. 720). These are a) parts incorporated by reference, cf. Attachment 2 – i.e. Tender documents from Bane NOR, and b) "other documents", cf. Attachment 1 (bespoke agreed supplemental documents).

(356) Regarding b) ("other documents"), Subcontractor refers to the "Agreement with Acciona" of 1 July 2014 (FA8 p. 724). Here, it is stated: "Engineering: The JV will contract the general engineering services, including design and RAMS, for the whole project. Subcontractor provide the necessary information." Further, "other documents" include the Design Coordination Manual (FA8 p. 726), which clarifies responsibilities, interfaces and coordination of the design engineering (FA8 p. 728). Subcontractor holds that the central premise is that Contractor has leadership in designing the RS (FA8 p. 728). Subcontractor's responsibility was limited to coordination, cf. section 3.2 of the Coordination Manual (FA8 p. 730). The purpose of including Subcontractor's design coordination activities was to mitigate the risk of the design not being part of Subcontractor's scope of work.

(357) Regarding the documents ITT, EPC TMB rev. 11 (FA8 p. 738), Subcontractor holds that these documents clarify the specific engineering deliverables by Subcontractor that follows from Art 3.1 of Appendix A.

(358) Regarding a) (parts incorporated by reference, cf. Attachment 2 – i.e. Tender documents from Bane NOR) (FA8 p. 720), Subcontractor holds that the *exclusion* of references to specific Tender documents from Bane NOR implies that Subcontractor was not responsible for any detailed engineering or other engineering than provided.

Subcontractor would have priced engineering responsibilities in its offer and Contract if they were part of its scope.

(359) Three tender documents are of particular relevance in this respect. The first is 6.3.3.3.01 "Engineering activities during all phases" (FA9 p. 8154). The second is 6.3.3.3.02, "List of all documents to be produced" (FA9 p. 8168). The third is 6.3.3.3.03, "List of any independent verification" (FA9 p. 8183). These documents are not included in Appendix F and not part of Subcontractor's scope. There are no references in ITT documents from Bane NOR that engineering was a preliminary discipline, and that engineering should be detailed during procurement.

(360) Subcontractor further holds that the pricing mechanism in Appendix B of the Contract supports Subcontractor's view on the engineering scope. The price for the engineering was limited to EUR 600.000 (FA8 p. 96), which covers the period from September 2015 to August 2017. This equals a monthly compensation of EUR 25.000 for engineering coordination, cf. the witness statement from Mr. Sevillano (FA2 p. 42). The price breakdown during the negotiations also supports that engineering was not under Subcontractor's scope of work. There were four major items to divide the bid on. A price offer for engineering was not included, cf. the witness statement from Mr. Fernández (FA 21 p. 1398).

(361) Contractor's contracts with Bane NOR and AI support Subcontractor's interpretation of its engineering responsibilities under the Contracts. Under Contractor's contract with Bane NOR, Contractor had the overall role as EPC contractor for the TBP EPC project. Contractor had the leading role of coordinating the project. It was Contractor's responsibility and risk how they chose to subcontract and manage the different scopes of the project. Contractor did not have the expertise to properly coordinate and secure the interfaces, cf. the witness statement from Mr. Solvik (FA22 p. 2319). Contractor contracted AI to provide a complete design fit for purpose for RS under the Design Services Agreement of 22 July 2015 (FA25 p. 555). The engineering scope of work was generally back-to-back with Contractor's contract with Bane NOR. Contractor subcontracted all aspects of the engineering of the RS to AI, except the provision of manufacturer's information. The different scope of work under the contracts puts the engineering responsibilities for the RS with Contractor/AI. The agreed pricing and compensation mechanism for the engineering of the RS in the three contracts are in line with Subcontractor's view.

(362) EPE does not only contain general criteria, as alleged by Contractor. Documents included in EPE is Design Manual, Technical descriptions, Illumination descriptions, power consumption study which collects all info of all estimated needs of LV power consumption of the project for all systems and disciplines, Electrical selectivity calculations and Single Line Diagrams (SLD). EPE was Contractor/AI's end product of the design phase. EPE was to provide detailed engineering ready for Subcontractor's construction.

(363) Subcontractor further holds that it was a contractual requirement that EPE included detailed engineering "valid for construction". This requirement follows from the ITT from Contractor's contract with Bane NOR, cf. Appendix C to Contractor's contract with Bane NOR (FA9 p. 140). It can also be found as Code C in the purpose codes to be used for documentation in Appendix E of the same contract. In the design requirements in Design Control doc. (UFB-00-A-66002-03E) of 23 February 2017 it is also stated that the design phase of a deliverable ends with deliverable being "issued for construction" (FA25 p. 1336).

(364) Contractor fully agreed in real time that their engineering should include all details for Subcontractor to commence installation; cf. MoM of 20 November 2017 item 6 (FA6 p. 1641) and VO 19 of 4 May 2018 (FA6 p. 2046), which stated that "Subcontractor shall be deemed to have all the information required to complete the procurement process."

(365) Contractor's first submittal of EPE on 31 January 2018 was incomplete and lacked necessary details. Subcontractor analyzed the engineering documents, notified of the errors in the design, and suggested improvements. cf. Subcontractor's letter of 14 February 2018 (FA6 p. 1800). Following the extended date of EPE to June 2018 in VO 19 (FA6 p. 2046), Subcontractor continued reviewing EPE. By June 2018, most necessary information for construction activity had been delivered, but much information had remained. Subcontractor notified of possible impacts of lack of engineering documentation in updated drawings and reports part of EPE throughout project execution.

(366) Subcontractor further holds that the Master Document Plan (MDP) and Master Document List (MDL) confirm Subcontractor's view on engineering responsibilities. MDP and MDL requirements are part of Contractor's contracts with Bane NOR and AI but not in the Contract with Subcontractor. The MDP, documents being part of EPE,

agreed in the early design development stage, shows Contractor/AI's responsibility for detailed design. The MDL specifies the detailed level of engineering to be ready for construction. The Design Control document section 4.2 (FA25 p. 1335) confirms that MDP shall include a detailed design.

(367) The Document Management Requirements in Contractor's contract with Bane NOR support Subcontractor's view that detailed engineering was Contractor deliverables, cf. section 5.1 (FA9 p. 3177. Subcontractor's MDL shows that only shop drawings were part of its engineering documents. This was observed by Bane NOR in audit 21-2017 of 30 November 2017 (FA25 p. 1461). Contractor confirmed that Subcontractor's only engineering documents were shop drawings in e-mail of 20 February 2018 (FA2 0. 306).

(368) Subcontractor rejects Contractors' arguments that EPE was conceptual and a "proof of concept" and that it was a general design based on assumptions that Subcontractor was to take over for performing the detailed design. The Parties agreed in the design development that EPE should contain a detailed design. Contractor runs away from its engineering responsibility by asserting that EPE was conceptual and based on assumptions. The term "assumptions" used in EPE refers to pre-requisites (Norwegian: "forutsetning") not estimates (Norwegian: "antagelse").

(369) The fact that the Parties agreed on an "open design" not linked to a specific manufacturer did not prevent Contractor from performing detailed engineering. An "open design" only means that the Parties agreed a "set of requirements for procurement items so that [Subcontractor] could make the procurement decisions between the suppliers that fulfilled those", cf. the witness statement from Mr. Sevillano (FA 21 p. 18). Subcontractor had the freedom to explore the market for the best available option that fulfilled the functional requirements.

(370) Contractor's main line of argument that engineering is split into general design in the design stage and detailed design during procurement and construction is baseless. Contractor is fogging the engineering topic by mixing engineering terms and attempts to carve out its engineering responsibility. Contractor takes wording out of context and tries to turn the engineering liability to Subcontractor. By this, AI is gaining astronomical compensation for a conceptual and incomplete EPE. Contractor's view results in several gaps that cannot be explained

(371) Subcontractor holds that Contractor was responsible for detailed engineering in the design phase and for progressing with its design during procurement and construction. Contractor's assertion that Subcontractor should have a technical office on site to perform the engineering during procurement is not correct. There was no contractual requirement of such technical office in the Contract.

(372) Contractor's presentation of red mark-ups, as-built drawings and documentation for operation ("DFO") is inaccurate. Contractor mixes concepts and responsibilities when claiming Subcontractor's detailed engineering obligations extends to as built an DFO.

(373) (Other) subsequent events support Subcontractor's view on engineering responsibilities. Two sequences of the Parties' correspondence in Autumn 2017 confirm Subcontractor's understanding of the Contract. The first sequence confirmed that Contractor should provide necessary detailed design ready for installation, cf. e-mail from Robert Diaz 8 November 2017 (FA6 p. 1662), e-mail from Jose Alonso of 15 November 2017 (FA6 p. 1660), e-mails from Subcontractor to AI/Contractor of 15 November 2017, minutes of meeting in e-mail from Mr. Sevillano of 22 November 2017, item 6, (FA6 p. 1641), and e-mail from Mr. Espinosa of 22 November 2017 (FA6 p. 1666). The second sequence confirmed that Contractor/AI were responsible for all engineering, except information from manufacturers, cf. e-mail from Subcontractor to Contractor of 15 November 2017 (FA6 p. 1689) and e-mail from Subcontractor to Contractor of 12 December 2017 (FA6 p. 1888). Contractor did not respond but confirmed in commercial meeting no. 2 of 8 March 2018 (FA6 p. 1993). The correspondence shows that both Parties shared the same understanding of the engineering responsibilities in real time, that Contractor/AI was responsible for the detailed engineering and for providing Subcontractor with all necessary details to perform the installation. Subcontractor was responsible for providing information from manufacturers.

(374) Further, design meetings for the RS between Bane nor, Contractor, AI, Cowi and Subcontractor from 2015–2018 confirm Subcontractor's view, cf. MoM meeting no. 8 of 7 April 2016 (FA6 p. 745), MoM meeting no. 10, 8 June 2016 (FA6 p 770) and MoM meeting no. 17 of 12 January 2017 (FA6 p. 861). Also, commercial meetings and Bane NOR Audits confirm Subcontractor's understanding, cf. Bane NOR Audit Report 21-2017- Railway Systems Work of November 2017 (FA25 p. 1424, 1454), commercial

meetings between Contractor and Subcontractor in January and March 2018 (FA6 p. 1765 and p. 1992), and Bane NOR Audit 19-2019 (FA25 p. 2507 on p. 2509).

(375) Subcontractor's understanding of the engineering responsibility is also supported by the fact that Contractor and AI de facto performed all required engineering and issued DoC for design of LVS and IPA on 3 April 2020 (FA6 p. 4306). Further, Contractor confirmed towards Bane NOR how engineering should be conducted, in line with Subcontractor's view, cf. Bane NOR's letter "Railway systems concerns and risks" of 6 April 2020 (FA25 p. 2570), where Bane NOR confirmed Subcontractor's view, and Contractor's reply of 6 May 2020 (FA25 p. 2771), where they agreed that detailed design was to be performed during the engineering phase. Reference is also made to task force meetings that confirms Contractor's responsibility for detailed engineering and proved defects in Contractor/AI's design, cf. MoM Task Force meeting 5 of 16 June 2020 (FA27 p. 5337 on p. 5343), MoM Task Force meeting 6 of 30 June 2020 (FA27 p. 5357 on p. 5364), MoM Task Force meeting 7 of 25 August 2020 (FA27 p. 5381 cf. p. 5388), cf. MoM Task Force meeting 8 of 15 September 2020 (FA27 p. 5391 on p. 5400 and 5406).

8.2 Contractor's position

(376) Contractor holds that an objective interpretation of the Contract implies that Subcontractor was responsible for providing the necessary detailed engineering to procure and install a fit-for-purpose installation. The wording in this matter results from lengthy and comprehensive discussions over months between highly experienced professionals.

(377) Contractor relies upon the system of the Contract. The system is that the Contract consists of several documents in an order of priority, cf. Form of Agreement (FA8 p. 3), with Appendix F having the lowest priority. This means that Appendix F cannot contain information that implies any limitation to the requirements described elsewhere in the contract. Neither can it contain information that introduces any change in the risk allocation following from the other part of the contract.

(378) The documents in Appendix F describe the minimum requirements that Subcontractor had to expect, cf. Art 1, 5th paragraph of Appendix F (FA8 p. 720). Pursuant to Art 7.1 of the CoC, Subcontractor shall comply with all requirements of Appendix F.

(379) Subcontractor pleads that an oral agreement was made that the Battery Limit documents in Appendix F should prevail over Appendix A. No evidence supports this.

(380) The first section of the Form of Agreement is relevant for the disputed interpretation issue (FA8 p. 3): "Contractor and Subcontractor have agreed on the 29th day of February 2016 that Subcontractor shall carry out and perform the engineering, procurement and construction of the Railway Systems for the Follo Line Project EPC TBM in accordance with the provisions of the Contract."

(381) Contractor is not pleading that the Contract is an ordinary EPC contract. Subcontractor`s engineering responsibility is limited to what follows from the provisions of the Contract. The wording demonstrates that Subcontractor was responsible for engineering. It would not have been natural to phrase the Form of Agreement like this if Subcontractor was not responsible for engineering.

(382) The wording in Art 23.1, letter b) and c) of CoC strongly indicates that Subcontractor was responsible for engineering under the Contract and had a fit for purpose obligation:

> "Subcontractor guarantees
>
> ...
>
> (b) that the Contract Object will conform during the Guarantee Period to the final result of Subcontractor's engineering, and
>
> (c) that Subcontractor Specification and his engineering is suitable for the purpose and use for which, according to the Contract, it is intended, ..."

(383) Contractor further holds that it follows from Appendix A, which regulates Subcontractor's scope of work, that Subcontractor was responsible for all activities and for all necessary detailed and construction engineering on the basis of EPE to ensure a fit-for-purpose delivery.

(384) Under subsection 1.4 of Appendix A to the Contract (FA8 p. 47), Subcontractor accepted the objective of this Contract, which was the supply of a complete, fit-for-purpose RS. A complete and fit-for-purpose system can't be achieved without having responsibility for engineering. The scope also includes the execution of all construction engineering and the performance of "all activities... required for the complete delivery of the contract object". The term "all activities" implies that any activities related to the RS fall

under Subcontractor`s responsibility, and it does not explicitly exclude the engineering work required.

(385) Contractor further refers to Art 2.1.1 of Appendix A, where it is stated that (F8 p. 49):

> "Subcontractor shall provide an organization to manage, inspect and control all activities and phases of the Work and ensure full and satisfactory performance of his obligations under the Contract. Subcontractor's organization shall ensure quality and effective communication in all elements of the Work, in particular with respect to the interface between engineering and construction, and to the interface issues across the contract battery limits with other contractors."

(386) Article 3.1 of Appendix A (FA8 p. 52) makes a distinction between a) general engineering as Contractor's responsibility with collaboration obligations for Subcontractor, and b) detailed and construction engineering responsibility as Subcontractor's responsibility:

> "Contractor shall provide the general engineering to the project including integration responsibilities, adapting the information to the Client's needs. Subcontractor shall provide the detail and construction engineering based on the design of the following main items:
>
> ...Engineering Package E."

(387) The detailed construction engineering takes place after the general engineering stage, and was to be developed based on the general design. This means that when EPE was finalized, the responsibility for engineering switched from Contractor to Subcontractor. Then, the contract turned into a regular EPC contract. Subcontractor has then a wide duty to assess documents, search and check for errors and inconsistencies, and notify and await instructions under Art 6.1 and 6.3 of the CoC.

(388) For all parts that Subcontractor did not notify of errors or inconsistencies within the deadline set in CoC Art 6, Subcontractor assumed responsibility for ensuring functionality. This also applies to errors or inconsistencies discovered after the deadline in Art 6. If further detailed engineering was necessary to obtain functionality, after receipt of the general engineering, Subcontractor was also responsibility for this, as the responsible party for the necessary detailed design, cf Art 3.1 of Appendix A.

(389) From the completion of EPE and/or expiry of the notice deadlines under Art 6 in CoC, Subcontractor fully responsible for the functionality of the delivery

(390) Contractor further refers to Art 3.5 of Appendix A (FA8 p. 54) which sets forth an obligation for Subcontractor to "define a maintenance strategy for all relevant items of

the Contract object during detail design". Under Art 3.6, cf. Art 3.1 of Appendix A (FA8 p. 54) Subcontractor was responsible for managing all interfaces and integration related to their scope.

(391) Subcontractor's engineering responsibilities are also reflected in Appendix B of the contract. It follows from Art 2.2 of Appendix B (FA8 p. 85-86) that when pricing its tender, Subcontractor had to account for the development of the design after the finalization of the general design. Not all detailed engineering work was included in the lump sum of EUR 600.000 under Art 1.2 (FA8 p. 85). Necessary detailed engineering under procurement was probably included in the lump sum for procurement, and detailed engineering during construction was probably included in the lump sum for construction.

(392) Appendix F does not include anything implying that Subcontractor was not responsible for detailed engineering, and if it did, Appendix A would nevertheless prevail. The remark regarding "Engineering" in the column "Agreement" (FA8 p. 724) explicitly echoes the Contract's provision on general engineering in Art 3.1 of Appendix A. It does not provide specific input to the disputed matter on the responsibility of detailed engineering.

(393) Subcontractor's contract interpretation implies a significant need for coordination and interaction between the Parties even after completing General Design and EPE. This iterative engineering process in the middle of Subcontractor`s procurement should have been at least as important to agree on as the coordination during the development of EPE. Such regulation is, however, absent in both the Design Coordination Manual (DCM) in Appendix F and the rest of the contract documents. The absence of such regulation in the contract docs, including the DCM, is a clear argument against the interpretation pleaded by Subcontractor.

(394) Contractor further holds that the Battery Limit documents in Appendix F do not imply that Subcontractor did not have any detailed engineering responsibilities. Contractor rejects that any verbal agreement was entered into that the Battery Limit documents would prevail over Appendix A, cf. witness statement from Mr. Fernando Vara paragraph 16-18 (FA3 p. 1185), supplementary witness statement from Mr. Fernando Vara, paragraph 30-36 (FA22 643) and supplementary witness statement from Mr. Francesco Bertagnolio, paragraph 8 (FA22 674). Contractors view is that it was agreed

from the very first draft of the contract documents that Subcontractor was responsible for detailed engineering.

(395) The Battery Limit documents were initiated by Contractor, due to Subcontractor not being awarded the full original RS scope. From a practical point of view, it was convenient to establish an interface matrix and define the physical boundaries for Subcontractor's scope. Subcontractor wanted to include some information regarding the sequence of their working methods. It was never discussed and never a part of the intention behind the Battery Limit documents to redefine Subcontractor's scope of work and to release Subcontractor from the responsibility for detailed engineering. This would have been contradictory to the purpose of bringing Subcontractor into the project, to release them from the responsibility for detailed engineering

(396) The wording of the Battery Limit documents does not mention detailed engineering—it does not say that Subcontractor was not responsible for such engineering. If Subcontractor intended to be released from the detailed engineering responsibility, asking explicitly would have been straightforward. It would have been easy to include a statement regarding this in the Contract if okay.

(397) Alstom, another tenderer, confirmed the objective interpretation of the wording, namely that the subcontractor was responsible for detailed engineering. Alstom submitted two offers dated 6 and 20 November 2015 (CB2-1 p. 284) based on the same tender documents and conditions as Subcontractor. Alstom specified in its offers that detailed design was included (CB2-1 p. 285, cf. p. 290).

(398) The principle of objective interpretation of contracts requires the contract to be understood within a context. The context pertains to the circumstances surrounding the conclusion of the contract, which encompass the negotiation phase. This includes the prehistory and negotiations leading up to the final agreement and the interpretation that aligns with the most reasonable commercial meaning, i.e. business common sense. In principle, subsequent events could also be considered part of the context.

(399) Contractor holds that the negotiations confirm Contractor's interpretation of the Contract's wording that Subcontractor was responsible for detailed engineering. The Contract was subject to extensive negotiations between the Parties for many months. As part of the context, Contractor refers to Subcontractor actively participating in 3

illegal price cartels during the negotiation period (FA 25 p. 1839 and p. 2994), which explains behaviour in late 2014, 2015 and 2016. The Follo Line project was one of the projects covered by the cartel agreements. Contractor was unaware of this during the negotiation period.

(400) Based on Acciona's previous experience and the size and risk of the project, they found it necessary to get involved with others. Acciona contacted Subcontractor already in 2011 since they had the necessary expertise and engineering experience from similar projects. They also partnered with Ghella in early 2013.

(401) Both Parties spent significant resources (legal, technical, procurement) on the negotiations. Since the first version of the contract documents was exchanged in May 2015, Subcontractor was responsible for detailed engineering. Several versions of the contract documents and Appendix A were exchanged from the summer of 2015 to March 2016. In all versions, the responsibility for detailed engineering rested with Subcontractor. It was never proposed that this responsibility should fall to anyone but Subcontractor.

(402) Several adjustments to the wording in Appendix A section 3.1 were proposed. None of the proposals affected Subcontractor`s responsibility for detailed engineering.

(403) The CEO agreement from December 2015 was entered into based on the contract documents from 23 September 2015. No battery limit documents were included at that time. It is not likely that Contractor would accept a significantly negative change in the risk allocation without having anything in return. Contractor initiated an interface matrix to clarify interfaces and physical boundaries for Subcontractor's work. The document was agreed to be included in Appendix F before the Parties exchanged the first draft. The consequence is that Appendix F only sets a minimum standard and if something more or something else is required in other contract documents, then that applies.

(404) However, the wording of the BLs doc does not support that it affects Subcontractor`s responsibility for detailed engineering as defined in Appendix A. Subcontractor never communicated to Contractor that they wanted to be released from this responsibility. Based on Subcontractor`s proposal on 7 March 2016, Contractor had no reason to believe that Subcontractor considered themselves released from this responsibility.

(405) Contractor further holds that Subcontractor required Contractor not to specify precisely the brand and/or the precise individual characteristics of the components to be included in the systems included in Subcontractor's scope. Instead, Subcontractor wanted Contractor to include assumptions/general specifications in EPE, enabling Subcontractor to buy components from the supplier with the lowest price.

(406) The total functionality of electrical systems is, to a large extent, dependent on special considerations being made to ensure that the components "work together." Experts know that when el-systems contain components from different suppliers, they do not always "talk to each other" in the same way as components from other suppliers. Thus, additional detailed engineering is required when components of the same systems are purchased from different suppliers.

(407) The Contract does not explicitly state that Subcontractor could require an open design. But there is no disagreement between the Parties that Contractor accepted keeping the general engineering "open", enabling Subcontractor to optimize its procurement. Contractor saw this as a natural consequence of their understanding of the contract. It is also assumed in the last paragraph of Art 3.1 of Appendix A (FA8 p. 53) and Art 5.3.3 of the Design Coordination Manual in Appendix F (FA8 p. 734), and the General Comments in the Battery Limit document, second text box of Appendix F (FA8 p. 738).

(408) Contractor holds that industry practice and business common sense support its interpretation of the Contract's wording. PC Contracts are not industry practice and do not comply with business common sense. Normally, responsibility for procurement and detailed engineering go hand in hand. Alstom's offer and Subcontractor's Purchase Procedure manual confirm that Contractor's interpretation aligns with business common sense and complies with industry practice.

(409) Various witnesses confirm that Contractor's interpretation represents business common sense and complies with industry practice, cf. Mr. Frode Solvik from Bane NOR (FA22 p. 2318 – chapter 3 paragraph 9), Mr. Francesco Bertagnolio (FA22 p. 678 – paragraph 28-31), Mr. Jaime Carillo (FA22 p. 2167 and p 2186), and Dr. Eng. Abdel Baset Awawdeh Awawdeh's expert witness statement of 3 January 2024uary 2024 (FA23 6556).

(410) The contract's wording, interpreted objectively and in the relevant context, provides a clear and unambiguous solution to the disputed issue: Subcontractor was responsible

for detailed engineering, meaning all engineering necessary on top of EPE, to provide a fit for purpose delivery in compliance with the contract requirements.

(411) Subcontractor pleads that the Parties have a common understanding of the Contract regarding detailed engineering responsibility that deviates from what follows from an objective interpretation. In their view, Subcontractor's engineering responsibilities in the procurement- and construction phases were limited to informing Contractor of what they had purchased, by forwarding shop drawings from their suppliers. Thus, they were not responsible for assessing whether the materials purchased would imply a fit-for-purpose delivery complying with the requirements in the contract.

(412) Contractor holds that such deviating common understanding cannot be established. The burden of proof of this rests upon Subcontractor. Subcontractor`s submission contradicts the solution resulting from the Contract's system and objective interpretation. It represents a fundamental breach of the Contract's system. Solid evidence is required. In other words, a heightened burden of proof applies in this matter.

(413) Contractor holds that given the pre-history and the negotiation phase, it is highly unlikely that the Parties agreed to something other than what follows from the wording, the text and the system of the contract. The background and the purpose of involving Subcontractor in the project speak against a deviating common understanding. The purpose of involving Subcontractor was to ensure the expertise and experience necessary to meet the customer's demands in this part of the project. It would completely contradict the rationale for involving Subcontractor, and Contractors need to agree on the pleaded deviating common understanding. If such an understanding had been established, it would have led to changes in the relevant parts of the contract documents. Such deviating common understanding would also represent an agreement contrary to Subcontractor's originally proposal for Appendix A.

(414) Contractor further holds that a deviating common understanding would imply an agreement contrary to all drafts throughout the negotiation phase and entail a significantly changed split of functions and risks after the lump sum price was agreed. It would also imply a significant contract change at the very last minute before signing. The awareness of the Contract's system and the agreement to include Battery Limit documents in Appendix F also speaks against a common deviating understanding as

argued by Subcontractor. The same applies to the fact that Subcontractor never asked to be released from their responsibility for detailed engineering.

(415) The wording in the Battery Limit document does not express what Subcontractor claims to be a deviating common understanding. It does not mention anything regarding engineering responsibility. No contemporaneous evidence supports the verbal agreement contended by Subcontractor's Project Manager, Mr. David Fernández (FA2 p. 2606 - paragraph 32).

(416) Contractor holds that subsequent events cannot determine a common understanding deviating from the objective interpretation. Discussions in autumn 2016 brought to light Subcontractor's views on potential discrepancies in Appendix F vs the ITT v11 documents. Subcontractor did not mention engineering or Subcontractor's remarks in the table "General comments" in the Battery Limit documents. The result of discussions was that Subcontractor committed to "No economic impact" for specifications in Appendix F. Contractor after that believed that all potential discrepancies were sorted – and that the Parties were aligned that Subcontractor's scope was back-to-back with Contractor's scope to Bane NOR.

(417) Subcontractor's repeated requests for an open design during the design phase contradict the alleged deviating common understanding. An open design increased the need for detail engineering during the procurement process.

(418) Subcontractor's request for more details in the design during the general engineering phase mainly related to construction engineering. The e-mail exchange from November 2017 on the level of detail only relates to 2D interface drawings. AI and Contractor replied that interface information was available in the 3D model. AI emphasized that the supplier would give the final details, which Subcontractor would assess. There was no mention of AI making any second review or adjustments to drawings after Subcontractor had chosen a supplier. Subcontractor made no objections to AI's summary of understanding.

(419) The audit report of the RS works carried out by Bane NOR, dated 30 November 2017 (FA25 p. 1385), and the subsequent presentation of 21 November 2017 (FA25 p. 1394) and action plan of 15 December 2017 (FA 25 p. 1420) do not support a deviating common understanding.

(420) The discussions between the Parties following the submittal of EPE on 31 January 2018, the commercial meetings following VOR 1 (FA6 p. 1992, FA6 p. 2038), and the re-issue of EPE on 13 July 2018 (FA26 p. 1), shows that the discussions on the level of detail in design were directed at details in the general engineering. Engineering development and detail engineering during procurement were not addressed. Subcontractor's comments in the VORs and commercial meetings do not address the functionality of Subcontractor's scope. Subcontractor's argument throughout the Project that EPE is still unfinished is illogical.

(421) The Parties' conduct and communications during the procurement phase also support Contractor's interpretation of the Contract. Subcontractor acknowledged its responsibilities for the procurement and did in fact, conduct the procurement independently of Contractor.

(422) During the Parties' discussions during the construction stage in 2019-2020, after the mistakes in the LVS installation materialized in the fall of 2019, Contractor first realized that Subcontractor purported not to have responsibility for the functionality of its scope and had performed no detailed engineering during procurement – in the spring of 2020. Contractor partly intervened in the detailed engineering of Subcontractor's LVS scope after the selectivity deviations were revealed in the spring of 2020 because Subcontractor was passive and uncooperative and because Bane NOR was requesting answers.

(423) In summary, the subsequent events do not support Subcontractor's interpretation. At most, the events and conduct taken by the Parties after the signature display a mixed and non-consistent picture. No consistent practice can be relied upon to construe a common understanding that deviates from the objective interpretation. In this respect, Contractor also holds that formal communication must be given greater weight than informal project-level communication. The formal communication supports Contractor's understanding of the Contract. Contractor holds that the evidence most contemporaneous to the Contract signing supports the objective interpretation of the Contract.

(424) Commercial positioning from Subcontractor on the engineering question was hugely detrimental to the Project. Subcontractor turned the responsibility for functionality in the installation on its head and created a lot of confusion in the Project.

Communication Contractor has had with Parties other than Subcontractor can have no bearing in the consideration of whether the Parties had a joint common deviating understanding

(425) Contractor holds that it is understandable that it took time for Contractor to understand the breach that followed Subcontractor's wrong contractual position. Before any consequences were discernible to Contractor, Contractor had less reason to react.

(426) Contractor holds that there is no basis for asserting that the so-called good faith standard could yield a conclusion different from the objective interpretation of the contract. There are no indications that Subcontractor understood or had any reason to believe that Subcontractor considered themselves exempt from the responsibility for detailed engineering.

8.3 The Tribunal's assessment

8.3.1 Introduction – the core of the disagreement

(427) The distribution of engineering responsibilities is heavily contested in the present case. Subcontractor argues, primarily based on the "Battery Limits" in Appendix F, that it is not obliged to provide any kind of engineering.

(428) On the other hand, Contractor argues that the Contract at the outset is not a "full-scale EPC contract" but a kind of "hybrid" contract where Subcontractor shall provide "detailed engineering". However, from the completion of Contractor's general design, the Contract shall be considered a "full-scale EPC contract".

(429) On this basis, the key question to be determined by the Tribunal is whether Subcontractor is responsible for "detailed engineering" and, if so, what kind of tasks are included in the "detailed engineering".

(430) In the following, the Tribunal will first consider whether an objective interpretation of the various invoked contractual documents provides an answer to this question. The order of the analysis follows the order of priority set out in the Form of Agreement. Hence, the analysis starts with the Form of Agreement, continues with the CoC and Appendix A, etc., and ends with Appendix F. Thereafter, in section 8.3.4 , it is assessed whether the Parties had a common understanding at the time of contract.

8.3.2 Does an objective interpretation of the Contract provide an answer to the responsibility for detailed engineering?

8.3.2.1 The Form of Agreement, CoC, and Appendix A

(431) The relevant parts of the *Form of Agreement* read (Tribunal's emphasis):

> "Contractor and Subcontractor have agreed on the 29th day of February 2016 that *Subcontractor* shall carry out and perform the *engineering*, procurement and construction of the *Railway Systems* for the Follo Line Project EPC TBM in accordance with the provisions of the Contract."

(432) The general reference to "engineering" concerning the RS must be understood to distribute both general and detailed engineering to the Subcontractor, strongly indicating that the present Subcontract is a so-called EPC contract.

(433) The understanding is clearly supported by the *CoC*, which is based on the EPC contract NTK: Article 23.1 (b) and (c) of the CoC expressly provide that "the Contract Object will conform during the Guarantee Period to the final result of Subc*ontractor's engineering*", and that "Subcontractor Specification *and his engineering* is suitable for the purpose and use for which, according to the Contract, it is intended ..." (Tribunal's emphasis).

(434) That the Form of Agreement and the CoC, the two contractual documents with the highest priority, provide a clear and coherent answer is at the outset a strong argument in support of the Contractor's interpretation.

(435) On the other hand, *Appendix A (Scope of Work)*, which provides a more detailed regulation of the distribution of engineering responsibilities, sets out a more nuanced picture. Article 1.4 second paragraph states that (Tribunal's emphasis):

> "The scope of work to be performed by Subcontractor includes the performance of all activities, including the provision of all resources, people, systems, equipment and materials (permanent and temporary), and the execution of all *construction engineering*, procurement, construction, MC, commissioning, assistance to Company's test activities, all as required for the complete delivery of the Contract Object."

(436) However, Subcontractor's obligation to provide "construction" engineering indicates that Subcontractor does not have all of the engineering responsibilities.

(437) The latter is supported by Art 3 in Appendix A, which must be considered the key provision governing the contested matter; "Engineering". Under Art 3.1 "General", the first and second paragraphs read (Tribunal's emphasis):

> "[1] Contractor shall provide the *general* engineering to the project including integration responsibilities, adapting the information to the Client's needs. Subcontractor shall provide the *detail* and *construction* engineering *based on* the design of the following *main* items:
>
> Engineering Package E
>
> As built drawings and documentation for operation (DFO)
>
> [2] The main *areas* of engineering work include the following:
>
> All railway systems *from* the respective interfaces between EPC Oslo S along the entire alignment *to* the interfaces with EPC Ski"

(438) The first sentence of the first paragraph clearly provides that Contractor shall provide "general" engineering, and the second sentence clearly states that Subcontractor shall provide "detail and construction engineering". The relationship between "construction engineering" and "detailed engineering" – whether it is basically the same – is not entirely clear. In any case, the first paragraph clearly provides a *distribution* of engineering responsibilities between Contractor and Subcontractor. That Subcontractor's "detail and construction engineering" shall be "based on" EPE supports that the provision is based on a traditional understanding of "general" and "detailed" engineering, namely that the "detailed" engineering to be provided by Subcontractor shall rely on and further develop – literally "detail" – the "general" engineering provided by Contractor in EPE.

(439) The reference to the as-built-drawings and the documentation for operation (DFO) seems to clarify that Subcontractor, in addition to developing the "detail and construction engineering" based on EPE, shall provide such documents as a part of its engineering responsibilities. That it explicitly refers to the "following *main* items" (our emphasis) clearly indicates that the following list of responsibilities is not exhaustive.

(440) The second paragraph is, at the outset, slightly confusing in this respect as it uses the general term "engineering". When the second paragraph is read in conjunction with the first paragraph, however, the meaning of the second paragraph seems to be that it merely outlines the "geographical" scope (or so-called "battery limits") of Subcontractor's engineering responsibilities set out above in the first paragraph, namely Subcontractors responsibility for "detail and construction engineering".

(441) The fifth paragraph of Art 3.1 clearly presupposes that Subcontractor's engineering responsibilities are not limited to "detail and construction engineering" by stating that

"Subcontractor shall assist Contractor during the engineering phase", for example by "provide to Contractor feedback and inputs into the design development". Furthermore, the sixth paragraph states that the coordination of these design activities is described in Appendix F ("Design Coordination Manual").

(442) The last paragraph of Art 3.1 is also relevant in this respect. It presupposes that the equipment to be procured by Subcontractor is, as a starting point, to be determined by the Subcontractor. That Subcontractor is to determine the equipment to be procured, provided that it complies with the functional requirements of the contract, sits well with Subcontractor's responsibility for procurement and detailed engineering.

(443) That Subcontractor has undertaken engineering responsibilities beyond "detailed and construction engineering" is also supported by article 3.6 concerning "interfaces and interdependences". In particular, the second paragraph, stipulating an obligation for Subcontractor to identify and coordinate interfaces and to "ensure functionality across interfacing contracts", clearly presupposes that Subcontractor has an active and key role in the engineering. In the absence of a key role in the engineering phase, it is hard to see that it would be adequate to assign such tasks to Subcontractor as identifying and coordinating interfaces require a deep understanding of the solutions to be determined as a part of the detailed engineering.

(444) The Respondent has also referred to Art 3.5 concerning Subcontractor's responsibility to define a maintenance strategy "during detail design." Similar to Art 3.6, this provision indicates that the Subcontractor's engineering responsibilities are not limited to a narrow understanding of "detailed engineering".

8.3.2.2 Does Appendix B shed light on the extent of Subcontractor's engineering responsibilities?

(445) The price might enlighten the scope of an obligation. For example, an extraordinarily low price may indicate that a buyer should expect a substandard quality. In the present case, Subcontractor asserts that the relatively modest lump sum of EUR 600 000 for "engineering" in section 1.2 of Appendix B strongly indicates that they did not undertake responsibility for "detailed" engineering. Alternatively, it is argued that the lump sum indicates a narrow understanding of "detailed" engineering. The basis of the argument is that if the Contract included "detailed" engineering (in an ordinary meaning) in such a complex project, the said lump sum would be significantly higher than EUR 600 000.

On this basis, Contractor could not at the time of the Contract reasonably expect that it included "detailed" engineering in an ordinary sense.

(446) The Tribunal agrees that the pricing of the various elements included in the Contract might be relevant determining the scope of the various elements. The Tribunal also agrees that the said lump sum, at the outset, might appear low compared to the Contract Price. However, the latter argument is less straightforward on closer scrutiny of the various provisions in Appendix B. First, section 2.2 (first paragraph) of Appendix B explicitly states that (Tribunal's emphasis):

> The description of the various price elements in this Appendix is intended for dividing the Contract Price into typical elements, but said elements *do by no means intend* to provide *exhaustive* detailing of each and every operation involved in or necessary for carrying out the Work. Hence, Subcontractor is under no circumstances entitled to compensation for any other cost elements than those specifically listed herein.

(447) The latter clearly entails that the said lump sum of EUR 600 000 cannot be considered to cover all the engineering covered by the Subcontract. This understanding is supported by section 2.2 (third paragraph) of Appendix B, which provides that (Tribunal's emphasis):

> "The Lump Sums, Rates and percentages shall be fully inclusive, firm and valid until completion of the Work and shall not be revised or amended as a consequence of Subcontractor's *engineering development* throughout the Contract period or for any other reason. Subcontractor has adequately *anticipated the degree of changes in complexity* of the Work resulting from such ongoing *engineering activities* and has included for this in the Lump Sums, Rates and percentages."

(448) The last sentence must be read in conjunction with section 3.1 in Appendix A and entails that Subcontractor, in its pricing of "engineering", were to take into account the uncertainties and complexities related to the "engineering activities". Hence, even though the lump sum of EUR 600 000 at the outset may appear low compared to the expected complexity of the "detailed and construction" engineering in such a complex project, Subcontractor was explicitly expected to take that complexity and uncertainties into account in its pricing of "engineering". Therefore, the Tribunal considers section 2.2 (third paragraph, second sentence) of Appendix B to zero out that the lump sum of EUR 600 000 may appear low.

(449) Furthermore, the Tribunal finds that its understanding is in accordance with more principled considerations. The Tribunal struggles to see that more or less vague indications inferred from the said lump sum may override what clearly follows from an objective interpretation, namely that Contractor, according to section 3.1 of Appendix A, shall provide "general" engineering while the Subcontractor shall provide "detail and construction" engineering. Even more so in a contract where the distribution of engineering responsibilities is set out in detail. It would be most unfortunate if a subcontractor, having agreed on a wording clearly stating that it shall provide "detail and construction" engineering, could avoid or narrow down such responsibility by referring to the various lump sums set out in Appendix B. Such an approach to interpreting commercial contracts between professional parties would not provide clarity and predictability.

8.3.2.3 Is detailed engineering a part of Contractor's obligation to provide EPE?

(450) It is not contested that Contractor shall provide the EPE. Subcontractor submits that Contractor's/AI's obligation to provide EPE must be understood to include detailed engineering. The submission is based on five lines of arguments. First, EPE shall provide general and detailed engineering valid for construction, which cannot be aligned with Contractor's argument that EPE was merely a "proof of concept". For the same reason, Subcontractor asserts that Contractor cannot be heard with the argument that there was a joint design phase where development of EPE was a collaborative contract (R3 para 140: FA20 p. 309); such a collaboration is not defined or referenced anywhere in the contract. Neither is there any basis for Contractor's argument that the Contract "transitioned" into an EPC contract after EPE was submitted. Second, the first line of argument is supported by Contractors responsibility for follow-up engineering for construction, design integration, further design development after EPE, the 3D model, and the MDL and MDP. Third, the "open design" regarding brands/manufacturers did not prevent Contractor/AI from providing detailed engineering. Fourth, Contractor de facto assumed responsibility for engineering, including detailed engineering, during all stages. Fifth, Contractor mixed up red mark-ups, as-built and DFO. Several of Subcontractor's lines of arguments, particularly the fourth and fifth, refer to subsequent conduct, which is mainly addressed below in section 8.3.5.

(451) Regarding the first line of argument, Subcontractor has referred to the level of detail in EPE. Reference is made to the Design Control Document dated 19 February 2016, which

entails that EPE was intended to contain engineering documentation "at a detail level" (FA25 p. 1333). Furthermore, that EPE included the Design Manual, technical descriptions, illumination description, Power consumption study, electrical selectivity calculations, and Single Line Diagrams (SLD) cannot reasonably be understood to merely be a general "conceptual" design or only to contain "general criteria". Subcontractor has also referred to the Main Contract, which required Contractor to provide detailed engineering ready for construction (FA9 p. 8164).

(452) The Tribunal cannot follow the first line of argument. At the time of the Contract, the Parties clearly and explicitly agreed in article 3.1 (first paragraph) of Appendix A that "Subcontractor shall provide the detail and construction engineering *based on* the design of the following main items: Engineering Package E ..." (Tribunal's emphasis). The latter clearly provides that the Subcontractor, *after* having received the EPE, shall detail the EPE by way of providing "detailed engineering" etc. In addition, article 3.1 (fifth paragraph) of Appendix A in the Contract entails that Subcontractor also had a role in the design development to, inter alia, "assist Contractor during the engineering phase". Hence, article 3.1 cannot be reasonably understood to entail that Contractor was solely responsible for providing a "complete" EPE, including detailed engineering, ready for procurement and construction.

(453) The level of detail in the EPE that was eventually submitted by Contractor, which is a matter of subsequent conduct, does not change the Tribunal's understanding. At the time of the Contract, Subcontractor had no reason to believe that the EPE would be "complete", including detailed engineering, ready for procurement and construction. Further, the Tribunal cannot see that the submitted EPE aimed to provide or did provide complete detailed engineering, for example, regarding SLDs. In any case, whether the EPE, which was to be delivered after the Contract was entered into, turned out to be delayed or not cannot enlighten the understanding at the time of the Contract.

(454) Furthermore, as indicated, the Tribunal considers the fifth and sixth paragraph of article 3.1 in Appendix A to support that the Contract had collaborative elements by setting out Subcontractor's role in the design development and engineering phase. Subcontractor's references to the Main Contract do not change the latter because it merely refers to Contractor's obligations towards Company, and the most sensible understanding is that Contractor subcontracted Subcontractor to fulfil its responsibility to provide detailed engineering towards Company.

(455) Regarding Subcontractor's second line of argument, the Tribunal notes that the current project was a large and complex and that Contractor had entered into an EPC contract with the Company. In such a context, in which Contractor undertook the overall responsibility towards Company – clearly beyond the scope of the Contract between Contractor and Subcontractor, it would be awkward if Contractor/AI were not responsible for the 3D model, the MDL and MDP. The latter are key instruments to maintain an overall understanding of the design and engineering and to monitor the progress of the same. For the same reasons, there is no surprise that AI was engaged by Contractor under the DSA to "develop and maintain a master document plan" (FA25 p. 603) and that Contractor/AI had a role concerning, *inter alia*, follow-up engineering for construction, design integration, further design development after EPE.

(456) Subcontractor's third line of argument contests Contractor's recurring argument that the "open design", in which it was basically left to Subcontractor to decide on the brands/manufacturers, *de facto* prevented Contractor/AI from providing or completing the required detailed engineering. The inherent logic of Contractor's argument is that the equipment and components to be selected, procured and installed by Subcontractor were not entirely generic. Therefore, even if Contractor was responsible for detailed engineering, it would not be possible for Contractor to provide or at least complete the detailed engineering. Subcontractor contests the argument for several reasons, and the key argument is that the so-called "open design" did not as such entail that further detailed engineering would be required. With reference to Mr. Sevillano's witness statement, it is argued that the open design is nothing more than a "Set of requirements for procurement items so that [Subcontractor] could make the procurement decisions between the suppliers that fulfilled those" (FA21 p. 18, para 47). Hence, it is argued that functional descriptions provided by Contractor did not require additional detailed engineering as a part of Subcontractor's procurement or installation. Subcontractor has also pointed out that there were several examples in which Contractor did specify the brand/manufacturer, and hence Contractor's argument cannot in any case serve as a general argument that Contractor could not provide or complete detailed engineering. Subcontractor has also pointed out that AI was in constant dialogue with different manufacturers and suppliers during the design development process up until delivery, which is another argument based on subsequent conduct.

(457) In general, the Tribunal struggles to see that whether the design was "open" (or not) is very relevant to determine the responsibility for the detailed engineering. The Contract barely addresses "open design" beyond what is stated in the last paragraph in Art 3.1 of Appendix A in the Contract: "Where a specific brand or type of equipment is mentioned in the Contract, Subcontractor may, subject to Contractor's approval, use an alternative brand or type of equipment of equal or better quality". Hence, at the time of the Contract, the Contract did not provide a straightforward answer whether the design would be "open". Apparently, some parts of the design could be "open", and other parts not. In fact, a design might be more or less "open" or "specified" based on how many brands/manufacturers that may meet the requirements.

(458) For the same reason, the Tribunal cannot give weight to Subcontractor's argument based on the Parties' subsequent conduct in this respect; that the Parties in November 2017 agreed that no specific brand or supplier should be included in the design. More importantly, it is clearly and explicitly stated in the first paragraph of Art 3.1 of Appendix A in the Contract that Subcontractor shall provide detailed engineering. In this context, where it follows clearly from an objective interpretation that Subcontractor shall provide detailed engineering, it is hard to see that whether the design was "open" makes any difference in determining the responsibility for detailed engineering. For the same reason, the Tribunal finds Subcontractor's reference to the DSA less relevant: That AI was obliged *towards Contractor* to incorporate supplier's input and Contractor's and client's needs in the design does not entail that Subcontractor had no responsibility for detailed engineering towards Contractor.

(459) Furthermore, the Tribunal cannot see that Subcontractor's arguments based on subsequent conduct, namely the examples where Contractor specified the brand/manufacturer and that AI was in constant dialogue with different manufacturers and suppliers during the design development process up until delivery, provide "clear indications" regarding the Parties' understanding at the time of Contract. It is not contested that most of the correspondence with the suppliers was carried out between Subcontractor and the suppliers and not between Contractor/AI and the suppliers. More importantly, in such a large and complex project, it is not surprising that AI also engaged in some communication with different manufacturers and suppliers as a part of the design development. For example, to optimize the design, exploring the range of available products and their particular specifications may be appropriate.

(460) To the extent the "open design" is relevant it might as well support Contractor's understanding, namely that Subcontractor was responsible for providing the required detailed engineering. At least where the functional descriptions in the EPE turned out to be rather generic, further (detailed) engineering was required to ensure that the various components – that Subcontractor eventually chose to procure and install – would work properly as an integrated system.

8.3.2.4 Summary of the objective interpretation; in particular Appendix A

(461) That the Form of Agreement and the CoC, which according to the Form of Agreement are the two contractual documents with the highest priority, provide a clear and coherent answer, indicating that Subcontractor shall provide (all) engineering. On the other hand, Appendix A (Scope of Work), setting out a more detailed regulation of the distribution of engineering responsibilities, provides a more nuanced picture, namely a distribution of engineering responsibilities where Contractor shall provide "general" engineering, while Subcontractor shall provide "detail and construction" engineering.

(462) The Tribunal's understanding is that there is no conflict between, on the one hand, the Form of agreement and the CoC and, on the other hand, Appendix A. The latter basically details the further content of the Parties' engineering responsibilities. In any case, Contractor does not dispute that it shall provide "general" engineering.

(463) On this basis, the Tribunal's preliminary conclusion, based on an objective interpretation, is that Subcontractor shall provide "detail and construction" engineering. The understanding is not only supported by the wording of the said contractual documents, in particular Appendix A. It is also supported by the scheme of the Contract: A reasonable person with proper experience from projects concerning construction and infrastructure would expect to find a detailed description of the engineering responsibilities in the document detailing the scope of work: Appendix A. The latter is supported by the fact that Art 3 in Appendix A ("Engineering") runs over several pages and seems tailor-made for the Contract; see, in particular, the text, boxes and bullet points in Art 1.4 and Art 3.1.

8.3.2.5 The relationship between Appendix A and the "Battery Limits" in Appendix F

8.3.2.5.1 What does an objective interpretation of Appendix F say about the distribution of engineering responsibilities?

(464) The effect of "Appendix F – Subcontractors Specifications", particularly its so-called Battery Limits, is a contested matter concerning the distribution of engineering responsibilities. Subcontractor's submissions rely heavily on Appendix F, particularly the Battery Limits. Subcontractor's arguments for its objective interpretation are essentially twofold. First, and more generally, Subcontractor's scope of work is considered fully defined in Appendix F. The latter understanding entails that the distribution of engineering responsibilities in Appendix A merely sets out a high-level regulation, while the further details are set out in Appendix F. Second, the said interpretation entails that there is no discrepancy between the Appendices A and F.

(465) Both arguments are contested by Contractor based on the wording of Appendix A, in particular sections 3.1 and 3.6, which cannot be aligned with Subcontractor's interpretation of Appendix F. Contractor also argues that the Subcontract must be considered a "back-to-back contract", in which "the overall objective was to "transfer" to Subcontractor, all the scope and responsibility that in the main contract, was Contractors, within those areas that were included in Subcontractor's contract".

(466) The Tribunal finds it appropriate to start its analysis with some initial remarks on the scheme of the various contractual documents in the Appendices A, E and F. Appendix A sets out the "Scope of Work" regarding the "Railway Systems"; the scope of work agreed between Contractor and Subcontractor. A summary of Subcontractors scope of work regarding the "railway system" is set out in section 1.4 of Appendix A, and the scope of work is basically structured and phrased in a functional manner.

(467) Appendix E concerns "Company's Documents", which comprises a number of documents provided by Company to Contractor as a part of the tendering process or as a part of the Main Contract between Company and Contractor. Section 1.1 of Appendix E provides a distinction between "Part I Documents" and "Part II Documents" and states that the first category "comprise a list of frame agreements, the specifications, drawings and other documents listed in Section 2 below *and define Company's and Contractor's minimum mandatory technical requirements* for the Contract". The latter entails that Appendix E may supplement Appendix A, for example, by providing the applicable

standards (for example, the technical minimum standards) the functional requirements shall meet. The Part I Documents include, *inter alia*, the Design basis, specifications and reports, drawings and JBV rules. Hence, there is an interaction between Appendix A and Appendix E. By contrast, the Part II Documents listed in section 3 "are given for information purposes only. Any use of such documents is Subcontractor's sole risk".

(468) How does Appendix F fit into the scheme? Appendix F concerns "Subcontractor's Specifications". In the context of the present Contract, in which Appendix A provides a comprehensive and functionally described scope of work, the term "Subcontractor's Specifications" has no straightforward meaning. Section 1 of Appendix F (first paragraph), however, explains the nature of Appendix F: "This appendix includes those parts of Contractor's Tender which are incorporated into the contract". Such documents are incorporated into the Subcontract "by reference" or otherwise, as explained in subsections 1.1 and 1.2 of section 1.

(469) According to the fourth paragraph of section 1 in Appendix F, the purpose of Appendix F is to provide "supplementary information to that included in other parts of the Contract". The latter seems to entail that Appendix F, similar to Appendix E, supplements Appendix A. The latter is supported by the fifth paragraph, stating that "Notwithstanding that this Appendix has the lowest order of priority in the Contract, the information included, or referred to, describes the minimum standards Contractor may expect in terms of methods of execution and related matters". The latter is, however, modified in the sixth paragraph, reading that "The information in this Appendix *does not, in any way whatsoever*: (i) imply any limitation or relaxation to the requirements described elsewhere in the Contract, or (ii) introduce any change in risk allocation in the Contract" (Tribunal's emphasis). This provision sits well with the supplemental nature emphasized in the fourth paragraph. In addition, section 2 of Appendix F provides an order of priority in case of any discrepancy between the documents included in Attachment 1 and Attachment 2 of Appendix F, where the documents in Attachment 1 prevail.

(470) The order of priority between Appendix A and Appendix F, where the Form of Agreement states that Appendix A prevails, explains why the Parties strongly disagree whether or not Appendix F, in particular the contested Battery Limits, merely supplements Appendix A, or whether there is a conflict. It is not disputed that according to the Form of Agreement, Appendix A prevails *if* there is a conflict with

Appendix F. Hence, the Tribunal must determine how to understand the contested provisions in Appendix F.

(471) Attachment 1 in Appendix F refers to three documents: "Tracking Alcance ELNR_eng", "Design Coordination Manual", and "RS Battery Limits". The first document is a matrix of contractual clarifications dated October 2014 related to Subcontractor's tenders prior to the Contract. The second document is dated 16 April 2015 and provides an outline of the design management process intending to provide "a guideline for the roles and responsibilities". The "RS Battery Limits" contains various documents, comments and descriptions.

(472) The contested item in the document "Tracking Alcance ELNR_eng" is "Engineering", which reads that "The JV will contract the general engineering services, including design and RAMS, for the whole project. Subcontractor provides the necessary information". The Tribunal's understanding is that the first sentence is consistent with Appendix A, namely that Contractor shall provide the "general engineering", which includes a situation where Contractor wholly or partly subcontracts the "general engineering". However, the second sentence – read in conjunction with the first sentence – indicates that Subcontractor shall only provide "information", not "detailed engineering" (as submitted by Contractor).

(473) Subcontractor emphasizes that section 1 (fourth paragraph) of the Design Co-ordination Manual provides that "leadership in the design of RS corresponds to Contractor". The Tribunal agrees that the latter indicates that the intention, at least when the document was made as a part of the tendering process, was that Subcontractor should have a limited role regarding design and engineering, in particular when it is read in conjunction with the document "Tracking Alcance ELNR_eng".

(474) As indicated, the "RS Battery Limits" contains various kinds of documents, comments and descriptions. The majority concerns various typical "Battery Limits"; e.g. the geographical boundaries of the scope of work and/or the physical boundaries towards other contracts/contractors. The most contested document in the RS Battery Limits, however, has the heading "General comments" and refers to "ITT EPC TBM Revision 11" (hereinafter referred to as the "ITT General Comments"). The contested two boxes of the ITT General Comments read (Tribunal's emphasis):

> "[2] The Client will perform and provide to Elecnor all necessary engineering development which will imply Elecnor to have an optimal definition of all supplies specified in this Contract, in the date agreed between both Parties. *Elecnor will be responsible to* submit to the Client (Designers) the information necessary (*Shop Drawings*) from those suppliers to finalize *the Detailed and As-Build documentation*.
>
> [3] Any necessary **design integration** is not under the scope of Elecnor. Elecnor has only considered the load of all parameters and data bases in the equipment supplied by Elecnor."

(475) Subcontractor's understanding is that the second box [2] merely details what follows from Appendix A concerning "detail and construction" engineering. Essentially, it is argued that Subcontractor shall only forward the Shop Drawings from its suppliers ("submit ... from those suppliers") to the Contractor's "Designers" to the extent the information in the Shop Drawings is necessary for the "Designers" to "finalize" the "Detailed and As-Build documentation". When the second sentence is read in conjunction with the first sentence, stating that Contractor will provide "all necessary engineering development", it is inferred that Subcontractor has no engineering responsibilities *except of* forwarding the information in the Shop Drawings provided by the Subcontractor's suppliers.

(476) Furthermore, Subcontractor asserts that this understanding of the second box is supported by the third box, stating that "design integration" is not, as a firm starting point, included in Subcontractor's scope of work. The argument is that the term "detail and construction" engineering in section 3.1 of Appendix A must be read in conjunction with this provision in the third box of the ITT General Comments and hence be understood not to include "design integration". The only part of "design integration" resting on Subcontractor is set out in the second sentence, namely to consider "the load of all parameters and databases in the equipment supplied by Subcontractor".

(477) The Tribunal agrees that the second box seems to presuppose a narrow understanding of the Subcontractor's engineering responsibilities. The wording may reasonably be understood to entail that Subcontractor has no engineering responsibilities except for forwarding the information in the Shop Drawings provided by Subcontractor's suppliers. The first sentence of the third box supports such a narrow understanding. The second sentence of the third box entails that Subcontractor shall nevertheless consider "the load of all parameters and databases" in the equipment supplied by Subcontractor. The latter seems to entail a narrow obligation to provide certain specific elements of detailed engineering.

8.3.2.5.2 *Can the distribution of engineering responsibilities in Appendix F be aligned with Appendix A based on a harmonizing interpretation?*

(478) Based on the above, the Tribunal must determine whether the distribution of engineering responsibilities in the ITT General Comments in Appendix F can be aligned with Appendix A by way of harmonizing interpretation, or whether there is a conflict. The question requires a closer scrutiny of the wording and scheme of Appendix A, in particular section 3.1, *and* a comparison with the ITT General Comments in Appendix F.

(479) Section 3.1 (first, second and third paragraph) of Appendix A reads (Tribunal's emphasis):

> "[1] Contractor shall provide the *general* engineering to the project *including* integration responsibilities, adapting the information to the Client's needs. Subcontractor shall provide the *detail and construction* engineering *based on* the design of the following *main* items:
>
> Engineering
>
> Engineering package E
>
> As built drawings and documentation for operation (DBO)
>
> [2] The *main* areas of engineering work include the following:
>
> - *All* railway systems from the respective interfaces between EPC Oslo S along the entire alignment to the interfaces with EPC Ski
>
> [3] The optional areas of engineering work include the following:
>
> - Permanent smoke control and ventilation systems for all tunnels within the Follo Line Project with the exception of inbound/outbound Ostfoldbanen.
> - Systems of doors and air locks, compatible with the operation of the overall ventilation system, emergency evacuation and rescue concept.
> - Firefighting system within the Rescue tunnels"

(480) The first paragraph states that Subcontractor "shall provide the *detail and construction* engineering *based on* the design of the following *main* items ...". When the wording is read in conjunction with the first sentence, the most sensible interpretation is that Subcontractor has a more or less *general* responsibility to provide "detail and construction" engineering. The end of the second sentence – "based on the design of the following main items" – provides that EPE shall serve as the basis or starting point for the Subcontractor's "detail and construction" engineering. Hence, the core of the

obligation to provide "detail and construction" engineering seems to be to further develop Contractor's design and engineering provided as a part of EPE to a level of detail that can be considered "detailed engineering" and "construction engineering". It should be noted, however, that even though the core of the obligation to provide "detail and construction" engineering seems to be to detail EPE, the wording of the second sentence of the first paragraph – referring to the "following *main* items" – clearly assumes that the obligation is not limited to providing "detail and construction" engineering based on EPE. The latter is supported by the second paragraph of section 3.1, which seems to refer back to the term "main items" of engineering in the first paragraph. The point is that according to the second paragraph, Subcontractor's obligation to provide "detail and construction" engineering includes "all" of the said "railway systems". On this basis, the Tribunal finds it clear that Subcontractor's responsibility for "detail and construction" engineering under section 3.1 first paragraph is not limited to specific tasks, but seems to refer to the normal understanding of the distinction between "general design" and "detailed engineering".

(481) When the first paragraph of section 3.1 Appendix A is read in conjunction with the fifth paragraph, Subcontractor's responsibility for engineering seems to include *more* than the normal understanding of "detailed" engineering. When it is stated that "Subcontractor shall assist Contractor during the engineering phase" by providing a qualified coordinator "into the Contractor's design team", Subcontractor is also obliged to contribute to the (general) "design development". The further content of this obligation to assist in the design development is set out in the bullet points following the fifth paragraph, *inter alia* stating that Subcontractor's design coordinator shall have the "responsibility" to "provide to Contractor feedback and inputs in to [sic] the design development" and "manage the communications with Contractor regarding the design activities". The sixth paragraph emphasizes the importance of such coordination by stating that the coordination of the "design activities" is further described in the Design Coordination Manual.

(482) It should also be noted that the first paragraph of section 3.1 refers to "detail and construction" engineering. It is not evident how to understand "construction" engineering, but it indicates that Subcontractor – primarily based on EPE – shall bring the engineering to a level of completion that enables Subcontractor to commence the construction work. To put it more straight forward: The term "construction"

engineering, together with "detailed" engineering, indicate that it was up to the Subcontractor himself, not the Contractor, to bring the "general" engineering to the appropriate level of completeness required for procurement and construction. In any case, the term "construction" engineering is hard to align with a narrow understanding of the term "detailed" engineering.

(483) The latter understanding that Subcontractor has not undertaken a narrow obligation to provide "detailed and construction" engineering is supported by section 3.6 of Appendix A. The first paragraph of section 3.6 states that Subcontractor shall "fully co-operate" with Contractor etc. "in order to achieve continuity and compatibility of all systems, installations and operations of the Follo Line Project". The second paragraph of section 3.6 goes a step further by providing that Subcontractor shall "identify" and "avoid" "interface problems", and the "overall objective is to ensure functionality across interfacing contracts". The last paragraph of section 3.6 emphasizes that the interface matrix in Attachment 2 to Appendix A shall not be considered exhaustive. Section 3.6 sets out a rather extensive obligation to, *inter alia*, identify and avoid interface issues, which seems to entail that Subcontractor, upon receipt of, for example, EPE, cannot passively assume that potential issues concerning interfaces and compatibilities are identified and solved by Contractor.

(484) Subcontractor's active role in the engineering is also confirmed by section 3.5 of Appendix A, stating that Subcontractor, as an inherent part of its "detail design", shall define an optimized "maintenance strategy for all relevant items of the Contract Object". The latter seems to presuppose that Subcontractor was not intended to have a minor role in the detailed engineering as any sensible contribution to an optimized maintenance strategy requires first-hand knowledge of the engineering process. The obligation in section 3.5 seems to sit well with the obligation to assist in the design development under the fifth paragraph of section 3.1.

(485) Contractor has put forward an argument based on "back-to-back". It is argued that "the overall objective was to "transfer" to Elecnor all the scope and responsibility that in the main contract, was AGJV's, within those areas that was included in Elecnor's contract". As set out above in section 5.2, the term "back-to-back" is merely a name on the possible outcome of a regular interpretation of a subcontract; that a subcontract is interpreted "in light of" its associated main contract. In any case, the Tribunal cannot see that the alleged "overall objective", which has limited support in the wording of the Subcontract,

provides any proper guidance in the present context where the contractual documents provide a rather complex and nuanced regulation. Furthermore, the argument refers to what "was included in the Elecnor's contract", making it circular.

(486) That the most sensible reading of the first paragraph in section 3.1 is that Subcontractor has a more or less *general* responsibility to provide the "detail and construction" engineering, is supported by the fact that the Contract, not at least Appendix A, was the outcome of extensive negotiations between the Parties. In this context, the Tribunal has noted that Subcontractor made the first draft of Appendix A, and the draft contained wording clearly allocating the responsibility for "detail and construction engineering for subjects that are under its scope" to the Subcontractor (FA25 p. 356). More importantly, all the subsequent revisions of the draft Appendix A provided by Subcontractor basically set out the same distribution of engineering responsibilities. See, for example, the draft dated 23.09.15 (FA25 p. 840), which is equivalent to the final wording of the first paragraph of section 3.1 in Appendix A; see also the draft submitted January 2016 (FA25 p. 1001).

(487) That basically all of the drafts of Appendix A since the first draft made by Subcontractor clearly stated that the responsibility for detailed engineering rested on Subcontractor has two implications for the interpretation of the final Appendix A. First, the fact that Subcontractor made the first draft and that the subsequent drafts were basically consistent with the first draft, gave Contractor reason to believe that Subcontractor's responsibility for detailed engineering was agreed. Second, if Subcontractor was of different understanding, it had a strong incentive to clarify its position by suggesting a different wording in the first paragraph of section 3.1 in Appendix A.

(488) That the Parties agreed on the basic distribution of engineering responsibilities set out in the first paragraph of section 3.1 in Appendix A is supported by the Minutes dated 27 January 2016, in which Subcontractor's only comment regarding section 3.1 in Appendix A concerned the scope and role of Subcontractor as design coordinator. The latter understanding is also supported by the fact that at the very end of the negotiations, 9 February 2016, Subcontractor still had no further remarks (in yellow) to the first paragraph of section 3.1 in Appendix A; only to the second last paragraph (FA25 p. 1088 and FA6 p. 1351).

(489) The Tribunal's objective interpretation of Subcontractor's engineering responsibilities under Appendix A can be summarised in two main findings. First, the term "detail and construction" engineering in section 3.1 does not set out a narrow obligation. On the contrary, the obligation under section 3.1 (first paragraph) to provide "detail and construction" engineering must, as a starting point, be determined in accordance with what is *normally* considered to constitute "detailed engineering". Hence, it is not limited to specific and narrow tasks. Second, the other paragraphs in section 3.1, in particular the fifth paragraph, read in conjunction with sections 3.5 and 3.6, entail that Subcontractor undertook obligations *beyond* typical "detailed engineering", namely concerning design development, coordination and interfaces.

(490) On this basis, the crucial question to be determined by the Tribunal is whether the above interpretation of Appendix A can be aligned with the ITT General Comments in Appendix F or whether there is a conflict.

(491) Subcontractor argues that the contested provisions in Appendix A and Appendix F can be aligned through a harmonizing interpretation. Basically, Subcontractor argues that there is no conflict between the provisions because the second box of the ITT General Comments in Appendix F merely details the content of the "detail and construction" engineering set out in section 3.1 (first paragraph) of Appendix A. What matters in the present context is the outcome of Subcontractor's interpretation and whether the outcome of the interpretation can reasonably be harmonized with a proper objective interpretation of Appendix A. As set out above, Subcontractor's interpretation is that it was only obliged to forward the Shop Drawings from its suppliers to the Contractor's "Designers" to the extent the information in the Shop Drawings is necessary for the "Designers" to "finalize" the "Detailed and As-Build documentation". Hence, Subcontractor has no "engineering" responsibilities, neither regarding general engineering nor detailed engineering.

(492) As indicated above in section 8.3.2.5.1, the Tribunal concurs with Subcontractor that the ITT General Comments in Appendix F might be understood to entail that Subcontractor has no engineering responsibilities except forwarding the information contained in the Shop Drawings provided by Subcontractor's suppliers.

(493) The Tribunal cannot, however, see that such an interpretation can be properly aligned with an objective interpretation of Appendix A. As indicated above in section 8.3.2.5.2,

there are certain boundaries for a harmonizing interpretation. Those boundaries cannot be generally phrased, but a harmonizing interpretation cannot be used to set aside what follows *clearly* from an objective interpretation of a contract. Otherwise, a "harmonizing" interpretation could be used to set aside a contractual provision. However, the latter would not be a matter of contractual interpretation. It is subject to the significant threshold for contractual censorship and adaption based on the Contract Act Section 36. The Tribunal cannot see that Subcontractor's interpretation of the ITT General Comments in Appendix F can be aligned with section 3 of Appendix A – without basically setting aside what clearly follows from an objective interpretation of Appendix A.

(494) *First*, there are no general or specific indications in section 3.1 of Appendix A that Subcontractor's obligation to provide "detail and construction" engineering in the first paragraph is limited to forwarding shop drawings from its suppliers to Contractor's Designers. Hence, such a narrow understanding contradicts the clear firm wording in the first paragraph of section 3.1 in Appendix *generally* stating that Subcontractor shall provide "detail and construction" engineering, and which does not even mention shop drawings. On the other hand, there is some common ground between the first paragraph of section 3.1 in Appendix A, referring to "As built drawings and documentation for operation", and the term "Detailed and As-Build documentation" at the end of box 2 of the ITT General Comments. That there is some common ground regarding such documentation, however, does not zero out that section 3.1 of Appendix A does *not* limit "detailed" engineering to forwarding shop drawings from the suppliers. Such a narrow interpretation cannot be aligned with the ordinary meaning of "detailed" engineering.

(495) *Second*, box 3 in the ITT General Comments sets out that Subcontractor has no responsibility for "design integration", except having "considered load of all parameters and data bases in the equipment supplied by Elecnor". However, such a narrow understanding of "design integration" cannot reasonably be aligned neither with Subcontractor's active role in the design development set out in the fifth paragraph of section 3.1 in Appendix A nor Subcontractor's interface obligations as per section 3.6 of Appendix A. For example, if Subcontractor's obligation regarding "design integration" was limited to consider the "load of all parameters and data bases in the equipment

supplied by Elecnor", it would not be much left of the obligation in the first paragraph of section 3.6 to co-operate to "achieve ... compatibility of all systems ...".

(496) *Third*, the sixth paragraph of section 1 in Appendix F leaves little or no room for a harmonizing interpretation of Appendix A in favor of Appendix F. It explicitly states that "The information in this Appendix does *not, in any way* whatsoever: (i) imply *any limitation or relaxation* to the requirements described *elsewhere* in the Contract, or (ii) Introduce any change in risk allocation in the Contract" (our emphasis). Based on this provision, the Tribunal is of the opinion that Subcontractor could not, at the time of the Contract, have any reason to believe that the scope of work set out in Appendix A could be narrowed down based on an interpretation of Appendix F.

(497) The latter is also supported by correspondence shortly before entering into the Contract. In an e-mail from Subcontractor to Contractor dated 26 January 2016 (FA22 p. 2428), Subcontractor confirmed that the Parties in a previous meeting had *agreed* to include the "Battery Limits" *in Appendix F*. By including the "Battery Limits" in Appendix F, Subcontractor must have understood that it would not, according to the order of priority set out in the Form of Agreement, prevail in conflict with Appendix A.

(498) In fact, Appendix F and the order of priority were revisited by Subcontractor in the last minute of the negotiations in the e-mail of 7 March 2016 (FA21 p. 1441). Subcontractor argues that this e-mail stated that its scope of work was limited to the work set out in Appendix F, which is mainly based on the following sentence: "Elecnor has offered the scope of this Contract according to information included in ITT EPC TBM Revision 11, and with the remarks included in the document Battery Limits of Attachment 1". At the outset, the last part of the sentence might be understood to entail that Subcontractor's scope of work was to be determined by the remarks set out in the Battery Limits of Attachment 1. On the other hand, if the meaning was to narrow down the scope of work set out in Appendix A, the Tribunal would expect to find firm statements in the same e-mail that the meaning was that Appendix F should prevail over Appendix A.

(499) The following sentence, however, seems to make it clear that the meaning of the quoted sentence merely was to clarify the order of priority between the two attachments included in Appendix F: "*Therefore*, in case of discrepancy, these documents shall *prevail* on the information contained in the *Attachment 2* of the *Appendix F*" (Tribunal's emphasis). Hence, the quoted statement cannot reasonably be understood to address

more than the internal order of priority within Appendix F, which was confirmed by the response from Mr. Bertagnolio the same day (FA3 p. 1198). The latter understanding is supported by the fact that this order of priority was eventually reflected in section 2 of Appendix F, but without any changes in the order of priority in the Form of Agreement (where it is not contested that Appendix A prevails over Appendix F).

(500) For the same reasons, it should not have been a surprise for Subcontractor that the "Battery Limits" were included in Appendix F and not in Appendix A. The latter entails that the Tribunal cannot follow the witness statement provided by Fernandez (FA21 p. 1395) stating that it was a "surprise" that the "Battery Limits" were eventually included in Appendix F, and not in Appendix A. In a situation where the meaning of an e-mail thread is heavily contested, it follows from Norwegian case law that such testimonies have limited weight as evidence; see, for example, Rt. 1996 p. 1696 (p. 1707).

(501) It should also be noted that the Minutes dated 27 January 2016 (FA21 p. 1429/RH02 p. 93) indicate that Contractor suggested including an "interface diagram" in Appendix F with the aim to identify "how far Elecnor's scope extends (e.g. marking the *boundaries* between RS and Permanent Mechanical Equipment) ..." (Tribunal's emphasis). The latter indicates that the purpose of this document, which was included in Appendix F, was to detail the physical boundaries/coordinates of the scope of work, typically referred to as "Battery Limits". The said Minutes are contested and addressed in the witness statements, in particular the witness statements provided by Mr. Fernandez and Mr. Bertagnolio. However, the Tribunal's understanding is that the Minutes provide no clear indications that the purpose of Appendix F was to narrow down Subcontractor's engineering responsibilities set out in Appendix A.

(502) Another question is whether there was a verbal agreement that Appendix F should nevertheless prevail, but that is not a matter of objective interpretation, and it is addressed below in section 8.3.4.2.

(503) On this basis, the Tribunal concludes that based on an objective interpretation, there is a conflict between section 3 of Appendix A and the ITT General Comments in Appendix F. According to the Form of Agreement, in the event of any conflict between the provisions of the contract documents "listed above", "they shall apply in the following order of priority". According to items c) and d), Appendix A is the highest-

ranked Appendix, while Appendix F has the lowest rank of the Appendices. The latter entails that Appendix A prevails over Appendix F.

8.3.3 Does a broader interpretation, considering Contractor's contracts with AI and Company, enlighten the disputed matter of interpretation?

8.3.3.1 Outline of the submissions

(504) During the Hearing, Subcontractor has argued extensively that Contractor's contracts with Bane NOR and AI, respectively, support Subcontractor's interpretation of the Contract. Reference is made to Part 4 of the Opening Statement (section 1.6), in which Subcontractor made a detailed comparison of the scope of work, compensation, and schedule in the three contracts.

(505) Subcontractor's overall argument is that the comparison "shows AGJV's clear intentions on who should perform the engineering scope in the RS", and a key argument is that the comparison reveals that Contractor contracted the whole engineering, including detailed engineering, to AI. Another interlinked and overriding argument is that there is no "back-to-back" concerning engineering: The Contract between Contractor and Subcontractor does not mirror Contractor's engineering responsibilities towards Company.

(506) Contractor, on the other hand, argues that Subcontractor de facto tries to rely on Contractor's contract with AI to narrow down its own engineering responsibilities under the Contract (R3 in FA20 p. 302). Subcontractor's response to the latter is that it is "not about changing any wording or scope in Elecnor's contract". Instead, said contracts are a "significant factor" supporting Subcontractor's understanding of the distribution of engineering responsibilities under the Contract.

(507) Another but associated submission made by Subcontractor is that Contractor's/AI's obligation to provide EPE included detailed engineering, which supports that Subcontractor was not intended to provide detailed engineering.

8.3.3.2 Tribunal's general remarks on the relevance of the contractual chain as means of interpretation

(508) As set out above in section 5.2, there is a threshold for giving much weight to associated contracts in the contractual interpretation. The presumption that a subcontract must be interpreted based on its own premises where the parties have basically negotiated, drafted and agreed on "their own" contract is particularly strong if it contains a

comprehensive and tailor-made description of the scope of work. The Tribunal considers the said presumption to apply to the present Contract. As set out above in section 8.3.2.1, the scope of work is comprehensively set out in Appendix A of the Contract, which was the outcome of extensive negotiations between Contractor and Subcontractor. On this basis, a key question in the following is whether the Subcontractor has rebutted the presumption by demonstrating that Contractor's contracts with AI prove Contractor's clear intentions on who should perform the engineering scope in the RS.

8.3.3.3 Contractor's EPC-contract with Bane NOR

(509) As a means of interpretation of the distribution of engineering responsibilities under the Contract, Subcontractor has pointed out that Contractor's scope of work, including the engineering responsibilities, towards Company under section 3 in Appendix A of the Main Contract is far more extensive than Subcontractor's scope of work towards Contractor under the Contract. The argument is that when article 3 in Appendix A of the Main Contract is compared to article 3 in Appendix A in the Contract, it shows (i) that article 3 of Appendix A of the Main Contract served as a model also for article 3 of Appendix A of the Contract, but (ii) that a comparison shows that just a few of the main engineering items listed in Appendix A of the Main Contract were eventually subcontracted to Subcontractor. Reference is made to the matrix in article 3.1 of Appendix A and the text and bullet points therein (FA9 pp. 53-56, compared to FA8 pp. 52-54), in particular to the fact that the matrix in article 3.1 of Appendix A to the Contract mainly contains one item, namely "As built drawings and documentation for operation (DFO)", while the matrix in article 3.1 of Appendix A in the Main Contract contains all the regular elements of an EPC-contractor's responsibilities for design and engineering. Reference is also made to the fact that several elements included in "Contractor's Specification" (Appendix F to the Main Contract; FA9 p. 8083), which was based on Company's ITT, were not included in the Contract with Subcontractor. Furthermore, reference is made to Appendix B in the Main Contract (CB1 p. 1020), in which the pricing of Contractor's engineering responsibilities (lump sum of MNOK 8.75) is significantly higher than in the Contract.

(510) As pointed out above in section 8.3.2.4, the Tribunal considers an objective interpretation of the Contract, in particular article 3 in Appendix A, to provide a clear answer to the disputed matter of interpretation: Subcontractor shall provide detailed

engineering. The latter is explicitly stated in the first paragraph of Art 3.1 in Appendix A of the Contract. Furthermore, and more importantly, the latter is a tailor-made provision not found in the Main Contract, which does not contain any division between general design/engineering and detailed engineering. In such a context, where it follows explicitly and clearly from the Contract that Subcontractor shall provide detailed engineering, the Tribunal finds it evident that the interpretation of the Contract cannot be deviated from based on what might possibly be inferred from the Main Contract. Based on the fact that the Contract explicitly and clearly states in article 3.1 of Appendix A that Subcontractor shall provide detailed engineering, Subcontractors' interpretation would entail that the clear wording is set aside based on what *might* be inferred from the Main Contract.

(511) On this basis, the Tribunal concludes that Subcontractor cannot prevail with its submission that the Main Contract implies that the Contract did not include detailed engineering.

8.3.3.4 Contractor's Design Contract with AI

(512) Subcontractor argues that the DSA of 22 July 2015 (FA25 p. 555) with AI supports that Contractor did not engage Subcontractor to provide detailed engineering. Reference is also made to the predecessor of the DSA, the Pre-Tender Design Services Agreement of 7 August 2014 (FA25 p. 159). A key argument is that the scope of the DSA article 1.4 reflects Contractor's obligations towards Company as per the Main Contract, namely to provide "a complete design, fit for purpose substructure and railway system" (FA25 p. 599). When the latter is read in conjunction with AI's obligations to follow up engineering during construction and to develop and maintain a Master Document Plan (FA25 p. 603) and updating a 3D-model during the engineering process (FA25 pp. 605-606), it must be understood as a "back-to-back" scheme, where Contractor subcontracted its engineering responsibilities under the Main Contract, *including detailed engineering* of the RS, to AI.

(513) Subcontractor also refers to Contractor's tender documents, in which detailed design was a part of the design phase and where it is stated that "AI will lead and manage all Engineering activities" (FA9 pp. 8156-8157). Furthermore, Subcontractor has pointed out that the DSA explicitly excludes shop drawings from AI's scope (FA25 pp. 714-715) and that AI did not provide shop drawings during the project. The latter is consistent with Subcontractor's understanding of the Contract, namely that Subcontractor shall

not provide detailed engineering but merely forward shop drawings. Subcontractor has also invoked the contrast between the compensation for engineering in the Contract and the DSA (lump sum of MEUR 29), which supports that Contractor did not intend Subcontractor to provide detailed engineering. The latter is also supported by the document governing Design Control (FA25 p. 1325 f.), which does not mention that Subcontractor was responsible for any design deliverables. The latter confirms that AI was also responsible for detailed engineering.

(514) The Tribunal concurs with the Subcontractor that the DSA may also be understood to include detailed engineering, which is hard to align with the fact that the Contract seems to provide that Subcontractor shall provide detailed engineering. At the outset, it appears awkward that Contractor did subcontract the same scope of work – detailed engineering – to two different subcontractors, and it might intuitively be tempting to avoid such a "mismatch" by a narrow interpretation of either the DSA or the Contract. The contrast between the compensation for engineering in the Contract and the DSA, may also be understood to support that detailed engineering was to be provided by AI.

(515) As pointed out above in section 8.3.3.2, however, the presumption that a subcontract must be interpreted based on its own premises where the parties have basically negotiated, drafted and agreed on "their own" contract is particularly strong if it provides a comprehensive and tailored description of the scope of work. Therefore, if a regular objective interpretation of the subcontract's scope of work in the subcontract provides a clear answer to the disputed matter that interpretation, that interpretation should, as a firm starting point, be decisive. Otherwise, it would make a mockery of the negotiations and drafting of the subcontract, and it would open up for speculative and opportunistic interpretations based on what might (possibly) be inferred from the main contract or other associated contracts.

(516) The reasons for this presumption apply in the present case, and the Tribunal cannot see that Subcontractor has rebutted the presumption by proving that Contractor did not intend to subcontract detailed engineering to Subcontractor. On the contrary, Contractor has emphasized that AI did not have sufficient experience with high-speed Railway Systems, which is used as an explanation for why they also wanted to involve Subcontractor in the design process and detailed engineering. The latter is supported by Art 3.1 (fifth paragraph) in Appendix A of the Contract, which, together with the Design Coordination Manual (referenced in the sixth paragraph), clearly provides that

Subcontractor was intended to have an important role in the design development. When the latter is read in conjunction with Art 3.1 (first paragraph), which explicitly and clearly states that Subcontractor shall provide detailed engineering, the Tribunal cannot see that there is an awkward "mismatch" between the scope allocation between the Contract and the DSA.

(517) The most natural interpretation of Art 3.1 in Appendix A of the Contract, which also provides business common sense and sits well with the DSA, is that Contractor shall provide general design and engineering, which the Contractor subcontracted to AI under the DSA, while Subcontractor shall provide detailed engineering. The latter is supported by the fact that the DSA seems not to expressly address detailed engineering. Furthermore, Art 3.1 in Appendix A of the Contract sets out in detail how Subcontractor shall provide detailed engineering *and* "assist" and contribute to the design development.

(518) On this basis, the Tribunal concludes that Subcontractor cannot prevail with its submission that the DSA implies that the Contract did not include detailed engineering.

8.3.4 Did the Parties at the time of Contract have a deviating common understanding of the order of priority between Appendix A and Appendix F?

8.3.4.1 Do the negotiations and correspondence up to the time of the Contract indicate such a deviating common understanding?

(519) The burden of proof for a common understanding deviating from an objective interpretation rests on the party invoking the common understanding; in the present case, the Subcontractor.

(520) Subcontractor's alleged deviating common understanding is based on two main submissions: (i) that the correspondence and changes made in Appendix F on 7 March 2016 entailed that Appendix F defined Subcontractor's scope of work, and (ii) the Parties' understanding of the engineering responsibilities after the Contract was entered into. The Tribunal will first address the first submission; the second submission is addressed below in section 8.3.5.

(521) Before the Tribunal proceeds to consider the first submission, the applicable burden and standard of proof must be determined in the present case. As set out above in section 5, an objective interpretation may, according to the Norwegian Supreme Court, only be deviated from for 'strong reasons', typically if the party arguing a deviating

common understanding is able to rebut the strong presumption that the Parties ultimately agreed on what follows from an objective interpretation of the contract. As set out above in section 8.3.2, the Tribunal is of the understanding that an objective interpretation of section 3 in Appendix A provides a clear answer to the disputed matter: Subcontractor shall provide "detail and construction" engineering, and this regulation prevails over Appendix F.

(522) On this basis, the onus is on Subcontractor to rebut the said presumption. Based on, *inter alia*, the decision by the Norwegian Supreme Court in Rt. 2002 p. 1155 (*Hansa Borg*), the standard of proof requires "clear indications" (*No.* "klare holdepunkter") of the alleged common understanding. That there is a clear discrepancy between what follows from the objective interpretation and the alleged common understanding, entails a heightened standard of proof.

(523) On this basis, the key question is whether Subcontractor has pointed out "clear indications" in the pre-contractual phase that the Parties had the alleged common understanding at the time of the Contract. The subcontractor's alleged common understanding is based on the correspondence leading up to the changes made in Appendix F on 7 March 2016, e.g., shortly before the Contract was entered into.

(524) The Tribunal has already considered those drafts and correspondence above in section 8.3.2 related to the context of the objective interpretation, where it is concluded that there is no discrepancy between what follows from an objective interpretation of section 3 in Appendix A and the correspondence on the 7 March 2016. In fact, as pointed out by the Tribunal the same place above, the correspondence leading up to the changes in Appendix F 7 March 2016 seems to *confirm* what follows from an objective interpretation of the Form of Agreement and section 3 of Appendix A: Appendix A prevails over the Appendix F, including the contested ITT General Comments ("Battery Limits"). In the present context, it is sufficient to reiterate the essence of what is emphasized above in section 8.3.2. First, that Subcontractor provided the first draft of Appendix A, including section 3.1, and that Subcontractor, as late as 9 February 2016, had no further remarks (in yellow) to the first paragraph of section 3.1 in Appendix A. Second, that Subcontractor, in the e-mail of 26 January 2016 seemed to confirm that the Parties in the previous meeting agreed to include the "Battery Limits" in Appendix F.

(525) The question is whether the correspondence of 7 March 2016 may *nevertheless* – in a broader context of evidence – be understood in accordance with the alleged common understanding. Subcontractor's submission basically relies on minutes and witness statements. The Tribunal would like to note that information that cannot easily be derived from written correspondence, for example, witness statements from those who wrote the correspondence in question, might put the meaning of the correspondence in a different light and reveal a different understanding. In addition to the e-mails of 7 March 2016, Subcontractor's alleged understanding seems to be based on minutes and witness statements. As set out above, the Tribunal cannot see that the e-mails of 7 March 2016 and the Minutes of 27 January 2016 support the alleged common understanding. Therefore, it must be considered whether the witness statements, in particular the witness statements provided by Mr. Fernandez and Mr. Bertagnolio, support the alleged common understanding.

(526) The said witness statements about whether there was such a common understanding at the time of the Contract are conflicting. In such a contested context and considering that the witness statements were made after the present dispute arose, it is hard to see that Subcontractor's witness statements can serve as a sufficient basis to meet the applicable standard of proof. In several cases, the Norwegian Supreme Court has stated that testimonies have limited weight as evidence, particularly if it is not consistent with contemporary evidence. The latter is the situation in the present case. As pointed out above in section 8.3.2.5.2, the most sensible understanding of the contested e-mails of 7 March 2016 is that Subcontractor merely intended to clarify the order of priority between the two attachments included in Appendix F: "*Therefore*, in case of discrepancy, these documents shall *prevail* on the information contained in the *Attachment 2* of the *Appendix F*" (Tribunal's emphasis). The latter understanding is supported by the order of priority eventually reflected in section 2 of Appendix F, but without any changes in the order of priority in the Form of Agreement. Similarly, the Tribunal cannot see that the Minutes of 27 January 2016 provide "clear indications" that the purpose of Appendix F was to narrow down Subcontractor's engineering responsibilities set out in Appendix A. In such a context, where the contemporary evidence rather supports the objective interpretation, witness statements cannot be considered "clear indications" of the alleged common understanding.

(527) On this basis, the Tribunal *concludes* that it is not proven that the Parties had the alleged deviating common understanding at the time of the Contract. For the sake of clarity, the latter cannot be considered proven either on the balance of probability or based on the applicable heightened standard of proof.

(528) The Subcontractor has implicitly also touched upon the so-called good faith standard but without arguing it in detail. In any case, the Tribunal finds it clear that Subcontractor cannot succeed based on the good faith standard in the present case. Based on the same facts as emphasized above – in particular that Subcontractor provided the first draft of Appendix A, that Subcontractor as late as 9 February 2016 had no further remarks (in yellow) to the first paragraph of section 3.1 in Appendix A, and that the e-mails of 7 March 2016 concerned the order of priority within Appendix F – the Tribunal cannot see that Contractor had reason to believe, or could not have been unaware, that Subcontractor intended that Appendix F should prevail over Appendix A.

8.3.4.2 Verbal agreement that Appendix F prevails over Appendix A?

(529) Subcontractor asserts that there, at the time of Contract, was a verbal agreement that Appendix F prevails over Appendix A. The submission is mainly based on the witness statement by Subcontractor's project manager, Mr. Fernández, and the most relevant parts read (FA2 p. 2606, para 32):

> "Elecnor proposed including this document [the "Battery Limits"] in Annex A since, in terms of definition and scope, it took precedence over any other document. However, in conversations with Fernando Vara, he told me that we should put it in Annex F, where our offer and specific scope appear, and that there would be no problem in the sense of document priority, as this particularised any general description. Elecnor accepted in good faith."

(530) Mr. Diaz has basically stated the same in his witness statement (FA21 pp. 1393-1397), where it is stated (on p. 1395) that "... in the conversations to make Elecnor agree on leaving the Battery Limits in the App F, we both agreed that this document particularizes and narrows the scope of our offer, so there is no discrepancy with the App A ...".

(531) The said verbal agreement is contested by Contractor, *inter alia*, by Mr. Vara in his witness statement (FA22 p. 642, paras 30-36).

(532) The Tribunal has noted that the asserted verbal agreement is not supported by any contemporary evidence. At the same time, as set out above, the pre-contractual negotiations and correspondence supports the objective interpretation: The most sensible understanding of the contested e-mails of 7 March 2016 is that Subcontractor merely intended to clarify the order of priority between the two attachments included in Appendix F: "Therefore, in case of discrepancy, these documents shall prevail on the information contained in the Attachment 2 of the Appendix F" (Tribunal's emphasis). The latter understanding is supported by the order of priority eventually reflected in section 2 of Appendix F, but without any changes in the order of priority in the Form of Agreement. In this context, where an objective interpretation of the wording of the Contract provides a firm answer to the disputed matter, and the contemporary evidence regarding the negotiations supports it, Subcontractor cannot be considered to have proven at the balance of probability that there was such a verbal agreement.

8.3.5 Do the Parties' subsequent conduct indicate a deviating common understanding at the time of Contract or an implicit contractual amendment?

8.3.5.1 General legal remarks on subsequent conduct

(533) The Tribunal has concluded that the pre-contractual negotiations and correspondence up to the time of Contract do not support the asserted deviating common understanding. In fact, the correspondence leading up to the changes in Appendix F on 7 March 2016 seems to confirm what follows from an objective interpretation of the Form of Agreement and section 3 of Appendix A: Appendix A prevails over the Appendix F, including the contested ITT General Comments ("Battery Limits"). Hence, it follows from article 3.1 of Appendix A in the Contract that Subcontractor shall provide detailed engineering. In the present context, it is sufficient to reiterate the essence of what is emphasized above in section 8.3.2. First, that Subcontractor provided the first draft of Appendix A, including section 3.1, and that Subcontractor, as late as 9 February 2016, had no further remarks (in yellow) to the first paragraph of section 3.1 in Appendix A. Second, that Subcontractor, in the e-mail of 26 January 2016, seemed to confirm that the Parties in the previous meeting agreed to include the "Battery Limits" in Appendix F.

(534) In such a context, where the contemporary evidence at the time of the Contract supports the objective interpretation, it is difficult to see that Subcontractor's asserted deviating common understanding can be established based on the Parties' subsequent

conduct. Interpretation of contracts is all about determining the content *at the time of contract*. Hence, the Parties' subsequent conduct may only be relevant as an aid in the interpretation to the extent the ex post events may indirectly shed light on the parties understanding at the time of the contract. That may typically be the situation where contemporary evidence at the time of a contract does *not* shed light on the parties' contractual understanding. We might, for example, imagine that it can be demonstrated by e-mails or letters how the persons negotiating a contract understood the contract after it was entered into. However, if contemporary evidence from the time of the contract clearly indicates that the Parties did not have the alleged deviating common understanding, the parties' subsequent conduct cannot overrule what follows from an objective interpretation. Otherwise, it would be equivalent to equating the parties' subsequent conduct with a contractual amendment, but amending or rewriting a contract is indeed not a matter of "interpretation".

(535) As set out above, the Tribunal has concluded that the contemporary evidence *at the time of the Contract* indicates that the Parties did not have the deviating common understanding asserted by Subcontractor. However, for the sake of completeness, the Tribunal will address also the Subcontractor's submission that the Parties allegedly had a deviating common understanding based on *subsequent* events. As explained in the preceding paragraph, to prevail with such argument, Subcontractor would need to show that the subsequent events clearly and consistently indicate that the Parties, at the time of the Contract, had the deviating common understanding proffered by Subcontracts.

8.3.5.2 Do the Parties' subsequent conduct clearly and consistently indicate Subcontractor's alleged common understanding?

(536) Subcontractor's position is that a number of subsequent events demonstrate that Contractor shared Subcontractor's understanding of the distribution of engineering responsibilities. Subcontractor has, *inter alia*, referred to the Parties' "follow-up" correspondence after the Contract was entered into. In particular, the last bullet point in Contractor's letter of 19 September 2016 concerning the understanding of the "Battery Limits" in Appendix F (FA12 p.13):

> "After this proposal and during the preparation and execution of the contract, Subcontractor prepared its Battery Limits introducing different scope and requirements causing a substantial deviation to the contract value. These Battery Limits changed what previously was agreed between Contractor and Subcontractor during the tender phase."

(537) The Tribunal agrees that the quote might be understood to imply that Contractor shared Sub-contractor's understanding that the "Battery Limits" in Appendix F had a bearing on Subcontractor's scope of work. However, the quoted text does not indicate that Appendix F was intended to prevail over Appendix A or that Subcontractor shall not provide detailed engineering. By contrast, it follows from the introduction of the letter that it merely aimed to clarify certain discrepancies between the Main Contract and the Subcontract regarding applicable "rules", which cannot reasonably be understood to be a reference to the distribution of engineering responsibilities. The latter is supported by the following statement in the same letter (Tribunal's emphasis):

> Contractor's understanding is that Subcontractor has taken advantage of its position during the period between March and December 2015 and anticipate substantial changes to the scope and requirements already discussed during meetings with Company without informing Contractor. The result is that Subcontractor based its final *contract price* on *rules* different than the other competitors and without keeping Contractor fully aware of the changed assumptions.

(538) On this basis, the Tribunal cannot follow Subcontractor's argument that the statements in the said letter reveal that Contractor was of the general understanding that Appendix F "should be in accordance" with Appendix A. The statements do not address the distribution of engineering responsibilities, only certain "rules". The latter understanding is supported by a clarification meeting held on 22 September 2016, particularly the Subcontractor's written response on 10 October (FA21 pp. 179-180) and 11 November 2016 (FA21 p. 180 f.). Again, none of Subcontractor's comments concern the distribution of engineering responsibilities, and none of them can reasonably be understood to narrow down Subcontractor's responsibility for detailed engineering under Appendix A. In fact, the item highlighted by Subcontractor (No. 9) merely concerns remarks to the detailed scope of work, particularly the physical deliveries, regarding LVS (FA21 p. 180); e.g. pure clarifications.

(539) In the following, the Tribunal will consider Subcontractor's submissions regarding the subsequent events put forward in its Opening Statement Part 4 concerning the distribution of engineering responsibilities: (1) the Parties' correspondence during fall 2017/spring 2018, (2) Commercial Meetings and Bane NOR Audits, (3) Contractor/AI provided engineering, including detailed engineering, as a part of EPE, (4) AI issued DoC for the design of the LVS and IPS, and later revised DoC's, (5) correspondence and task force meetings between Contractor, Bane NOR and AI, (6) Contractor raised no objections to the engineering responsibilities until April 2020, and (7) Contractor's

argumentation from April 2020 onwards on the engineering topic was Janus-faced. Subcontractor's overall argument is that the above events demonstrate that Contractor did not consider Subcontractor responsible for detailed engineering, which again supports that this was a common understanding between the Parties at the time of Contract. In the following, the Tribunal will consider the said events in a slightly different order.

(540) The first submission (1) entails two sequences of correspondence in November 2017 to confirm Subcontractor's understanding of the Contract. It is argued that the first sequence confirmed that Contractor should provide the necessary detailed design ready for installation. The argument is mainly based on Subcontractor's concerns in an e-mail of 8 November regarding the level of detail in Contractor's engineering concerning IPS/LVS/C&C developed by AI (FA6 p. 1662) and Subcontractor's summary of the subsequent clarification meeting held 20 November 2017. In particular, Subcontractor has referred to item 6 in the Minutes from the said meeting, which reads (FA6 p. 1641):

> "6. AGJV confirms that all the necessary engineering documentation will be delivered so that Elecnor can carry out the installation of the systems that are the object of its contract."

(541) Furthermore, Subcontractor argues that Contractor confirmed this understanding in an e-mail of 20 November 2017, and reference is made to the following statement (FA6 p. 1666):

> "(...) Of course, the 2D standard sections will be completed to define all the systems, in such a way that they allow Elecnor to carry out its purchasing plan and its installation."

(542) The Tribunal concurs with Subcontractor that the meeting aimed to clarify engineering matters. The summary, which was made by Subcontractor, however, does not provide an unambiguous picture of the distribution of engineering responsibilities. For example, items 1, 2, and 7 state that Subcontractor shall provide certain layout drawings, and item 2 explicitly provides that Subcontractor's layout drawings shall include "examples of possible interference with other systems or equipment are detected". The latter clearly indicates that also Subcontractor was to provide essential input to the engineering, at least regarding interfaces. For the same reason, the Tribunal cannot follow Subcontractor's argument that item 6 in the summary reflects that Subcontractor was intended to have no responsibilities regarding engineering (except for providing shop drawings, etc.).

(543) Furthermore, the purpose of the meeting seems to have been to clarify engineering matters from a technical perspective. There are no indications that the aim was to modify or amend the contractual distribution of engineering responsibilities. On this basis, the Tribunal cannot see that Contractor's response 20 November 2017 can be considered a common understanding that Subcontractor had no responsibilities for detailed engineering (except for providing shop drawings, etc.). The response appears purely technical. If Subcontractor's aim of the meeting summary was to confirm the asserted contractual understanding, the Tribunal would expect Subcontractor to phrase its position more explicitly and direct the request to Contractor's representative, not to Contractor's Design Coordination Manager. Not at least because it follows clearly from an objective interpretation that Subcontractor shall provide detailed engineering.

(544) The second sequence of correspondence invoked by Subcontractor starts with its e-mail of 15 November 2017 regarding the split of responsibilities, where it is stated, *inter alia*, that "Calculations: Designers should provide calculations" and "Data sheets: Elecnor will provide data sheets" (FA6 p. 1689). Contractor did not respond to this e-mail, and in an e-mail dated 12 December 2017 Subcontractor stated that it considered Contractor to agree on the distribution of engineering responsibilities as set out in the said e-mail of 15 November (FA6 p. 1688). Subcontractor also argues that the said understanding was not disputed at the delivery of EPE and therefore must be considered (tacitly) accepted. Finally, Subcontractor asserts that Contractor eventually confirmed their understanding in the Minutes from the meeting 8 March 2018. In particular, Subcontractor relies on item 1.4 in the Minutes, where it is, *inter alia*, stated that "In principle, AGJV agrees with Elecnor's comments provided by email on 27.10.2017" (FA6 p. 1993), and it is pointed out that the latter date is meant to be a reference to the said e-mail of 15 November 2017. Item 1.4 is placed under the main heading "Engineering". The Tribunal cannot, however, see that such a vague statement ("In principle, AGJV agrees") can reasonably be understood to confirm a contractual understanding contrary to what follows clearly from an objective understanding of the Contract. Furthermore, item 1.4 seems to mainly regard "As-built documentation", which cannot be considered to have a general bearing on the distribution of engineering responsibilities. The latter is also supported by item 1.2 in the same Minutes, which only seems to address "CP drawings – level of detail".

(545) The Tribunal has noted that in Subcontractor's summary of its legal assertions based on the two sequences of correspondence in November 2017, it is argued that "Both Parties shared the same understanding of the engineering responsibilities in real time" . As emphasized by the Tribunal above, however, it is important to have in mind that the Parties' understanding after the Contract was entered into is only legally relevant to the extent it may shed light on their understanding *at the time of the Contract*. That the Parties, after the time of the Contract, might have understood the Contract in various manners cannot *per se* serve as evidence of a common understanding at the time of the Contract.

(546) Subcontractor's second submission (2) refers first to design meetings no. 8, 10 and 17 between Bane NOR, Contractor, Subcontractor, AI and Cowi. It is pointed out that the Minutes from meeting no. 8 refer to the design process as "Detailed engineering", which is asserted to support Subcontractor's understanding of the Contract. The Tribunal agrees that the purpose of the meeting was to discuss various matters regarding design and engineering but cannot see that such a meeting – led by Company – necessarily enlightens Contractor's and Subcontractor's understanding of the distribution of engineering responsibilities at the time of Contract. As set out in the Minutes' section concerning who is responsible under each item, the responsible is either Company or Contractor. To the extent the Minutes are relevant to enlighten the understanding of a contract, it therefore seems relevant only for the understanding of the Main Contract between Bane NOR and Contractor. Furthermore, and as set out above, that Contractor has extensive engineering responsibilities towards Bane NOR, which is not contested, does not entail that Subcontractor had not undertaken certain of the engineering responsibilities towards Contractor. Hence, the Tribunal's understanding is that the said Minutes are consistent with the objective interpretation of the Contract. The same remarks apply to the Minutes from design meetings no. 10 and 17, where item 4.1 refers to "Detailed engineering review" (FA6 p. 770 and FA6 p. 861). The latter, in which Contractor shall provide a detailed engineering review towards Bane NOR, can easily be aligned with an obligation for Subcontractor to provide a detailed engineering review towards Contractor.

(547) The Tribunal's considerations also apply to the second element of Subcontractor's second submission (2): Subcontractor's arguments based on Bane NOR audits. There are no indications that Bane NOR intended to audit the distribution of engineering

responsibilities between Contractor and Subcontractor; see, for example, the audit scope (FA25 p. 1427). And even if Bane NOR had such an intention, their understanding would not be relevant to determining the Parties' understanding of the Contract. Subcontractor has, however, referred to a statement from AI set out in Bane NOR's presentation from the closing of the audit meeting held on 21 November 2017, which reads (FA25 p. 1435):

> "Both Cowi and AI states that their detailing of the engineering should be sufficient, however AI state that Elecnor have requested some further details."

(548) Subcontractor has emphasized the quoted sentence, which might be understood to entail that Cowi and AI were of the understanding that they were solely responsible for detailed engineering towards Contractor. However, on the next page of the presentation, it is stated, *inter alia*, that "Detailed construction engineering documents to be developed by Elecnor are not shown in MDP" and that "EN [Elecnor] will provide red line mark up as input to as-built engineering". The latter statement clearly provides that also Subcontractor had a role in the detailed engineering. In any case, the Tribunal cannot see that any of the said statements enlighten the Parties understanding at the time of the Contract. For the same reasons, the Tribunal cannot follow Contractor's arguments in R3 (paras. 156-160) that Bane NOR's presentation supports their understanding of the Contract.

(549) The third element of Subcontractor's second submission (2) concerns the meetings between Contractor and Subcontractor in 2018. Based on the Minutes from the meeting of 24 January 2018 (FA6 p. 1765, item 1.2), it is argued that "AGJV confirmed in Commercial Meeting No. 1 all drawings should have necessary level of detail for construction". The Tribunal notes that item 1.2 is placed under the main heading "Engineering". Hence, it may be relevant for the Parties' understanding of the distribution of engineering responsibilities. However, the Tribunal cannot see that Subcontractor's argument can be based on item 1.2. Item 1.2 concerns "CP drawings – level of detail", stating that "All necessary drawings for construction will be delivered in 2D". The latter seems only to clarify the format of the "drawings for construction" to be provided by Contractor. It does not, as Subcontractor's argument seems to imply, state that all detailed engineering shall be provided by Contractor. Based on the clear wording of the Contract, in which Subcontractor shall provide detailed engineering, the standard of proof for a deviating common understanding requires "clear indications".

(550) Subcontractor has made a similar argument based on the Minutes from the meeting held 8 March 2018 (FA6 p. 1992), and it is argued that Contractor here "reaffirms its obligation to provide drawings with detailed". The wording of item 1.2 mirrors item 1.2 in the Minutes from the meeting of 24 January 2018, except for the following addition in the end: "The drawings delivered contain the necessary level of detail. A complementary delivery is pending according to the comments provided by ELECNOR on 14th February 2018". The Tribunal cannot see that the added sentence provides a different understanding of the Minutes of 8 March 2018 than those of 24 January 2018. Subcontractor has also pointed out that item 2.1 in the Minutes of 8 March 2018 states that EPE shall be "valid for construction", but the Tribunal cannot see that the latter indicates that the Parties, at the time of Contract, was of the common understanding that Subcontractor should not provide detailed engineering.

(551) Subcontractor also refers to Bane NOR's audit report dated 20 September 2020 and argues that the following statement confirms that detailed engineering was to be provided by AI, not Subcontractor, before installation (FA25 p. 2509):

> "Summary: "Detailed engineering drawings have not been issued prior to installation. Though, Contractor has recently requested AI to update the drawings to include more details"."

(552) The Tribunal, however, cannot see that the statement can be understood *e contrario*, that Subcontractor had no role in the detailed engineering. More importantly, it is hard to see that a summary of Bane NOR's audit may serve as evidence of the Contractor's and Subcontractor's understanding at the time of Contract. The audit aimed to identify and resolve *Bane NOR's* concerns in the project execution phase, not to examine contractual issues in the Contract. The same remarks apply to the non-conformities set out in section 4 of the same audit report (page 2512), stating that Subcontractor had requested Contractor to provide "more detailed drawings ... for the installation/construction works since beginning of 2018." Again, this is not evidence of Contractor's and Subcontractor's understanding at the time of the Contract. Instead, it indicates that the Parties were not aligned on the level of detail in the drawings to be provided by Contractor to Subcontractor as a part of Contractor's design and engineering responsibilities. The latter cannot be reasonably understood to entail that Subcontractor had no responsibilities for detailed engineering. To the contrary, it indicates a disagreement on the more exact distribution of engineering responsibilities regarding what belongs to "detailed engineering" and what does not.

(553) Furthermore, Subcontractor refers to Contractor's correspondence with Bane NOR and asserts that Contractor "confirmed towards Bane NOR how engineering should be conducted in line with Elecnor's view". The key point made by Subcontractor is that detailed design/engineering cannot be separated from general design. Subcontractor, in particular, refers to Bane NOR's letter dated 6 April 2020, where it is, *inter alia*, stated that "Contractor is missing a level of detailed engineering sufficient enough to allow Company to verify the installation is correct" (FA25 p. 2570). Subcontractor considers the latter to be striking evidence for its contractual understanding. Subcontractor also refers to Bane NOR's statement that the engineering process shall be carried out in a specific order according to the regulations, where both general and detailed design shall be carried out before installation, not after installation (FA25 p. 2571). Reference is also made to the response letter from Contractor to Bane NOR dated 6 May 2020 (FA25 pp. 2771-2772), and Subcontractor argues that Contractor in this letter agreed that detailed design is to be performed during engineering phase as a part of the engineering. The Tribunal, however, cannot see that the latter has any bearing on the internal distribution of engineering responsibilities between Contractor and Subcontractor. Bane NOR's understanding of the sequence of design and engineering did not prevent Contractor from subcontracting detailed engineering to Subcontractor. More importantly from a legal point of view, this was a post-contractual dialogue between Bane NOR and Contractor, and the Tribunal cannot see that it enlightens the Parties' understanding at the time of the Contract.

(554) Subcontractor also refers to a number of so-called task force meetings between Bane NOR and Contractor, to which Subcontractor was not invited. The argument is twofold. First, the position taken by Contractor/AI towards Bane NOR in the meetings confirms Contractor's responsibility to provide detailed engineering (and proves defects in Contractor's/AI's design). Second, that Subcontractor was not invited to the meetings confirms that Contractor did not consider Subcontractor responsible for the detailed engineering. A key point is that the Minutes do not state that Contractor considered Subcontractor to be responsible for detailed engineering. Reference is made to the Bane NOR's letter of 6 April 2020 (FA25 p. 2570) and the agenda of the subsequent meetings, where the level of detailed engineering was one of Bane NOR's key concerns; see, for example, the agenda for the first meeting (FA27 p. 4674). Subcontractor also emphasizes that the Minutes of 30 June 2020 state that "Contractor agrees that their current drawings do not fulfil the requirements and that they are already working on

this" (FA27 p. 5364) and that Bane NOR's presentation 16 June 2020 states that "AGJV must submit correct and sufficiently detailed drawings (i.e. vendor detail engineering incorporated)" (FA27 p. 5355). Reference is also made to Bane NOR's presentation on 30 June 2020 (FA27 pp. 5376-5378), which shows AGJV's responsibility to update the original design based on vendor drawings (shop drawings). The Minutes of 15 September 2020 (FA27 p. 5391) are referenced to support the distribution of engineering responsibilities according to Subcontractor's view; in particular items 6 and 7 entailing that Subcontractor only had to provide shop drawings, and it is also asserted that the shop drawings were the only engineering provided by Subcontractor.

(555) The Tribunal considers the Minutes and presentations from the task force meetings to stand in the same position as the correspondence between Bane NOR and Contractor considered in the previous paragraph. Between Contractor and Bane NOR, it was evident that Contractor, not Subcontractor, was responsible for providing detailed engineering. This follows clearly from the Main Contract. For the same reason, however, it is difficult to see that the said statements may have a strong bearing on the understanding of the distribution of the engineering responsibilities between Contractor and Subcontractor under the Contract. In any case, it is hard to see that said Minutes and presentations serve as "clear indications" of the Parties' understanding at the time of the Contract.

(556) Subcontractor also relies on Contractor's alleged "inaccurate presentation of red mark-ups, as built and DFO", an argument that is further developed in section 3.4.4 of C3 (FA20 pp. 157-158). The argument aims to counter Contractor's assertion (in R2 section 4.2.4) that it is natural to include as-built drawings and documentation for operation (DFO) as a part of Subcontractor's detailed engineering because Subcontractor's detailed engineering "form the basis of these documents". Subcontractor's argument in the present context is that Contractor's argument contradicts Bane NOR's understanding of the documentation requirements set out in the task force meetings, in which Contractor was to provide such documentation to Bane NOR (FA27 p. 5346 and p. 5355). Reference is also made to Bane NOR's audit 21-2017 (FA25 p. 1436) and Contractor's/AI's responsibility for as-built and 3D-models as per the tender (FA9 p. 8166). Again, the Tribunal cannot see that *Bane NOR's* understanding may serve as evidence of the Parties' understanding at the time of Contract.

(557) Subcontractor furthermore emphasizes that Contractor and AI (i) *de facto* performed all required engineering, basically as an integrated part of EPE, and (ii) issued Declaration of Conformity (DoC) for the design of LVS and IPS 4 March 2020. The argument is that Contractor (and AI) would not have carried out that work if Contractor considered Subcontractor responsible for the detailed engineering. The Tribunal will first address item (ii); the DoC.

(558) The essence of Subcontractor's *de facto* argument concerning DoC is that Contractor's view on the distribution of engineering responsibilities pleaded in this case is not consistent with the DoC requirements. A key point is that AI would not have issued a DoC comprising the detailed engineering unless they considered Contractor to be responsible for the detailed engineering. Subcontractor has elaborated in detail on the requirements for a valid DoC, and it is argued that the DoC issued by AI on 3 April 2020 (FA6 p. 4307) was invalid, which caused serious consequences regarding costs and progress. It might be that the DoC was invalid. The Tribunal, however, cannot see that Subcontractor has provided any evidence that Contractor's/AI's handling of DoC and the understanding of the applicable requirements for a valid DoC enlightens the Parties' understanding of the distribution of engineering responsibilities *at the time of Contract*. There are no indications that the persons in AI who issued the DoC were involved in the negotiations leading up to the Contract. It should also be noted that the system of DoC aims to ensure the public interest of safe installations and that who is responsible according to such public law requirements does not necessarily correspond to the contractual distribution of engineering responsibilities.

(559) Another element of Subcontractor's *de facto* arguments relies on several Variation Orders where Contractor instructed AI to carry out various engineering under the contract between Contractor and AI: VO 68 (return cables), VO 81 (strobe lights), VO 89 (autotransformer signal cables), and VO 83 (new LVS cabinets). A key point is that the said VOs issued by Contractor to AI correspond with the VOs issued by Contractor to Subcontractor to procure/supply and install the same under the present Contract: VO 22, 40, 54 and 65, respectively. Hence, the various VOs reveal a pattern in which Contractor did not engage Subcontractor to provide detailed engineering. The Tribunal cannot, however, see that the Parties' understanding of the distribution of engineering responsibilities at the time of the Contract can be inferred from the said VOs, of which several VOs were issued years after the Contract was entered into. The reason that

Contractor chose to instruct AI, and not Subcontractor, to carry out the relevant engineering associated with the Variations might simply have been to rely on "in-house" resources. In any case, the only thing that can be safely inferred from the said VOs is that Contractor considered the instructed work *not* to fall within the scope of work of AI and Subcontractor, respectively.

(560) Subcontractor also argues that VO 19 between Contractor and Subcontractor regarding support for the EPE confirms that the intention was that Contractor, not Subcontractor, should provide detailed engineering. The Tribunal agrees that VO 19 might be understood to support Subcontractor's understanding as it implies that Contractor considered the EPE not to be completed by Contractor/AI. However, it is evident that VO 19 does not explicitly address the responsibility for detailed engineering, and it was not a regular VO but a kind of commercial settlement related to compensation for supporting Contractor in the revision of EPE. On this basis, it is hard to see that VO 19 from May 2018 can be considered to provide "clear indications" of the Parties' understanding at the time of the Contract.

(561) Subcontractor's *de facto* argument is also based on Mr. Sevillano's witness statement, stating that AI undertook a key role in the detailed engineering by having a constant dialogue with manufacturers and suppliers up until the DD (FA22 p. 11, para 71). The testimony from Mr. Sevillano refers to one document, namely CE-815, regarding replacing the power relay at switchgear EH-BRY-004155. Furthermore, in the Opening Statement (Part 4), Subcontractor argued that the e-mails of 15 April 2020 demonstrate that Contractor/AI discussed with manufacturers (Schneider) and developed the relevant detailed engineering. Subcontractor also argues that Subcontractor's own MDL shows that only shop drawings were included in their engineering.

(562) Furthermore, Subcontractor argues that the way Contractor and AI carried out and delivered EPE supports that Contractor did not consider Subcontractor responsible for detailed engineering. First, Subcontractor contests that the Contract lacked details on the content of EPE, and reference is made to VO 19 of 4 May 2018 stating that "Subcontractor *shall be deemed to have all the information required to complete the procurement process"* (FA6 p. 2046). Reference is also made to, *inter alia*, the detailed requirements in the Main Contract. Furthermore, reference is made to the fact that Contractor considered the first EPE of 31 January 2018 to be incomplete because it lacked certain necessary details. The latter was confirmed by the extended date for the

EPE to June 2018 and the fact that Subcontractor was paid additionally (EUR 20.000 per month as per VO 19) to suggest improvements etc. Reference is also made to Mr. Sevillano's witness statement (FA2 p. 46), numerous letters and meetings between Contractor and Subcontractor throughout project execution. In VOR 20, Subcontractor made a claim based on the "lack of engineering", referencing several letters where they had asked for outstanding engineering documentation, which is supported by the MPR of July 2019 (FA13 p. 402).

(563) The Tribunal cannot see that the said examples of subsequent conduct prove that Contractor considered itself generally responsible for the detailed engineering or generally carried out the detailed engineering required for the selection of the various manufacturers. In this context, it must also be taken into account that some involvement would, in any case, be expected by a prudent Contractor in such a complex project. Not at least as an inherent part of the design development process, and because there is no straight forward division between general design and detail engineering. More importantly in the present legal context, dialogues on a technical level, EPE, VOs, etc., years after the Contract was entered cannot *per se* be considered evidence of the Parties' understanding *at the time of the Contract*. The latter also has a principled aspect. Personnel involved in the execution of a project phase is often not the same as the personnel that negotiated a contract, and hence, a judge or arbitrator should be cautious not to mix post-contractual interpretations with the parties' understanding at the time of contract; see Tørum, Interpretation of Commercial Contracts, 2019, paras 224–225.

(564) Two overall and highly contested interlinked matters are (i) when Contractor expressed or maintained that Subcontractor was obliged to provide detailed engineering, and (ii) why and to what extent Contractor (AI) carried out rework and "follow up" regarding detailed engineering. Contractor asserts that AI became extensively involved because Subcontractor refused to provide or did not provide the required level of detail in the detailed engineering; see, in particular, Ms. Nicolás witness statement (FA22 p. 953, para 28) and Mr. Medina's witness statement (FA22 p. 11). On the other hand, Subcontractor asserts that the said line of argument has no merits and is contradicted by evidence that AI performed the rework and "follow-up" regarding detailed engineering. Reference is made to, *inter alia*, various revised/updated SLDs and transmittals: FA6 p. 4752 (September 2020), FA6 p. 5058 (10 November 2020), FA6 p.

5304 (4 December 2020) and FA6 p. 5639 (8 December 2020) and FA2 p. 743 (7 February 2021). Subcontractor also emphasizes that Contractor/AI performed the selectivity assessments (incl. calculations and verification) on numerous occasions – implicitly confirming its responsibility for detailed engineering.

(565) Subcontractor furthermore asserts that Contractor did not object to Subcontractor's understanding of the engineering responsibilities until Contractor submitted the letter of 22 April 2020 (FA6 pp. 4476-4477). Subcontractor has also referred to AI's involvement in the engineering after EPE, and it is emphasized that the latter is not consistent with Contractor's argument that after the submission of EPE, the Contract must be considered an EPC contract. Reference is also made to the matrix of agreed actions for the period September 2019 until April 2022 (FA24 p. 978 f., in particular p. 981, 988, 1001 and 1005), showing that several engineering deliveries were developed after the completion of EPE. Subcontractor has also pointed out that Contractor's Project Director, Mr. Medina, has only put forward two alleged examples of detailed engineering provided by Subcontractor, namely regarding OCL components and load connectors, and reference is made to Mr. Medina's witness statement (FA3 p. 10, para 23). Both examples are contested on the basis that Subcontractor merely pointed out misunderstandings in Contractor's/AI's engineering, and reference is made to Mr. Sevillano's witness statement (FA21 p. 18, paras 48-49).

(566) Based on Contractor's firm position in the present arbitration – that Subcontractor was solely responsible for providing detailed engineering based on the EPE – the Tribunal is surprised that the unambiguous contractual position put forward in the letter of 22 April 2020 was not communicated to Subcontractor earlier. Not at least because there were several examples that Subcontractor requested more details in the engineering provided by Contractor/AI; see, for example, FA6 p. 1765 (Minutes of 24 January 2018), FA6 p. 1992 (Minutes of 8 March 2018), FA6 p. 2050 (Minutes of 31 May 2018), and FA6 p. 2252 (Minutes of 17 July 2018). The latter might also be understood to entail that Contractor was of the understanding that Contractor's/AI's design and engineering were to include detailed engineering. As emphasized by Subcontractor, the latter also entails that it is incorrect, as stated in Contractor's letter to Bane NOR dated 6 May 2020, that Subcontractor had not previously expressed concerns regarding the level of detail in Contractor's/AI's engineering. The Tribunal has also noted that there is limited contemporary evidence supporting Contractor's argument that AI became involved in

the detailed engineering (merely) because Subcontractor refused to provide or did not provide the required level of detail in the detailed engineering, ref. the said witness statements provided by Ms. Nicolás and Mr. Medina. For the same reasons, the Tribunal can, to some extent, understand Subcontractor's line of argument – that Subcontractor's personnel involved in the project execution, in particular in 2020, might have understood Contractor's and AI's *de facto* involvement in the detailed engineering as Subcontractor did not have the sole responsibility to provide or finalize the detailed engineering. The absence of clear reservations from Contractor that further detailing of the EPE was expected to be carried out by Subcontractor as a part of its detailed engineering or that AI became involved in detailed engineering merely because Subcontractor refused to provide or did not provide the required level of detail in the detailed engineering, might be understood in a similar manner.

(567) The relevant legal question in this respect is, however, not how Subcontractor could reasonably understand Contractor's conduct after the Contract was entered into and up to the letter of 22 April 2020. The key legal question in the present context is, again, whether Contractor's said subsequent conduct "clearly indicates" that Contractor, *at the time of the Contract*, shared the asserted deviating common understanding. The Tribunal cannot see that the evidence invoked by Subcontractor – neither at the balance of probability nor based on the applicable heightened standard of proof due to the clear wording of the Contract – proves the alleged common understanding. The Tribunal's understanding of the evidence might be summarised in the following three elements.

(568) First, as indicated, the Tribunal concurs with Subcontractor that Contractor should have set out its firm position earlier or expressed reservations. In a context where the Contract clearly provides that Subcontractor shall provide detailed engineering, however, the onus was on the Subcontractor to clarify its contractual understanding. Subcontractor could not just rely on its inferred understanding of Contractor's and AI's subsequent conduct. Hence, if Subcontractor, despite the clear wording of the Contract, believed that it had no responsibility to provide detailed engineering, Subcontractor had the strongest incentive to communicate and clarify its position. Subcontractor could not just tacitly consider itself released from its obligation to provide detailed engineering.

(569) Second, the subsequent conduct by Contractor highlighted by Subcontractor – mainly AI's involvement after EPE – does not provide an unambiguous picture regarding the responsibility to provide detailed engineering. The fact that there is no clear-cut distinction between general design and detailed engineering, and that design and engineering is not an entirely linear process, entails that it is not evident that all of the said involvement by AI might be considered involvement in the "detailed engineering". Furthermore, the distribution of engineering responsibilities between AI and Subcontractor is not straightforward, which may explain why AI became involved in elements of detailed engineering. The lack of clarity in this respect is unfortunate. Nevertheless, it does not change the fact that the Contract between Contractor and Subcontractor clearly and explicitly provides that Subcontractor shall provide detailed engineering. For the same reason, AI's involvement did not give Subcontractor a legitimate reason to believe that it could assume that AI would carry out all the relevant engineering, including detailed engineering. That Contractor was under pressure from Bane NOR to ensure the progress, which Subcontractor was well aware of based on, *inter alia,* Bane NOR's audits, may also explain AI's involvement in aspects of the detailed engineering. In any case, the Tribunal cannot see that Bane NOR's audit sheds light on the Parties' understanding of the distribution of engineering responsibilities at the time of Contract. The purpose of Bane NOR audits was not to determine the extent of Subcontractor's contractual engineering responsibilities towards Contractor. For the same reason, Bane NOR's concerns during the project execution phase regarding the distribution of engineering responsibilities between Contractor and Subcontractor (FA25 pp. 2570-2572) and the so-called task force meetings cannot be considered to enlighten the Parties' understanding of the distribution of engineering responsibilities at the time of Contract.

(570) Third, and more importantly, it is hard to align Subcontractor's reliance on subsequent events with the pre-contractual and contemporary evidence of the Parties' understanding at the time of the Contract. As set out above in section 8.3.2, the pre-contractual correspondence leading up to the changes in Appendix F on 7 March 2016 supports what follows from an objective interpretation of the Form of Agreement and section 3 of Appendix A: Appendix A prevails over Appendix F, including the contested ITT General Comments ("Battery Limits"). Furthermore, the wording of article 3.1 in Appendix A, distributing the responsibility for "detailed engineering" to Subcontractor, was suggested by Subcontractor. In such a context, where the pre-contractual evidence

supports what follows from an objective interpretation of the Contract, there must be a significant threshold to deviate from an objective interpretation based on an alleged common understanding based on subsequent events. In the absence of such a threshold, subsequent events would *de facto* not serve as a means of interpretation but as a means of modifying or amending the Contract.

(571) The assessment above of subsequent events does not provide a coherent picture, and many of the invoked events concern the relationship between Bane NOR and Contractor, not the relationship between Contractor and Subcontractor. Hence, the Tribunal cannot consider it proven – neither at the balance of probability nor as per the heightened standard of proof – that the Parties, in their subsequent correspondence or by the implementation of the Contract consistently and over a period of time, expressed an understanding equivalent to the alleged common understanding.

(572) Based on the above, the Tribunal concludes that the Parties, at the time of the Contract, did not have the common understanding asserted by Subcontractor based on, *inter alia*, the asserted subsequent events.

8.3.5.3 Does the Parties' subsequent conduct constitute an implicit contractual amendment?

(573) Even though the Parties' subsequent conduct cannot be a decisive aid in the interpretation of the Contract where it contradicts their proven understanding at the time of contract, their subsequent conduct might, *in casu,* constitute an implicit or "tacit" contractual amendment. The latter might sometimes be pretty much straightforward, for example, where the Parties have mutually, consistently and over time established a contractual practice clearly contradicting what follows from an objective interpretation and which could reasonably be understood to entail an implicit amendment of the contract. Typically, where both Parties have expressed that understanding. In larger and more complex contracts, however, the latter is rarely straightforward; the evidence often provides an ambiguous picture.

(574) Furthermore, and more principled, the need for clarity and predictability calls for a high threshold for considering a complex contract to be "implicitly" amended, in particular in complex contracts involving numerous persons on many different levels. In such projects, a low threshold for considering a contract "implicitly" amended could undermine the Contract as a reliable and stable vehicle to manage the project.

Furthermore, a low threshold cannot be aligned with contractual provisions aiming to avoid such discussions; for example, clauses providing that only the parties' contractual representatives are entitled to make contractual decisions and so-called "no oral amendment" clauses. Also, such clauses might be deviated from, but they will normally entail a strong presumption that amendments to the contract are subject to a formal contractual amendment agreed between the contractual representatives.

(575) On this basis, the Tribunal must consider whether the Parties mutually, consistently and over time established a contractual practice clearly contradicting the distribution of engineering responsibilities following from the objective interpretation and which could reasonably be understood to entail an implicit amendment of the Contract.

(576) The present Contract concerns a large and complex project between very professional Parties, in which clarity and predictability are of utmost importance. The distribution of engineering responsibilities is not a minor element in the Contract but a key matter of great importance for the Parties' roles and responsibilities in the project. Therefore, it cannot be questionable that considering the present Contract "implicitly" amended must be subject to a high threshold.

(577) A significant part of the evidence invoked by Subcontractor in respect of the alleged common understanding at the time of the Contract and later concerns communications between Bane NOR and Contractor. The Tribunal finds it clear that the communication, meetings and presentations between Bane NOR and Contractor/AI, which is addressed above in section 8.3.5.2,, cannot be considered an implicit amendment of the Contract. It is evident that Contractor was obliged to provide engineering towards Bane NOR, including detailed engineering. The latter entails that Subcontractor, even if it had been fully aware of all the correspondence between Bane NOR and Contractor regarding detailed engineering (including the task force meetings and presentations), would not have a reasonable ground to believe that the correspondence between Bane NOR and Contractor entailed an implicit amendment of the Contract between Contractor and Subcontractor.

(578) On this basis, an implicit amendment in the present case must be derived from the communications and conduct between Contractor and Subcontractor. As pointed out above in section 8.3.5.2 there were several examples in 2018 that Subcontractor requested more details in the engineering provided by Contractor/AI; see, for example, FA6 p. 1765

(Minutes of 24 January 2018), FA6 p. 1992 (Minutes of 8 March 2018), FA6 p. 2050 (Minutes of 31 May 2018), and FA6 p. 2252 (Minutes of 17 July 2018). The fact that Subcontractor was concerned about the level of detail in Contractor's/AI's engineering, however, could not reasonably be understood to entail that Subcontractor was relieved from its clear obligation to provide detailed engineering under the Contract. Certain discussions about the level of detail in the engineering could be expected in such a large and complex project.

(579) As indicated above in section 8.3.5.2, the Tribunal is surprised that Contractor's clear contractual position in the letter of 22 April 2020 was not communicated to Subcontractor earlier. The Tribunal nevertheless finds it clear that Subcontractor could not reasonably understand the absence of such a letter prior to 22 April 2020 to entail that Subcontractor was implicitly or tacitly relieved from the obligation to provide detailed engineering under the Contract. The letter simply stated what follows from an objective interpretation of the Contract. In a context where the Contract *clearly* provides that Subcontractor shall provide detailed engineering, the onus was on the Subcontractor to clarify its contractual understanding. Subcontractor could not just rely on its understanding of Contractor's and AI's subsequent conduct. Hence, if Subcontractor, despite the clear wording of the Contract, believed that it had no responsibility to provide detailed engineering, the onus was on Subcontractor to communicate and clarify its position. Subcontractor could not just consider itself implicitly or tacitly released from its obligation to provide detailed engineering.

8.3.6 Summary and conclusion

(580) Based on the above, it follows from an objective interpretation of the Contract that Subcontractor shall provide detailed engineering. There is no basis for deviating from this interpretation based on the alleged common understanding, verbal agreement or implicit amendment. The conclusion is that Subcontractor was obliged to provide detailed engineering.

(581) The meaning of "detailed engineering" is, however, not entirely straightforward, and before the Tribunal proceeds to assess the various claims concerning engineering, it is, therefore, required to provide some remarks on the understanding of "detailed engineering" and its relationship to general engineering/design.

8.3.7 What is "detailed" engineering, and how does it relate to design development and "general" engineering in the present Contract?

(582) Based on the Tribunal's conclusion that Subcontractor is responsible under the Contract for providing detailed engineering, it is imperative to determine the further content of "detailed engineering". That must be determined based on an interpretation of the Contract. However, to the extent "detailed engineering" is not expressly and precisely defined in the Contract or cannot otherwise be inferred from the Contract, the normal understanding of "detailed engineering" will be relevant for the interpretation.

(583) The normal understanding of "detailed engineering", which is a technical and not a legal term, seems not to be highly contested in the present case. Because the normal understanding may be relevant for the interpretation – and hence relevant for the Tribunal's determination of the various claims – it is appropriate to briefly outline the Tribunal's understanding of "detailed engineering" according to what it considers to be the normal understanding. Having said that, the finer details regarding what is considered "detailed engineering" may slightly differ within different industries and technical disciplines. An outline of the normal understanding of "detailed engineering" must, therefore, be limited to the core of the concept in the context of an electrical scope of work.

(584) The Tribunal concurs with Mr. Bish (CB2 p. 1408 para 2.2.11) that the stages of design and engineering set out in the RIBA Plan of Work of 2013 (RIBA) must be considered to provide a representative outline of the key elements of the various phases also in railway construction projects. In addition, the RIBA Plan of Work of 2013 is detailed in the Network Governance for Railway Investment Projects (GRIP), which is developed in the UK to measure progress and key stages within a rail construction project (CB2 p. 1408 para 2.2.11). In the absence of similar guidelines in Norway, the Tribunal considers RIBA and GRIP to fairly reflect what must be considered key elements of the various stages of design and engineering also in a Norwegian railway construction project.

(585) The first RIBA phase of a design process is *conceptual design*, which is typically limited to a high-level layout of how a particular concept may be designed to meet certain requirements set out by the client. In this initial phase, the layout typically appears as a conceptual sketch of the main elements and their location and approximate size, and in this phase, the layout of electrical systems is highly schematic by only setting out

flow directions etc. The second RIBA phase is often referred to as the *developed design model*, in which more details are added to the sketch, for example, regarding the location and sizing of the various elements, and the electrical schematics are further developed by inserting the equipment required to make the systems work; approximate dimensions of equipment and sizing of cables etc.

(586) The most relevant phase in the present context is the third RIBA phase concerning technical design, in which the developed design is further developed into a technical design model. The technical design model phase may typically include three steps: feasible generic design, coordinated generic design and coordinated specific design. In the *feasible generic design*, the dimensions and sizing of equipment and cables go from approximate to accurate, and so does the layout of the plant rooms and the positioning of equipment and cables etc. During the coordinated generic design and the coordinated specific design, further details are added to the technical design. Typically, in addition to the accurate location and sizing of equipment, horizontal and vertical layouts are detailed to avoid clashes, critical dimensions are scrutinized, cables are identified by reference number and size within the zones, and panels are shown with correct size. As pointed out by Mr. Bish (CB2 p. 1406), the coordinated specific design typically includes technical design and information from relevant manufacturers of equipment and cables. The outcome of the coordinated generic design and the coordinated specific design will typically be installation/working drawings.

(587) The fourth RIBA phase concerns the *installation model*. Again, it is about adding further details, but now on an even more detailed and practical level, typically regarding brackets, supports and fixings to ensure proper installation. Such details are typically obtained from the manufacturers of the selected components as a part of the procurement process. The fourth phase might include incorporating these details into the working drawings from the third phase. It also includes the as-built model, which records changes made during actual installation differing from the installation drawings. The last phase is about updating the as-built model with the rectification of defects (if any).

(588) Essentially, while the first two RIBA phases concern high-level *"general design"*, the third RIBA phase concerns more hardcore and nitty-gritty engineering – read: comprehensive calculations and modeling – in a more specific and integrated manner, in which the developed design is converted to a scrutinized technical design which can

be used for procurement, construction and installation. As pointed out by Mr. Bish (CB2 p. 1404 para 2.1.4), the third phase (the fourth in his statement) comprises what is normally referred to as *"detailed engineering"*, and the detailed engineering will serve as the basis for the "shop drawings".

(589) Furthermore, as pointed out by Mr. Bish (CB2 p. 1409 paras 2.2.18-2.2.22), GRIP provides that detailed engineering requires suppliers' details, software analysis (where required) and detailed drawings for the installation of equipment (typically developed in 3D). At the same place, Mr. Bish also points out that depending on the complexity and cost of the project, a project Management Consultant may be employed to manage and coordinate the whole design process.

(590) On this basis, the key question to be determined by the Tribunal is how to understand "detailed engineering" in the present Contract. Article 3.1 (first paragraph) of Appendix A in the Contract reads (Tribunal's emphasis):

> "[1] Contractor shall provide the *general engineering* to the project including integration responsibilities, adapting the information to the Client's needs. Subcontractor shall provide the *detail* and *construction* engineering based on the design of the following main items:
>
> Engineering Package E
>
> As built drawings and documentation for operation (DFO)"

(591) The *first* sentence of the first paragraph explicitly and clearly provides a distinction between general design/engineering and "detail and construction engineering", a distinction that is well known from, for example, RIBA and GRIP. As indicated above, however, there is no firm distinction between general and detailed engineering; it is merely about the *level* of detail. The second sentence of the first paragraph, however, provides guidance on how to distinguish between the "general engineering" to be provided by Contractor and the "detailed engineering" to be provided by Subcontractor: The latter shall be "based on the design" in the EPE. The only reasonable understanding of the latter is that Subcontractor was to carry out and *add* the required detailed engineering to EPE, which has two important implications. First, Subcontractor could not expect the EPE to include the required level of detailed engineering. Hence, Subcontractor could not consider the EPE ready to proceed straight to procurement and installation. Second, Subcontractor was responsible for adding the required detailed engineering to EPE to ensure that the final output resulted in a complete,

scrutinized and robust design to which Subcontractor's scope of work could be performed.

(592) Furthermore, Art 3.1 (fifth paragraph) provides that Subcontractor shall "assist Contractor during the engineering phase". When this provision is read in conjunction with the first paragraph, it seems clear that the assistance refers to Contractor's "general engineering" and design. Hence, Subcontractor was *responsible* for providing "detailed engineering", but it was also obliged to *"assist"* regarding the general engineering. The latter did not entail any responsibility regarding the feasibility of the general design and engineering, but it entailed that Subcontractor was obliged to contribute to a feasible design.

(593) It should also be noted that Art 1.4 of Appendix A provides guidance determining the extent of Subcontractor's scope of work (Tribunal's emphasis):

> "The scope of work to be performed by Subcontractor includes the performance of *all* activities, *including* the provision of all resources, people, *systems, equipment and materials* (permanent and temporary), and the execution of all *construction engineering, procurement*, construction, MC, commissioning, assistance to Company's test activities, all as required for the complete delivery of the Contract Object."

(594) The Tribunal has already pointed out Subcontractor's responsibility for detailed engineering, cf. 8.3.6 above. Art 1.4 has, however, a bearing on the understanding of "detailed engineering" in the present Contract. When Subcontractor was responsible for providing the relevant "systems, equipment and materials", it must also be considered responsible for carrying out the required detailed engineering required to select and procure the relevant "systems, equipment and materials". The latter also sits well with his responsibility for "construction" engineering as there is no clear distinction between detailed engineering, procurement and construction engineering. Furthermore, the interpretation sits well with Subcontractor's warranty as per the CoC Art 23.1 (c) that his engineering is fit for the purpose. Hence, it was up to Subcontractor to ensure that the equipment to be selected and procured by Subcontractor would meet the functional requirements set out in the Contract – both as such and as an integrated part of the systems.

9 VOR 40

9.1 Introduction

9.1.1 Outline of VOR 40 and the contested matters

(595) Subcontractor issued VOR 40 on 19 April 2021. According to the heading of VOR 40, it concerns "Production of Changes LVS Cabinets" and the content of VOR 40 reads as follows:

> « Reference is made to Contractor's letter "UFB-SF-L-00231" dated on 12th of April 2021.
>
> Reference is also made to Subcontractor's letter "853-001-LT-ASE-AGJV-1542" dated 19th of April 2021.
>
> Pursuant to the provisions under the Art. 16.1 of the Conditions of Contract, Subcontractor hereby issues this VOR 040 as the work is not part of Subcontractor's obligations under the Contract by virtue of the facts duly substantiated in the aforementioned Subcontractor's letter.
>
> Since Contractor has decided to not contribute to a solution in this regard within the deadlines set out in the letter "853-001-LT-ASE-AGJV-1517" dated 8th of April 2021, Contractor has exhausted Subcontractor's possibility to assess such changes prior of the submission of both the Monthly Report of April 2021 and the CSB with cut-off date 25th April 2021.Thus, Subcontractor hereby informs Contractor that the Contract Schedule Baseline shall be updated through this VOR 040 once the changes on the LVS could be properly assessed».

(596) The major disagreement under VOR concerns selectivity, but the Parties also partly disagree on what is covered by VOR 40. They also disagree on to what extent VOR 40 constitutes a Variation, the effects if it is considered a Variation, and whether VOR 40 is precluded.

(597) The disagreement on preclusion is not only related to whether VOR 40 was timely submitted. It also concerns the scope of VOR 40. While the Parties agree that VOR 40 covers engineering responsibilities related to the LVS Cabinets, they disagree whether VOR 40 also covers work related to, *inter alia*, the control and monitoring of the Ventilation system. The latter has a link to VOR 108.

9.1.2 LVS cabinets and selectivity

(598) The Parties agree that Subcontractor's VOR 40 covers engineering responsibilities related to LVS cabinets in the cross passages and technical rooms; in particular verification of selectivity, which Subcontractor considers not to be a part of its scope under the Contract.

(599) The cabinets in question are a part of the Low-Voltage Systems (LVS). The LVS is the system for distributing low-voltage power from transformers/main panels in the cross passages to the main panel boards and UP panel boards, cf. Art 5.2.11.5 of Appendix A to the Contract. These panels provide low-voltage power to the installations in the tunnels and cross passages.

(600) The LVS is fed from the infrastructure power supply system (IPS), which is the high-voltage power supply for power consumers other than trains, cf. Art 5.2.11.4 of Appendix A to the Contract.

(601) As indicated, a key element of Subcontractor's VOR 40 concerns verification of so-called selectivity. The LVS includes *circuit breakers* to protect the electrical circuits against damage caused by electrical faults. The two main types of electrical faults are overload, i.e. when power consumption for a circuit is larger than expected, and short circuit, i.e. when an instantaneous excessive current occurs. The circuit breakers are coordinated in a specific sequence to ensure that only the protection device closest to the fault or the overloaded equipment, trips, ensuring that the healthy parts of the system are not affected and do not lose power supply. This coordination of circuit breakers is referred to as *selectivity*. As indicated, the purpose of selectivity is to minimize interruption to power supplies in the event of an electrical fault. *Partial selectivity* is sufficient for overload protection, while also short circuits must be considered to achieve *total selectivity*.

9.1.3 Outline of the factual background for VOR 40

(602) The factual background of VOR 40 is comprehensively addressed below in the Parties submissions and in the Tribunal's assessment. Hence, the present outline merely serves as an introduction.

(603) EPE for the Railway System, which the Parties agree to be Contractor's responsibility, included, *inter alia*, the design of LVS. The design of LVS in the EPE was represented symbolically in the form of single-line diagrams (SLDs), which also included selectivity. In July 2018, Contractor submitted revision 04C of the SLD as a part of the LVS design in the EPE.

(604) According to the Contract, Subcontractor was obliged to procure and install the LVS cabinets. Subcontractor subcontracted Laugstol to provide the LVS cabinets.

(605) The Parties' disagreement leading up to VOR 40 began when Laugstol questioned Subcontractor about the selectivity in the LVS design set out in the EPE. In early 2019, Subcontractor brought Laugstol's selectivity concerns to Contractor's attention. Afterwards, the Parties exchanged letters and engaged in meetings about the selectivity issue in February and March 2019.

(606) On 25 March 2019, Subcontractor submitted shop drawings for the LVS cabinets. Based on the said SLDs of July 2018, Subcontractor and Laugstol continued with the fabrication and delivery of the LVS cabinets.

(607) Subcontractor's procurement process for the LVS cabinets was finalized in July 2019. In March 2020, the installation of most of the LVS cabinets was finalized to the extent possible in the cross passages.

(608) On 3 April 2020, Contractor signed the Declaration of Conformity (DoC) for the LVS. On 2 September 2020, however, Contractor submitted Engineering Transmittal No. 00149, which contained changes to the SLDs and recommended changes to MP and UP panels in cross passages to achieve selectivity in the LVS cabinets that were already procured by Subcontractor. The backdrop was that it had become clear that the installed LVS cabinets had to be modified and reinstalled to achieve selectivity.

(609) Engineering Transmittal No. 00149 triggered further discussions between the Parties concerning the engineering responsibility for the LVS cabinets, especially regarding verification of selectivity. The discussions also concerned the responsibility for determining feasible solutions to modify the LVS cabinets to resolve the selectivity issue.

(610) Subcontractor considered the modifications and reinstallation that had to be carried out for the LVS cabinets to constitute a Variation, and on 19 April 2021 Subcontractor issued VOR 40. On 30 April 2021, Subcontractor issued final shop drawings for the modifications of the LVS cabinets.

(611) On 3 August 2021, Contractor rejected VOR 40 by issuing DVO 20.

9.1.4 Outline of the key questions to be determined by the Tribunal

(612) As elaborated on below, the key disagreement between the Parties concerning VOR 40 is whether the engineering issues and the associated rework carried out in 2020 and

2021 after installation of the LVS Panel Boards were due to deficient or incomplete engineering on the part of Contractor or Subcontractor.

(613) If the Tribunal concludes that the engineering issues were not a part of Subcontractor's scope of work, there is no deficient or incomplete engineering on the part of Subcontractor, and hence, VOR 40 may constitute a Variation. On the other hand, if the Tribunal concludes that the engineering issues, for example, the lack of selectivity, were a part of Subcontractor's scope of work, VOR 40 will not constitute a Variation.

9.2 Subcontractor's submissions

9.2.1 Subcontractor's claim

(614) Subcontractor claims 162 days of EoT, EoT-costs of EUR 1,275,399.47, direct costs of EUR 5,471,750.81, and costs for preparing the claim of EUR 39,550.

9.2.2 Contractor/AI were responsible for detailed engineering and Subcontractor's engineering responsibilities during procurement and construction were limited to providing shop drawings

(615) The two arguments in the heading are addressed above in section 8.3 concerning the responsibility for detailed engineering. Because section 8.3 concerns the responsibility for detailed engineering in general, without elaborating on the selectivity issue, the Tribunal finds it appropriate to set out how Subcontractor has elaborated on the two arguments regarding VOR 40 and selectivity.

(616) A key argument for Subcontractor's position that VOR 40 constitutes a Variation is that Subcontractor was not responsible for providing detailed engineering but only for providing/forwarding shop drawings and providing certain assistance to Contractor in preparing EPE. Hence, Subcontractor holds that Contractor/AI was responsible for the detailed engineering of the RS. The detailed design should have been performed during the design phase.

(617) More specifically, in the context of VOR 40, EPE should have been complete and included all necessary details for Subcontractor to proceed with procurement and installation, including but not limited to selectivity. Hence, Contractor's/AI's engineering obligations did not end in the design phase by providing the EPE. Contractor/AI was responsible for performing engineering activities during all project phases.

(618) By contrast, Subcontractor had no responsibility to verify the feasibility of Contractor's/AI's design and engineering set out in the EPE. During procurement, Subcontractor had no other engineering obligations than submitting shop drawings for Contractor's/AI's information so that they could progress with the design and detailed engineering. Hence, Subcontractor could contact suppliers based on the detailed design set out in EPE. Subcontractor was only obliged to procure equipment that fulfilled the functional requirements set out by Contractor in EPE. Engineering activities during procurement, as described in ITT documents, were not subcontracted to Subcontractor. After installation, Subcontractor merely provided red markups identifying the exact positioning of installation data and forwarded them to Contractor/AI for incorporation into its design.

(619) The Parties agreed that the design would be "open", i.e. not linked to a specific brand or supplier. The latter, however, has no bearing on VOR 40. Open design is about having the freedom to choose manufacturers, which in turn shall fulfil the design requirements. Hence, an open design is fully compatible with Contractor being responsible for detailed engineering, including selectivity.

9.2.3 Contractor's detailed engineering responsibilities included selectivity

(620) Contractor/AI's responsibility for detailed engineering included calculating and verifying selectivity in the original design. Contractor/AI were also responsible for assuring that selectivity was fulfilled for the engineering changes made during project execution.

(621) Contractor/AI's original design of July 2018 did not comply with selectivity requirements. Contractor/AI attempted to rectify the lack of selectivity in the design in 2019/2020 but failed to do so. Contractor/AI's changed design in 2020 and 2021 did not meet selectivity requirements.

(622) Subcontractor was blindfolded by Contractor about the changes performed by Contractor after the procurement and installation of the LVS cabinets. Contractor did not reveal anything about the selectivity discussions between Contractor/AI that took place after procurement was finalized from July 2019 to May 2020. Contractor revealed in R3 that they had had extensive discussions with Bane NOR about the lack of selectivity in LVS in 2019 and 2020. Despite being held responsible for selectivity, Subcontractor was still unaware of the content of these discussions.

9.2.4 *Subcontractor holds that (other) subsequent events support its contractual understanding.*

(623) As addressed above in 8.1 regarding the responsibility for detailed engineering in general, Subcontractor argues that subsequent events confirm Subcontractor's understanding. Here, it is sufficient to point out the submissions regarding subsequent events concerning VOR 40.

(624) Subcontractor argues that AI's issuance of the Declaration of Conformity on 03.04.2020 proves Contractor's/AI's responsibility for the detailed and all required engineering for the RS, including selectivity.

(625) Contractor's argument that engineering was split into a general design in the design stage, which was Contractor's responsibility, and a detailed design and detailed engineering during procurement and construction, being Subcontractor's responsibility, has no basis. This is merely an attempt to carve out its own engineering responsibility. Contractor/AI de facto carried out all engineering, including detailed engineering. For example, Contractor conducted a long-lasting meeting series with Bane NOR on detailed engineering without Subcontractor's participation or knowledge. Contractor and AI also repeatedly confirmed their responsibility for detailed engineering towards Bane NOR.

(626) Furthermore, Contractor mismanaged the project by providing conflicting messages to the Company and Contractor's (sub)contractors, thereby neglecting its responsibility to coordinate interfaces. Contractor carried out the overall coordination responsibility but lacked expertise in coordinating and managing their subcontractors, with the consequence that some issues, such as the lack of selectivity, were not revealed in a timely manner.

(627) The fact that Contractor/AI carried out selectivity studies in several rounds proves that Contractor considered itself responsible for detailed engineering, including selectivity. Contractor's comprehensive correspondence with Bane NOR confirms the latter. Subcontractor was unaware of these communications and was not requested to participate or perform selectivity assessments.

(628) Subcontractor has consistently had the same understanding of the engineering responsibilities - from the tender phase, throughout the project, and up until this arbitration case.

9.2.5 *The numerous engineering changes related to EPE represents Variations under VOR 40*

(629) Contractor carries the full responsibility for the numerous engineering changes related to the EPE. Subcontractor's deliverables caused none of the engineering changes related to VOR 40. Hence, there were no errors with Subcontractor's procurement or equipment related to the LVS cabinets. Instead, the changes were only caused by errors and late changes in the engineering provided by Contractor/AI, which made numerous changes in the SLDs after installation of the LVS panel boards, *inter alia*, by the late introduction of new LV consumers (e.g. motorized doors and HVAC). This represented significant changes in power consumers and an increase in power demand. Despite Subcontractor's warnings before procurement and installation, the original design lacked selectivity.

(630) Contractor/AI was responsible for issuing a complete, detailed design for the LVS panel boards, which should have been ready for Subcontractor to proceed directly with procurement, installation, and commissioning. The number of late changes to the SLDs included in EPE shows that the original SLDs were either incomplete or deficient when EPE was issued in July 2018.

9.2.6 *Subcontractor has complied with Art 6 of the CoC*

(631) Contractor's assertion that Subcontractor's notice of lack of selectivity was not submitted as required under Art 6 and 36 of the CoC is wrong. Article 6 of the CoC sets out a duty to search for errors in Part I documents. EPE is not included in Part I documents. Hence, Art 6 does not apply to EPE. Subcontractor has no general duty to search for errors in documents beyond the scope of Art 6.

(632) In any event, the Parties did not practice providing the designated representative with all notices in the project under Art 36, cf. Art 3. There is no general rule that a notification is regarded as not submitted if not submitted to the party's representative under Art 3.

(633) Subcontractor continuously searched for inconsistencies and notified of errors discovered throughout the project, despite EPE not forming Part 1 documents under Art 6 of the CoC.

9.2.7 *VOR 40 also includes works related to control and monitoring of the ventilation system*

(634) VOR 40 also includes works related to implementing new signals for the control and monitoring of the ventilation system within Subcontractor's main PLCs. This includes programming the operational logic for the control and monitoring of the ventilation system, and testing such signals (SIT and SAT).

(635) Subcontractor rejects that control and monitoring of the ventilation system is a part of their SCADA scope. Control and monitoring of the ventilation system is outside Subcontractor's scope of work under the Contract, cf. Appendix F to the Contract, Battery Limits, Art 5.2.11.5 of Appendix A, Appendix E Doc LVS UOS-00-A-91157. EPE supports this.

(636) If the Tribunal finds that control and monitoring of the ventilation system is a part of Subcontractor's scope of work, Subcontractor holds that the said works in VOR 40 related to control and monitoring of the ventilation system represents a Variation because it was a result of changes in the EPE.

9.2.8 *Contractor's rejection of VOR 40 represents a misuse of the VO- system*

(637) Contractor announced on 29.06.2020 that they would issue a VO for the changes covered by VOR 40, issued on 19.04.2021. The DVO 20 was issued after 106 days from VOR 40, arguing that the VOR 40 was time-barred.

(638) Subcontractor holds that VOR 40 was presented on time. Contractor did not issue a VO or a DVO within the time limit, as they were obliged to, and did not issue a VO as promised.

(639) This misuse of the VO system and Contractor's lack of contribution to finding a workable solution have the effect that changes covered by VOR 40 must be considered a Variation entitling Subcontractor to extra time and cost compensation.

(640) Contractor's time-bar argument is lost because it was not presented within a reasonable time when presented in the DVO 106 days after the VOR 40, especially when the work had already started and was close to being completed and when the Contractor had explicitly promised to issue a VO for the work.

The rolling three-month analysis requirement under Art 13.3 of the CoC only applies to VOs, not VORs. Thus, it is not relevant to this claim.

9.2.9 *The limit to impose Variations under Art 12.1 of the CoC was exceeded before VOR 40*

(641) When the Variations covered by VOR 40 were imposed in the summer/autumn of 2020, this was long after the limit to impose variations had been exceeded under Art 12.1 of the CoC. The consequence is that the work under VOR 40 is to be considered additional work, and Subcontractor is entitled to cost and time consequences as claimed. In any case, the adjusted rates shall be applied as claimed.

9.2.10 *Article 2.2 of the CoC serves as an independent basis for EoT, and for the same reason Contractor cannot claim liquidated damages*

(642) Bane NOR has awarded Contractor EoT for the period covered by VOR 40. According to Art 2.2 of the CoC, Subcontractor is entitled to receive the benefits of such entitlements. Hence, the Subcontractor is entitled to an EoT as claimed.

Since Bane NOR did not claim liquidated damages for this period, Contractor is not entitled to claim liquidated damages from the Subcontractor.

9.2.11 *The costs are sufficiently documented*

(643) Subcontractor's direct cost for the work covered by VOR 40 amounts to EUR 5 471 750,81. In addition, Subcontractor claims EUR 39 550 in preparation costs and EUR 643 980,45 in other management costs.

(644) The costs are sufficiently substantiated and documented and in compliance with the contractual requirements in Art 13.2, 20.2 and Appendix B. When Contractor has not issued a DVO within a reasonable time and has not demanded reimbursable work when the work was performed, the consequence must be that Subcontractor is entitled to payment as claimed. The principles of loyalty impose a burden to react, and the consequence of breach also implies that Subcontractor shall be entitled as claimed.

(645) Further, the consequence of being late must be that an argument on lack of documentation is lost since the (sub)contractor's possibility to defend against the allegations is limited.

(646) The consequence of lack of documentation is nevertheless not full loss. The consequence must be that Subcontractor is entitled to payment based on a "common price" or alternatively what Contractor "must have understood", cf. the principle used for the day rate in LH-2020-131143.

(647) The final account includes sufficient documentation of the claims covered by VOR 40 in accordance with Art 20.4 of the CoC. The time-bar provision in Art 20.4 only refers to "claims" not being included, not the documentation. The provision must be interpreted based on the aim which is to clarify which claims are disputed and the related amount. Documentation may be a reason to object to a claim, but not to preclude a claim that is presented and not to preclude the final account as such.

(648) The arbitration process was nevertheless initiated for VOR 40 before the time limit in Art 20.4 of the CoC and can therefore not be precluded.

9.3 Contractor's submissions

9.3.1 The selectivity issues arose because Subcontractor did not fulfill its detailed engineering scope

(649) Contractor holds that VOR 40 does not constitute a Variation because the defects to the LVS installations due to lack of selectivity resulted from Subcontractor not performing the detailed engineering included in its scope of work.

(650) The Parties agree that selectivity was part of the detailed engineering. As addressed above in 8.2, Contractor holds that Subcontractor was responsible for detailed engineering. Because section 8.2 concerns the responsibility for detailed engineering in general, without going into the selectivity issue, which is contested regarding VOR 40, the Tribunal finds it appropriate to address how Subcontractor has elaborated the argument in respect of VOR 40 and selectivity.

(651) Contractor holds that it follows from Subcontractor's contract obligations that Subcontractor was responsible for detailed engineering, including selectivity verification. The contract does not explicitly set out which party was responsible for performing the final selectivity verification of the LVS system. However, it was agreed that the RS's general design should be open and that Subcontractor had a fit-for-purpose obligation, cf. section 1.4 of Appendix A. It is not possible to verify selectivity as part of the general design when this is agreed to be brand-free or open. Subcontractor

has never argued that it was an error or a breach that EPE contained a brand-free or open design with assumptions.

(652) Concerning the contractual requirements relevant for selectivity related to the LVS system, Contractor has argued, in addition to the submissions under 8.2 above regarding detailed engineering, that it follows from Art 5.2.11 and 5.2.11.5 of Appendix A (FA8 p. 61 and 63) regarding Subcontractor's LVS scope, that Subcontractor was responsible for providing a fit-for-purpose LVS system, and that selectivity is essential to ensure that the system functions as foreseen. Further, Contractor refers to the functional requirements for the IPS and LVS scope in Appendix E Part I Documents (FA8 p. 550 and p. 563) and to Bane NOR Technical Regulations (TR) incorporated in Appendix E (FA8 p. 690 (692)). The TR sets out the selectivity criteria, cf. section 2.1. Contractor further refers to Appendix F, Battery Limits LVS "Remarks" (FA8 p. 743), which states: "Low Voltage Distribution Boards will be designed and built to deliver the needed power to the systems described in the ITT EPC TBM Revision 11." Contractor also holds that safety requirements achieved through selectivity are set out in Norwegian regulations for electrical installations that apply to Subcontractor's contractual scope of work when signing the DoC for the installation, cf. "Forskrift om elektriske lavspenningsanlegg (FEL) § 12, § 16 and chapter V on Safety Measures (RLA1 p. 13-14). In this respect, reference is also made to NEK 400:18 section 536 (RLA1 p. 71 on p. 299-304), which sets out guidelines on selectivity based on international electrical standards applicable when Subcontractor performed its procurement.

(653) There is no general industry practice in Norway regarding who performs the selectivity calculations. As an expert witness, Dr. Nigel Bish explained that no industry practices exist for "overengineering" or oversizing the circuit breakers during the general design, making selectivity calculations unnecessary during detailed engineering.

(654) Subcontractor did not submit notice on errors in the design regarding selectivity during the general design phase. Selectivity verifications are so closely linked to procurement that the most accurate label is "procurement engineering," which needs to be performed based on EPE. Such procurement engineering is part of Subcontractor's detailed engineering responsibility, cf. section 1.4 and section 3.1, first paragraph of Appendix A. The Contract does not set out a system for providing Contractor with information on procured items for further detailed engineering and selectivity verifications.

(655) The general design in EPE contained assumptions for values. If Subcontractor had conducted a prudent procurement process and done the necessary detailed engineering and selectivity verification in particular, then the general design in EPE could have been implemented correctly.

(656) Contractor holds that Subcontractor negligently failed to perform necessary detail engineering, i.e. selectivity verification, before finalizing procurement and installation of the LVS system. Subcontractor should have either performed necessary detail engineering during procurement or subcontracted the detail engineering to the manufacturer. Either way, Subcontractor should have ensured proper coordination of all subsupply contracts. Subcontractor should also have provided a Technical Office on site according to Appendix D, Administration Requirements, Attachment 3 (FA 8 p. 142).

(657) Subcontractor's procurement process for the LVS panel boards was negligently conducted. Laugstol's offer was based on complete LVS documentation in EPE. There are several examples of Laugstol requesting clarification regarding selectivity from Subcontractor, cf. Kick-Off Meeting for procurement of panelboards of 13 February 2019, item 5 (FA25 p. 1845) and Technical Query ("TQ") dated 15 January 2019 (FA24 p. 5077). Laugstol also requested clarifications regarding assumptions in the design for permanent mechanical equipment in the TQ, cf. TQ item 21, dated 11 January 2019, and TQ item 23, dated 15 February 2019 (FA24 p. 5103). Subcontractor chose to proceed with manufacturing panel boards before receiving clarifications from Contractor regarding PME contractors. The comments from Laugstol in the TQs do not imply that it was possible to do selectivity verification during General design and/or that there was an error or mistake in the General Design.

(658) Shop drawings for the LVS should have been prepared based on a selectivity verification to ensure a fit-for-purpose solution. Failing to do so is a failure in Subcontractor's detail engineering. Subcontractor should have assessed the validity of the assumptions for the power supply included in EPE, both infeed and output values, verified selectivity, and performed selectivity calculations.

(659) Regarding the Parties' discussions regarding selectivity in February 2019, Contractor rejects Subcontractor's argument that because Subcontractor shared Technical Documentation and preliminary shop drawings with Contractor, Contractor should

have performed detailed engineering. Contractor holds that they acted according to their understanding that selectivity was the Subcontractor's responsibility and that the communication at the time did not give Contractor reason to act otherwise.

(660) Contractor further rejects Subcontractor's argument that documents related to Contractor's handling of the selectivity question from summer 2019 to TT 149, dated 2 September 2020, show that Contractor acknowledged that the defects in the installation of LVS panel boards were Contractor's risk.

(661) Contractor holds that Contractor's handling of the selectivity question is irrelevant. Ensuring selectivity in the installation was Subcontractor's scope of work and risk according to the Contract. Contractor could have waited until mechanical completion to punch the mistakes in the installation. That it took time for Contractor to uncover the liability for the defects does not release Subcontractor from its obligations according to the Contract. Bane NOR's insistence and Subcontractor contractually erroneous position led Contractor to investigate the root cause of the defects itself. Subcontractor's contractually erroneous position contributed to Contractor's belief that the defects could be the fault of AI. Contractor's issue of TT 149 was done to avoid further delays. Contractor's support was necessary following the issuance of TT 149 because of Subcontractor's misgiving regarding selectivity criteria (i.e. total selectivity). Contractor emphasized that Subcontractor was responsible for implementing the design in TT 149 as it saw fit to achieve a fit-for-purpose solution.

(662) Contractor argues that Subcontractor was slow in executing Contractor's rectifications to Subcontractor's detailed engineering following TT 149. TT 149 was issued to Subcontractor on 2 September 2020, but Subcontractor did not start the LVS modification works before April 2021. Subcontractor apparently refused to carry out the works because Subcontractor requested more information from Contractor, cf. e.g. Subcontractor's letter of 26 November 2020 (FA11 p. 332). However, Subcontractor, as of the issuance of TT 149 in September 2020, had the information it needed to proceed. It was not up to Contractor to decide on the alternative ways forward that Subcontractor assessed together with Laugstol. The transmittals received after TT 149 did not prevent Subcontractor from proceeding with the LVS works and were (mostly) not even relevant for VOR 40. The information requested by Subcontractor in the period after September 2020 was not a prerequisite for the commencement of the works.

9.3.2 *Alternative line of argument: Subcontractor has not complied with Art 6 of the CoC*

(663) Under the assumption that Subcontractor was not responsible for detailed engineering, Contractor pleads that Subcontractor has not complied with Art 6 of the CoC and therefore, the costs claimed under VOR 40 are their own risk.

(664) Article 6.1 of the CoC requires Subcontractor to continuously review Contractor's documents as soon as they are received. Article 6 applies to engineering documents developed based on Part I documents. The wording on the obligation to "immediately and continuously" review documents upon receipt supports that Art 6 applies to all engineering documents transmitted from Contractor to Subcontractor throughout the project. This interpretation is supported by legal theory, cf. Kaasen, Tilvirkningskontrakter pages 165–167.

(665) Subcontractor and Contractor have consistently assumed that Art 6 applies to engineering documents prepared based on the original engineering documents in Appendix E Part 1. Subcontractor's correspondence throughout the project also confirms that the Parties understood that Subcontractor's obligation under Art 6 applied to design documents issued after the contract signature. Also, the position taken by Subcontractor in the dispute demonstrates the Parties` joint understanding that Art 6 also applies to engineering documents that were prepared based on the original engineering documents in Appendix E Part 1.

(666) If the review obligation in Art 6 only applied to the original Appendix E Part I engineering documents, the provision would hold minimal or no distinct significance in the Contract. Coherence and consistency considerations between the provisions of the contract support this view.

(667) It follows from Art 6.3 that if Subcontractor does not notify of errors discovered or errors they ought to have discovered under such review without undue delay, then all costs related to later rectifying the error are Subcontractor's costs. Such notification must be submitted in writing to Contractor's representative under Art 3, cf. Art 36 of CoC.

(668) Furthermore, it follows from Art 6.4 that Subcontractor cannot proceed unless Contractor has made necessary corrections or has instructed Subcontractor on how to proceed.

(669) Subcontractor did not notify Contractor's representative of a selectivity error in accordance with Art 6.3 of the CoC, cf. Art 36 and 3, and Subcontractor's representative never received any written instruction from Contractor to proceed with building the panel boards as they were originally built.

(670) Hence, Subcontractor has not complied with the review obligations under Art 6 of the CoC and must carry any extra costs incurred due to document errors.

9.3.3 VOR 40 is limited to defects to the installation of LVS panel boards due to lack of selectivity and alleged changes in TT 149, and does not include controlling and monitoring of the tunnel ventilation equipment

(671) Contractor further holds that VOR 40 concerns and is limited to the selectivity issue and revisions to SLDs included in TT 149, i.e. cross passages, as well as the technical room at Åsland and Vevelstad. Only engineering transmittals addressing these SLDs – to the extent they are not covered by other VORs, could, therefore, be considered under VOR 40.

(672) Contractor rejects Subcontractor's argument that controlling and monitoring the tunnel ventilation equipment was a Variation to the Work included in VOR 40. Contractor holds that this was part of Subcontractor's SCADA scope and also outside the scope of VOR 40. Contractor was unaware that this was part of Subcontractor's submissions under VOR 40 before the presentation in the Hearing.

9.3.4 The claim under VOR 40 is time-barred based on Art 16.1 of CoC.

(673) Under Art 16.1 of CoC, a VOR must be issued "without undue delay". If this deadline is not complied with, then the subcontractor "loses the right to claim that the work is a Variation to the Work".

(674) According to Subcontractor, the work that prompted VOR 40 was imposed or instructed in the summer/autumn of 2020. Subcontractor issued VOR 40 on 19 April 2021, 8-9 months after the alleged instruction. This is not in accordance with the deadline "without undue delay" in Art 16.1.

(675) The limit to impose variations under the third paragraph of Art 12.1 of CoC was not exceeded in the project.

9.3.5 The claim under VOR 40 is time-barred due to non-compliance with the final account regulations in Art 20.4

(676) According to Art 20.4 of CoC, the proposal for the Final Account shall "contain documentation relating to each item included in the breakdown." Subcontractor submitted the proposal for the Final Account on 12 January 2023 and did not include documentation for VOR 40 or any other claim.

(677) Contractor requested Subcontractor to provide all relevant documentation within 15 days of receipt of Contractor's letter of 8 March 2023, pursuant to Art 20.4, first paragraph. Still, Subcontractor failed to deliver a proposal for the Final Account within the deadline in accordance with the documentation requirements. The consequence is that the claims are lost.

(678) There are no exceptions in Art 20 for claims submitted to arbitration.

9.3.6 Calculation of claim if Subcontractor is entitled to compensation

(679) If the Tribunal finds that VOR 40 represents a Variation, Contractor generally agrees with the HKA expert report regarding Subcontractor's calculation of direct costs regarding changes to the panel boards. HKA advises that EUR 225 491 and NOK 28 461 658 should be considered regarding compensation for these changes. However, Contractor holds that more of the OneCo invoices should be disregarded. The total should, therefore, be less than the amount calculated by HKA. Furthermore, Contractor holds that Subcontractor likely chose a solution more costly than necessary to ensure selectivity in the system – replacing all UP panels and increasing the size of all MP panels. The total amount should, therefore, be less than the HKA calculation.

(680) If the Tribunal finds that VOR 40 is a Variation, the costs for the PME changes are included in the direct costs described above. If the Tribunal finds that VOR 40 does not represent a Variation, i.e. that it was in Subcontractor's scope to perform selectivity calculation, Contractor has accepted to compensate Subcontractor for changes to the PME scope, provided the claim is not time-barred.

(681) Under the same assumption—that the Contractor prevails in the detail engineering question—the Contractor holds that the Subcontractor has been compensated for all effects of VOs from Bane NOR in LVS scope through other VOs.

(682) Subcontractor's claim for additional management resources due to mitigation, EUR 643 980,45, represents 23 weeks of full-time work for 7 individuals. No contemporaneous records are presented to support that these individuals carried out work related to VOR 40. The same individuals are included in Subcontractor's claim for prolongation costs. Subcontractor cannot claim additional management resources for performing contract scope under VOR 40. The mitigation was for the entire contract scope, and there is no explanation in Subcontractor's claim of how this is considered when allocating costs.

(683) Subcontractor's claim for EUR 39 550 in preparation costs has not been documented and seems disproportionally high. Kroll and HKA do not acknowledge the costs.

9.4 The Tribunal's assessment of disputed matter I: Selectivity

9.4.1 Does an objective interpretation provide an answer to the disputed matter of selectivity?

(684) Subcontractor has submitted numerous arguments that the selectivity issues set out in VOR 40 constitute a Variation. The arguments based on an objective interpretation basically reflect Subcontractor's submissions that it is not responsible for providing detailed engineering under the Contract, where the key arguments rely on the Battery Limits in Appendix F: Contractor shall provide a complete EPE valid for construction, and Contractor's/AI's engineering scope include engineering activities during all phases, including integration engineering and follow-up engineering.

(685) In section 8.3.6 above, the Tribunal concluded that Subcontractor shall provide detailed engineering. On this basis, a key question to be determined by the Tribunal is whether Subcontractor's obligation to provide detailed engineering includes selectivity.

(686) The first question is whether an objective interpretation of the Contract provides an answer to whether Subcontractor's obligation to provide detailed engineering included selectivity studies or verification of selectivity studies provided by Contractor/AI.

(687) The most comprehensive regulation of "Engineering" in the Contract is set out in Art 3 of Appendix A, and the most explicit regulation of Contractor's obligation to provide "general engineering" and Subcontractor's obligation to provide "detailed engineering" is set out in Art 3.1. Article 3.1 (first paragraph) reads (Tribunal's emphasis):

> "[1] Contractor shall provide the general engineering to the project including integration responsibilities, adapting the information to the Client's needs. Subcontractor shall

provide the *detail* and *construction* engineering *based on* the *design* of the following *main* items:

Engineering Package E

As built drawings and documentation for operation (DFO)"

(688) The *first* sentence explicitly and clearly distinguishes between general design/engineering and "detail and construction engineering". As indicated above in section 8.3.7, there is no firm distinction between general and detailed engineering; the distinction normally concerns the *level* of detail. The second sentence, however, provides guidance on how to distinguish in the present Contract between the "general engineering" to be provided by Contractor and the "detailed engineering" to be provided by Subcontractor: The latter shall be "based on the design" in the EPE.

(689) The Tribunal considers the phrase "based on" to provide significant guidance. The most sensible understanding is that Subcontractor was to carry out and add the required detailed engineering, which has three important implications. First, Subcontractor could not expect the EPE to include the required detailed engineering. Second and for the same reason, Subcontractor could not consider the EPE "ready" to proceed straight to procurement and installation. Subcontractor was responsible for adding the required detailed engineering to bring the "general engineering" provided in the EPE to a level of detail ready for construction. The latter is supported by the term "detail *and* construction engineering" (Tribunal's emphasis), which entails that it was up to Subcontractor to ensure that the final detailed engineering – "based on" the EPE – resulted in a complete, scrutinized and robust design to which Subcontractor's scope of work could be performed.

(690) When the latter is read in conjunction with Subcontractor's obligation to provide procurement as per Art 1.4 and Art 4 in Appendix A of the Contract, which is not contested, the Tribunal considers Subcontractor to be responsible for ensuring that Subcontractor's procurement was based on the required detailed engineering. When Subcontractor was responsible for providing the relevant "systems, equipment and materials" as per Art 1.4, it must also be considered responsible for carrying out the required detailed engineering required to select and procure the same "systems, equipment and materials". The latter also sits well with Subcontractor's responsibility to provide "construction engineering" as there is no clear distinction between detailed engineering, procurement and construction engineering. For example, procurement of

equipment and components meeting the functional requirements in the Contract, including the functional requirements that the equipment and components shall work as an integrated whole, is dependent on proper detailed engineering.

(691) The Tribunal finds the above considerations to have a strong bearing on the contested matter of verification of selectivity. As a clear starting point, Subcontractor could not assume that the EPE provided by Contractor *already* contained the required level of detailed engineering regarding, for example, selectivity. Hence, as a part of the obligation to provide detailed engineering, it was up to Subcontractor to ensure that the equipment and components to be selected and procured by Subcontractor would meet the selectivity requirements.

(692) Based on an objective interpretation of Art 3, Art 1.4, and Art 4 in Appendix A of the Contract, the conclusion so far is that it was up to Subcontractor to provide the required detailed engineering regarding selectivity or to verify that the selectivity engineering in the EPE met the functional requirements in the Contract.

(693) The next question is whether other provisions in the Contract provide a different understanding of the responsibility for selectivity than what follows from an objective interpretation of Art 3.1, Art 1.4, and Art 4 in Appendix A of the Contract.

(694) Contractor refers to Art 3.6 in Appendix A in support of Subcontractor asserted responsibility for selectivity, and reference is made to, *inter alia*, Subcontractor's obligation to cooperate with Contractor to achieve "compatibility of all systems" and to "avoid interface problems". The Tribunal cannot, however, see that Subcontractor's obligations under Art 3.6, which are highly general, have any particular bearing on selectivity and engineering. By contrast, engineering is comprehensively governed in Art 3.1. Therefore, even though selectivity might be considered a kind of interface management, it seems strained in the present context to consider lack of selectivity engineering as a matter of lack of "compatibility" or "interface" issue.

(695) Contractor also relies on Art 5.2.11.5 in Appendix A of the Contract in support of its interpretation, in which the relevant part reads:

> "Provide a LVS, including distribution substations, including distribution capable of providing sufficient power for all such requirements. This shall include; ventilation, railway signalling, telecoms (as a right of first refusal and according to Appendix G section 2.9 Management of Frame Agreements), illuminations/lighting, control regulations and monitoring systems (SRO), emergency lighting, etc."

(696) The Tribunal considers the provision to be too broad and general to provide any particular or additional guidance on the distribution of engineering responsibilities regarding selectivity, in addition to the comprehensive regulation of engineering in Art 3.1 in the same Appendix A.

(697) The Tribunal concluded above in section 8.3.2.3 that it is difficult to see that whether the design was "open" (or not) is, in general, very relevant for determining the responsibility for the detailed engineering. However, based on the Tribunal's conclusion that Subcontractor *is* obliged to provide detailed engineering, the open design has some relevance for the responsibility to verify selectivity. The last paragraph in Art 3.1 of Appendix A in the Contract clearly presupposes that the starting point was an "open design". To the extent Subcontractor had the freedom selecting brands/manufacturers meeting the selectivity requirements, it would be awkward if the freedom did not correspond with a responsibility to verify that the selected equipment from the relevant brands/manufacturers *did* meet the selectivity requirements – both per item and as a part of the system as an integrated whole. Otherwise, there would be a gap between the general engineering provided by Contractor and the detailed engineering and procurement provided by Subcontractor.

(698) Hence, the open design supports that Subcontractor could not merely assume that the EPE included the required detailed engineering regarding selectivity. Furthermore, based on the Tribunal's understanding that it was up to Subcontractor to ensure that the final engineering – "based on" the EPE – resulted in a complete, scrutinized and robust design, Subcontractor could not assume that the selectivity analysis to be provided as a part of the EPE would be more than conceptual. As demonstrated below in section 9.4.4 the conceptual nature was subsequently confirmed by the numerous "assumptions" and generic character of Contractor's selectivity analyses provided as a part of EPE.

(699) Contractor asserts that its interpretation is supported by the Battery Limits in Appendix F of the Contract, and reference is made to the following text (FA8 p. 743): "Low Voltage Distribution Boards will be designed and built to deliver the needed power to the systems described in the ITT EPC TBM Revision 11." The latter clearly indicates that the Low Voltage Distribution Boards were to be "designed and built" by Subcontractor. That the Low Voltage Distribution Boards were not only to be built but also to be "designed" by Subcontractor sits well with Subcontractor's responsibility for detailed

engineering, but it seems to go a step further to also include a responsibility to provide the design/general engineering of the Low Voltage Distribution Boards. The latter may be understood to entail that Subcontractor, at the time of the Contract, could not expect the EPE to include any design (or general engineering) of the Low Voltage Distribution Boards. However, the brief and vague wording of the Battery Limits makes it difficult for the Tribunal to draw firm conclusions. In any case, the quoted Battery Limits do not explicitly mention selectivity.

(700) Furthermore, Contractor argues that the said reference to the "ITT EPC TBM Revision 11" entails that Subcontractor undertook to design and build the Low Voltage Distribution Boards according to the requirements set out in ITT v. 11. The latter tender is included in the same Appendix F and expressly refers to, *inter alia*, NEK 400 and the JBV Technical Regulations as "Design criteria" (FA8 p. 864). NEK 400:2018 (para 536), again, requires selectivity. Contractor has also pointed out that Appendix E refers to the JBV Technical Regulations (FA8 p. 565) and the applicable Norwegian regulations set out in "forskrift om elektriske lavspenningsanlegg" (FEL). Based on the said chain of references to, *inter alia*, NEK 400, Contractor asserts that Appendix F, particularly the tailor-made Battery Limits, incorporates an obligation for Subcontractor to carry out and/or verify the required detailed engineering to meet the selectivity requirements.

(701) The quoted Battery Limits in Appendix F explicitly refer to the design and construction of the Low Voltage Distribution Boards, which again goes to the core of the contested matter of selectivity. The Tribunal, however, cannot see that there are any explicit references to selectivity requirements in the quoted Battery Limits in Appendix F. It merely includes a general reference to the (numerous) requirements set out or referenced in ITT v. 11, of which many are not relevant for the Contract between Contractor and Subcontractor. The latter entails that the reference to ITT v. 11 cannot reasonably be understood to mean that all the requirements that might be inferred from ITT v. 11 constitute a part of Subcontractor's obligations under the Contract. For the same reason, the general reference to ITT v. 11 cannot be considered to provide explicit and firm guidance on the distribution of roles and responsibilities *between* Contractor and Subcontractor regarding selectivity. As demonstrated below in section 9.4.4, the latter is supported by the Parties' subsequent conduct, namely that the EPE contained a selectivity study. Having said that, when the quoted Battery Limits in Appendix F expressly state that Subcontractor shall "design and build," it may be read

to imply an obligation to design the Low Voltage Distribution Boards to meet the selectivity requirements. Hence, even though the quoted Battery Limits in Appendix F cannot be considered to provide a firm answer to the disputed matter, it must be considered to support what follows from an objective interpretation of Art 3.1 in Appendix A of the Contract.

(702) In its Supplemental Outline section 2.5.4, Subcontractor emphasizes that Selectivity is a part of Contractor/AI's engineering responsibilities according to the Main Contract and the DSA. The Tribunal cannot see that Contractor's responsibility to provide selectivity towards Company under the Main Contract has any bearing on whether Contractor or Subcontractor under the present *Contract* was responsible to provide or verify selectivity. Furthermore, as concluded above in section 8.3.3.4, the Tribunal cannot see that the DSA can be considered to have a bearing on the present matter as the Contract provides a comprehensive and tailored regulation of Subcontractor's obligation to provide, *inter alia*, detailed engineering. Furthermore, as set out above, verifying selectivity must be considered a part of the "detailed engineering" to be "based on" the EPE. Finally, and more importantly, that AI was to provide selectivity as a part of EPE – which Subcontractor's detailed engineering was to be "based on" – sits well with the Tribunal's understanding, namely that Subcontractor was to verify selectivity as a part of its detailed engineering.

(703) In its Supplemental Outline section 2.5.5, Subcontractor has pointed out that Subcontractor could not have been able to perform complete selectivity calculations on the LV installation, and that Contractor's use of different selectivity terms are misleading. The Tribunal cannot see that the first assertion regarding "complete selectivity calculations" has a bearing on an objective interpretation of the Contract. As set out above, based on an objective interpretation at the time of Contract, Subcontractor must be considered to be responsible to provide detailed engineering, including verification of selectivity. Whether or not such verification, after the Contract was entered into, could turn out to be difficult does not entail that Subcontractor responsibility to verify selectivity can be set aside or relaxed as a matter of interpretation. In any case, the Tribunal cannot see that Subcontractor has proven that it could not reasonably have verified the contested selectivity as a part of its detailed engineering. With regard to the contested terms of selectivity, the Tribunal cannot see that they have any bearing on the interpretation of the Contract in a context where the

regulation of detailed engineering does not use a particular term regarding selectivity. What is relevant for the Tribunal, based on an objective interpretation of the Contract, is not the selectivity terms used by the Parties after the Contract was entered into, but a functional approach to "selectivity" as per its understanding of "detailed engineering".

(704) Based on the above, the Tribunal *concludes* that it follows from an objective interpretation of the Contract that Subcontractor's obligation to provide detailed engineering included verification of selectivity.

9.4.2 Subsequent conduct – introduction

(705) The majority of Subcontractor's arguments regarding selectivity issues rely on subsequent events, mainly Contractor/AI's conduct after the time of the Contract.

(706) The question in the following is whether the Parties' subsequent conduct supports that the Parties, at the time of the Contract, agreed that selectivity was nevertheless to be provided and verified by Contractor/AI. Above in section 8.3.6, the tribunal concluded that Subcontractor shall provide detailed engineering. Furthermore, in section 9.4.1, the Tribunal concluded that it follows from an objective interpretation of the Contract that Subcontractor's obligation to provide detailed engineering included verification of selectivity. Hence, the burden of proof for the alleged deviating common understanding rests on Subcontractor.

(707) The Tribunal's understanding of the applicable legal tests to consider subsequent conduct is set out above in section 5.1. Concerning detailed engineering, the Tribunal concluded that an objective interpretation of the Contract explicitly and clearly provides that Subcontractor shall provide detailed engineering, which is also supported by contemporary evidence at the time of contract. The latter entails a heightened standard of proof for the alleged deviating common understanding. In the present context, however, the Tribunal cannot see that the contemporary evidence from the events leading up to the Contract enlightens the contested matter of selectivity, and the Contract cannot be considered to provide an explicit and clear answer to the contested matter of selectivity. Hence, no heightened standard of proof for the alleged deviating common understanding applies in the present context of selectivity. On this basis, the questions to be considered in the following is whether the presented evidence concerning the Parties' subsequent conduct concerning selectivity – at the balance of probability – demonstrate that the Parties, at the time of Contract, had the deviating

common understanding, typically where the Parties' conduct *clearly and consistently* indicated that they had the alleged common understanding.

(708) The time window invoked by Claimant regarding the Parties' subsequent conduct spans over a significant period, particularly 2019, 2020 and 2021; e.g. several years after the Contract was entered into. Before the Tribunal proceeds, it is therefore appropriate to provide three general remarks. *First*, subsequent conduct years after the time of a contract will normally be less relevant to determining the Parties' understanding at the time of the contract than subsequent conduct shortly after the time of the contract. Hence, in case of discrepancy between the Parties' conduct long after and shortly after the time of the contract, the latter should presumably prevail.

(709) *Second*, as set out above in section 5.1, the subsequent conduct of persons who were not involved in negotiating the contract will, fairly obviously, not automatically serve as an indication of what the Parties intended when the contract was entered into; their understanding of the contract will normally be arrived at in hindsight. For example, at the time of the Contract, AI was yet to be engaged by Contractor. For the same reason, AI's understanding is hardly relevant to determining Contractor's understanding at the time of the Contract.

(710) *Third*, the Parties' subsequent conduct after a matter became contentious will normally serve to facilitate their contractual and legal positions based on legal and tactical considerations after the contract was entered into. Hence, subsequent conduct after a matter has become contentious will rarely serve as trustworthy evidence of what the Parties intended when the contract was entered into.

9.4.3 Subsequent conduct - summary of Claimant's submissions

(711) As indicated, the majority of Subcontractor's arguments regarding selectivity issues rely on subsequent events, mainly Contractor/AI's conduct after the time of the Contract. Section 2.5.7 of the Claimant's Opening Statement Part 5 (Supplemental) is explicitly referenced as subsequent events. However, also several other sections include subsequent events; for example, section 2.4.2 ("EPE contained detailed engineering solutions ready for construction"), section 2.4.3 ("Declaration of Conformity of 03.04.2020 illustrates Contractor/AI's defective engineering"), section 2.4.4 ("The design changes issued by Contractor in Tr. 149 (Sept. 2020) and subsequently until April 2021 related to LVS are a result of Contractor/AI's defective engineering"), section 2.4.5

("Commercial discussions about liability for LVS changes and Subcontractor's compensation. Contractor accepted compensation for updated shop drawings needed because of the changes in SLDs on 07.02.2021), section 2.4.6 ("The Parties correspondence in April 2021 – leading up to issuance of VOR 40"), 2.4.8 ("Expert Reports by Dr. Bish show that increase in power demand was a reason for the modification of UPS, and that major changes were required following Transmittal 149"), section 2.5.3 ("AGJV's communications on selectivity with Bane NOR and AI was unknown to Elecnor"), section 2.5.6 ("AGJV/AI performed selectivity calculations and attempted to assure selectivity was maintained in the design").

(712) Section 2.5.6 provides an outline of the Parties' communication, and Claimant argues that (i) Contractor/AI performed, calculated, rectified and maintained selectivity during the project, (ii) Subcontractor did not perform any selectivity calculations or issued any selectivity report, and (iii) Subcontractor was "put on the hallway" – was not involved and had no knowledge on all the selectivity issues that arose. The arguments are based on evidence from three time windows set out below.

(713) Section 2.5.7 is, as indicated, dedicated merely to subsequent events regarding selectivity from May 2021 and onwards and is addressed below.

9.4.4 Subsequent conduct – Tribunal's assessment of the Design Manual and the EPE

(714) The question to be determined by the Tribunal is whether the Parties' subsequent conduct clearly and consistently indicates that the Parties, *at the time of Contract*, agreed or had a common understanding that selectivity was to be provided or verified by Contractor/AI. Based on Contractor's submissions, the Parties seem to agree that the design provided by Contractor (AI) as a part of EPE should include an analysis of selectivity. The Parties, however, disagree whether the selectivity analysis to be provided by Contractor should be ready for procurement and installation or whether the selectivity analysis to be provided by Contractor merely was general design to be further developed or verified by Subcontractor through detailed engineering. Subcontractor asserts that the Parties' subsequent conduct – contrary to what follows from an objective interpretation of the Contract – demonstrates that the Parties considered Contractor (AI) to be solely responsible for providing and verifying the selectivity analysis.

(715) As set out above in section 9.4.1 the Tribunal considers the phrase "based on" in Art 3.1 of Appendix A to provide significant guidance on how to distinguish in the present Contract between Contractor's "general engineering" and Subcontractor's "detailed engineering": The latter shall be "based on the design" in EPE. The reasonable understanding is that Subcontractor was to carry out and add the required detailed engineering to the general design to be provided in EPE, which has three important implications. First, Subcontractor could not expect the EPE to include the required detailed engineering. Second and for the same reason, Subcontractor could not consider the EPE "ready" to proceed straight to procurement and installation. Subcontractor was responsible for adding the required detailed engineering to bring the "general engineering" provided in EPE to a level of detail ready for construction, procurement and installation.

(716) A key question to be considered by the Tribunal in this context is how Contractor understood the distribution of engineering responsibilities before selectivity became a contested matter. In the following, the Tribunal will first consider the Design Manual and, thereafter, the EPE.

(717) The first question to be considered by the Tribunal is whether the selectivity matters included in the Design Manual indicated a different understanding of the distribution of engineering responsibilities than the one following from an objective interpretation. The Design Manual was first issued for review on 10 March 2016, shortly after the Contract was entered into and well before selectivity became a contested matter. The Design Manual was issued in several versions by Contractor and rev. 04E is dated 30 November 2017 (FA26 pp. 1185 f.). Section 2 ("Scope") states that it "describes he main requirements for the Low Voltage System (LVS)..." and "... Therefore, it consists of an overall description of: a) the LVS distribution along the tunnel and b) the general features of the main devices ...". The high-level approach is reiterated in section 4 ("LVS System Description") where it is, inter alia, stated that it provides "Design principles (Starting hypothesis, initial assumptions, safety factors, etc.), as well as description of calculation methods, software used and results overview are shown in next documents:
- UFB-30-A-65725 "Follobanen, Tunnel. LVS. Cable, Short circuit, Electrical selectivity calculation". for cables, Switchboards, UPS and any other relevant LVS devices (if required)."

(718) The Tribunal considers the Design Manual to clearly support that Contractor intended to provide general design, not detailed engineering. In particular, it should be noted that the Design Manual Rev. 04E referenced the document "UFB-30-A-65725 Follobanen, Tunnel. LVS. Cable, Short circuit, Electrical selectivity calculation", which explicitly addressed selectivity.

(719) The next question to be considered by the Tribunal is whether the EPE provided by Contractor/AI on 12 July 2018 indicated a different understanding. The EPE included a document with the same document number and heading as the document referenced in the Design Manual Rev. 04E: "UFB-30-A-65725 Follobanen, Tunnel. LVS. Cable, Short circuit, Electrical selectivity calculation". The version of the latter document included in the EPE (FA26 p. 1277) is Rev. 01E, dated 12 July 2018 (hereinafter referred to as the "Calculation Methods Rev. 01E"). Section 2 ("Introduction") states that "This document describes the *calculation methods* for the cable sizing, short-circuit assessment and electrical selectivity of the Low Voltage System (LVS) for the "Folloline Project, EPC TBM" (Tribunal's emphasis). The Tribunal understands the reference to "calculation methods", which are set out in the subsequent sections, to entail that the document was not intended to provide a comprehensive analysis of selectivity etc. It merely set out the calculation "*methods*" to be relied upon in the further engineering process. The latter is supported by section 3, which only outlines the applicable standards, and section 4, which only provides general remarks on cable sizing. Regarding the contested matter in the present case, it should be noted that section 4 mainly describes the method of "verifying" proper cable sizing. Section 5 concerning "short-circuit" is of a similar generic nature, but its preliminary nature is highlighted by referring to "initial assumptions" for the short-circuit calculations (section 5.3); for example, by stating in item 3 that "Load currents are neglected" and stating in item 4 that "Arc resistances are not taken into account". The functional and generic nature is also highlighted by sections 5.4 and 5.5, which merely set out the maximum and minimum short-circuit calculation, respectively. So far, the Calculation Methods Rev. 01E appears to be a typical example of general design and functional requirements because it does not include the level of detail expected in a document providing detailed engineering.

(720) Section 6 of the Calculation Methods Rev. 01E goes to the heart of the contested matter and reads "selectivity". Section 6 runs over slightly more than one page and provides an elementary and generic description of selectivity, in particular, the three main

techniques to achieve selectivity: "time-current", "current", and "time". The latter is in accordance with section 1 ("Introduction"); the document provides "calculation methods", not calculations. On the other hand, Section 7 reads "Calculations", which at the outset indicates that the methods above were applied to the present project by way of certain calculations *in casu*. When section 7 is read in conjunction with section 2, however, it mainly appears as examples of how to apply the calculation methods. The latter is evident with regard to the 400V Main Panelboard and the UP Panelboard on pages 1289-1290, where it is explicitly stated "TYPICAL" in brackets. The latter must be understood to mean that the Calculation Methods Rev. 01E provided the methods, including examples of calculations, to be relied on in the further engineering process. It did not include the detailed engineering required to make it ready for procurement and installation.

(721) On this basis, the Tribunal concludes that the level of detail in the Calculation Methods Rev. 01E must be considered general design, not detailed engineering. Thus, the detailed engineering was yet to be carried out. The fact that the EPE did not include detailed engineering of selectivity clearly supports that *Contractor*, at the time of the EPE, did not consider detailed engineering of selectivity to be a part of its responsibility, which sits well with the objective interpretation. Furthermore, the fact that the Calculation Methods Rev. 01E is dated 12 July 2018 provides contemporary evidence of how Contractor understood the distribution of engineering responsibilities well before selectivity became a contested matter.

(722) The above entails that Tribunal cannot agree with the submission set out in section 2.4.2 in Claimant's Opening Statement Part 5 (Supplemental): That the EPE of 13 July 2018 contained detailed engineering solutions "ready for construction". Reference is made to, *inter alia*, the SLD Rev. 04C (FA6 p. 2121). As stated above, however, the Calculation Methods Rev. 01E did not provide a finalized selectivity study; it merely provided the calculation "methods". The SLD Rev. 04C (FA6 p. 2121) was issued "for review", which cannot reasonably be understood as "ready for construction". The latter is also supported by Subcontractor's Purchase Procedure dated 8 February 2018, which states that (CB2-1 p. 323):

> These documents [purchase documentation] must be revised each time changes are made to the engineering. Special attention must be paid during the revisions of one-line diagrams and developed diagrams, since any change to such diagrams can involve significant modifications during the construction phase of the equipment.

(723) The quoted text clearly indicates that Subcontractor expected changes to the engineering, which could result in "significant modifications during the construction phase of the equipment".

(724) Subcontractor's subcontracts are also relevant in this respect. The subcontract with ABB dated 28 September 2018 clearly provides that ABB was to price and provide "engineering" towards Subcontractor (FA25 p. 1569), and section 5 in Annex 5 clearly indicates that Subcontractor considered itself to have certain engineering responsibilities (FA25 p. 1652, the Tribunal's emphasis):

> "ELECNOR, S.A. shall review all the technical documents provided by the SUPPLIER *during the engineering phase* in order to approve it and start the manufacturing of the equipment or, in case some clarification or more information will be needed, ELECNOR, S.A. must submit all comments or queries should be relevant to the SUPPLIER."

(725) More directly relevant for the contested matter of selectivity and panels is Subcontractor's subcontract with Laugstol. Laugstol's offer dated 22 November 2018 explicitly included hourly rates for engineering services, and it was stated that "As part of our engineering process we need access to PLCs from other suppliers to do integration testing" (FA25 p. 1732).

(726) Based on the above, the Tribunal concludes that the Parties' subsequent conduct – before the selectivity issues were revealed and became contested – *supports* the distribution of engineering responsibilities following an objective interpretation of the Contract.

9.4.5 *Subsequent conduct – the Tribunal's assessment of the subsequent conduct from 2019*

(727) As stated above, section 2.5.6 of Claimant's Opening Statement Part 5 (Supplemental) outlines the Parties' communication. Claimant argues that (i) Contractor/AI performed, calculated, rectified and maintained selectivity during the project, (ii) Subcontractor did not perform any selectivity calculations or issue any selectivity report, and (iii) Subcontractor was "put on the hallway" – was not involved and had no knowledge on all the selectivity issues that arose. The arguments are based on evidence from three-time windows.

(728) First, the period *January – February 2019*, where Subcontractor (Laugstol) raised concerns about the lack of selectivity and Contractor/AI confirmed that selectivity was considered. The Tribunal cannot see that the Parties' conduct in January – February

2019 shed light on the Parties' understanding at the time of the Contract. That Contractor involved AI regarding the selectivity issues is no surprise because Contractor did not have expertise in selectivity. More importantly, AI's involvement in responding to Laugstol's TQ cannot reasonably be understood to entail that Contractor considered itself or AI responsible for verifying selectivity. The most appropriate understanding of the correspondence (FA3 pp. 3298-3299) is that Contractor would like to rely on AI's expertise to address the concerns set out in Laugstol's TQ. Furthermore, Laugstol stated in the MoM of 13 February that "Selectivity of the whole plant is missing and must be controlled by FEB doc. (Norwegian program)" (FA6 p. 2815), and in an e-mail on the same date, Laugstol stated that "Selectivity has to do with short circuit current, not overload. Design for all cabinets has to be changed before production starts. A change after will require a complete new cabinet!!" (FA6 p. 3353). Based on these serious concerns raised by Laugstol, it would be more surprising if Contractor did not involve AI to address the issue to fulfill its evident selectivity obligations towards Bane NOR. In the present context, it should also be noted that a TQ is indeed a technical matter that should not easily be confused with the contractual understanding at the time of the Contract.

(729) On this basis, the most interesting part of the correspondence in this period is perhaps that AI 21 February 2019 stated that "In principle, Pepe has reviewed it and there is no lack of selectivity ... although it would be good if Eltek also approved it" (FA27 p. 3814). The latter statement from AI was far more reserved than asserted by Subcontractor under the Hearing, but it led to Laugstol's waiver: "will NOT be responsible" (FA6 p. 2698). From the latter, Subcontractor infers that they, on the basis of the said "design confirmation", could continue with fabrication and delivery of LVS cabinets pursuant to the original design, and on this basis, Subcontractor submitted shop drawings and the procurement of the LVC cabinets was finalized in July 2019 and installation finalized in March 2020.

(730) The Tribunal cannot follow the line of argument. Based on Subcontractor's responsibility to provide detailed engineering and verify selectivity, Subcontractor (and Laugstol) could not just consider the vague and reserved response from AI to be a "design confirmation" that selectivity was already verified by Contractor/AI. As indicated, AI's response merely stated the selectivity had "in principle" been reviewed", and at the same time, it was stated that preferably also Eltek should approve selectivity.

For the same reasons, Subcontractor cannot prevail with the argument that "Elecnor did not request Contractor to perform selectivity verification turns it upside down". More importantly, based on Laugstol's firm position that selectivity was not properly addressed in Contractor's general design, Subcontractor could not just proceed on the basis that selectivity was verified. Furthermore, it is expressly set out in Art 14.5 (fifth paragraph) in Appendix D of the Contract (FA8 p. 28) that:

> "The submissions of any documents by Subcontractor and the giving of not giving of any comments/approval thereto by Contractor (and other parties), shall in no way be construed as to relieve Subcontractor of any obligations, liabilities or responsibilities under the Subcontract."

(731) Subcontractor's approach, however, entailed that it considered itself relieved from the obligation to verify selectivity.

(732) Second, during July 2019 – May 2020, Bane NOR raised concerns about the lack of selectivity, which triggered "workshops" and several selectivity analyses by Contractor/AI. Subcontractor emphasizes that the correspondence regarding selectivity was between Contractor and AI only, and hence, that Subcontractor knew nothing about these selectivity assessments performed over a one-year period until late 2023. Reference is made to, *inter alia*, Contractor's notification to AI for lack of selectivity on 19 September 2019 (FA25 p. 1924), which cannot be aligned with Contractor's position that Subcontractor was responsible for verifying the selectivity. Subcontractor also refers to two examples where Contractor requested AI to fix the selectivity issues (FA25 pp. 1998-1999), that AI 26 November 2019 sent a selectivity report to Contractor for review (FA25 p. 2001), and correspondence between Contractor and AI in March 2020 demonstrating that AI performing selectivity calculations in Febdok (FA25 p. 2540). Furthermore, Subcontractor refers to the DoC issued by AI on 3 April 2020 (FA6 p. 4306) and questions how AI, while still verifying selectivity, could declare that LVS/IPS met the requirements. Reference is also made to Contractor's previous position that AI was responsible for the lack of selectivity, cf. the notice of defect to AI of 17 June 2020 (FA6 p. 4603) and the letter of 28 August 2020 (FA6 p. 4706).

(733) Generally, the Tribunal finds it difficult to infer the Parties' understanding of the distribution of engineering responsibilities at the time of the Contract from their discovery and subsequent handling of selectivity issues almost three years later. First and foremost, based on the Main Contract, it was clear that Contractor was responsible towards Bane NOR for detailed engineering, including selectivity. Therefore, and

because the selectivity issues could have a severe effect on the progress, the Tribunal finds it evident that Bane NOR expected Contractor, in the capacity of EPC-contractor, to be on the top of the events. Therefore, it is not surprising that Bane NOR held Contractor responsible for the selectivity issues and that Subcontractor was not directly involved in the communications between Bane NOR and Contractor. Based on its obligations towards Bane NOR and Bane NOR's persistence, Contractor had to be actively involved in the selectivity issues, regardless of whether Contractor had subcontracted detailed engineering and verification of selectivity to the Subcontractor.

(734) Subcontractor asserts that Contractor's notification to AI for lack of selectivity on 19 September 2019 (FA25 p. 1924) cannot be aligned with Contractor's position that Subcontractor was responsible for verifying selectivity. The Tribunal cannot, however, see that the said letter can be considered a notification of liability. It is correct that Contractor's Sun Weigo, the Completion Engineer, expressed deep concerns in respect of no selectivity for the emergency systems, but there are no indications that Contractor, by this e-mail, intended to hold AI responsible for not having verified the selectivity. The e-mail and its attachments are indeed of a technical and not of a legal nature.

(735) At the outset, the Tribunal is more puzzled about the fact that Contractor later, on 17 June 2020, made a formal notification of liability against AI under the DSA Art 25.2 for alleged lack of selectivity (FA6 p. 4603), cf. also the letter of 28 August 2020 (FA6 p. 4706). Having said that, the two letters do not elaborate on why AI is considered liable. More importantly, in the present context, there is no basis to consider the letters to reflect Contractor's and Subcontractor's understanding of the responsibility for selectivity at the time of the Contract. The DSA was entered into well after the Contract. The most appropriate understanding of the two letters is that Contractor did not have a full understanding of the selectivity issues (whether they were due to AI's design or lack of detailed engineering), and hence that Contractor could not rule out that the selectivity issues could be attributable to AI. As a professional Contractor, it would have been inappropriate not to notify such a claim within the applicable deadline set out in the DSA.

(736) Subcontractor also refers to two examples where Contractor requested AI to fix the selectivity issues (FA25 pp. 1998-1999), that AI 26 November 2019 sent a revised selectivity report to Contractor for review (FA25 p. 2001 f.), and correspondence

between Contractor and AI in March 2020 demonstrating that AI performed selectivity calculations in Febdok (FA25 p. 2540). The Tribunal cannot see that the said examples enlighten Contractor's and Subcontractor's understanding of the responsibility for selectivity at the time of the Contract. As set out above, in the delicate situation that arose due to the selectivity issues, time was of the essence and Bane NOR indeed expected Contractor (and AI) to take an active role. The Tribunal considers the latter to be a more appropriate explanation of Contractor's and AI's active role in resolving the selectivity issues.

(737) Concerning the DoC issued by AI on 3 April 2020 (FA6 p. 4306), Subcontractor questions how AI, while still verifying selectivity, could declare that LVS/IPS met the requirements. The Tribunal also struggles to understand the latter, but it is difficult to see that AI's DoC is relevant to determining the Parties' understanding at the time of the Contract. AI was not a party to the Contract.

(738) The third period invoked by Subcontractor is *October 2020 – February 2021*, and Subcontractor asserts that also the changed design issued in September 2020 and January-February 2021 lacked selectivity. Reference is also made to the task force meetings between Contractor, AI and Bane NOR, and Sweco's reports that identified several defects in the changed design from September 2020 and February 2021. The Tribunal cannot see that the said events are relevant to determining the Parties' understanding at the time of the Contract. The fact that the changed design might have lacked selectivity may indicate that it was not straightforward to resolve the selectivity issues. In any case, Sweco's reports cannot enlighten the Parties' understanding at the time of the Contract.

(739) Section 2.5.7 of the Claimant's Opening Statement Part 5 (Supplemental) concerns subsequent events regarding selectivity from May 2021 and onwards. The first point made by Subcontractor is that Contractor/AI included a revised selectivity report (rev. 03) in the EPE of 27 May 2021, which was then significantly extended from 26 to 234 pages. On Subcontractor's request about what Subcontractor was expected to do with the said revised selectivity report, Contractor merely responded that: "We cannot answer what do we expect from Elecnor". Subcontractor asserts that the statement clearly indicates that Contractor did not expect Subcontractor to provide selectivity calculations or verify selectivity. The latter might be understood as pointed out by Subcontractor. The Tribunal, however, considers another explanation to be more likely:

In the context of the situation that had arisen, in which Contractor was under great pressure from Bane NOR to take ownership of the selectivity issues, Contractor was expected by Bane NOR to take the lead on the selectivity issues. In any case, the Tribunal cannot see that such a revised selectivity report may shed light on the Parties' understanding at the time of the Contract. By contrast, as set out above in section 9.4.4, the EPE of 12 July 2018, which was much closer to the time of the Contract, merely provided a generic outline of methods to calculate selectivity.

(740) Subcontractor contests Contractor's alleged example of Laugstol performing selectivity calculations to ensure selectivity because it was only a single example based on Sweco's request. In the situation that had arisen, in which all the involved Parties were expected to contribute to a swift resolution of the selectivity issues, the Tribunal agrees that Laugstol's involvement cannot serve as evidence of Subcontractor's understanding at the time of the Contract.

(741) Furthermore, Subcontractor argues that Contractor engaged Sweco to analyze whether the original and changed design had selectivity support that it was not Subcontractor's responsibility to verify selectivity. It is also argued that the first Sweco reports concluded that the original design lacked selectivity and that AI was responsible for the defective and incomplete selectivity studies. Reference is also made to the witness statement of Mr Solvik (Bane NOR), stating that Contractor did not understand how to incorporate selectivity as a part of its design, and the two witness statements from AI, Mr Nicolas and Mr Ramirez, stating that AI were involved in selectivity discussions with manufacturers and that AI carried out selectivity assessments during project execution. The latter explains why there are no examples of Contractor instructing Subcontractor to perform detailed engineering by way of selectivity calculations or verifying selectivity.

(742) The Tribunal finds it evident that neither the fact that Contractor engaged Sweco to investigate the selectivity issues nor the conclusions of the Sweco reports enlighten the Parties' understanding at the time of the Contract. In the situation that had arisen, in which Contractor was under great pressure from Bane NOR to take ownership of the selectivity issues, it was appropriate to engage an independent third party to investigate the selectivity issues. For the same reason, it would not have been appropriate to ask Subcontractor or Laugstol to investigate. In any case, there are no indications that it was a part of Sweco's scope to consider the distribution of engineering responsibilities

between Contractor and Subcontractor at the time of the Contract. In general, the Tribunal hesitates to rely on how the Parties – after having discovered the selectivity issues – acted in the context of resolving the selectivity issues as evidence for their understanding at the time of the Contract. As set out above, that behaviour, in particular Contractor's, was more likely influenced by the fact that Contractor was under great pressure from Bane NOR to take ownership of the selectivity issues.

(743) Mr. Solvik's statement merely refers to his understanding of Contractor's contractual obligations towards Bane NOR, which has no bearing on the Parties' understanding at the time of the Contract. The Tribunal cannot see that AI's involvement in selectivity discussions with manufacturers and that AI carried out selectivity assessments during project execution shed light on the Parties' understanding at the time of the Contract. And AI's involvement cannot *per se* be understood to entail that Contractor was *responsible* for verifying selectivity. In any case, witness statements from AI have limited weight as evidence for the understanding of the Contract. AI was not a party to the Contract, and the DSA was entered into after the Contract.

(744) As set out above in section 5.1 the parties' subsequent conduct after a matter has become contentious will rarely serve as evidence of what the parties intended when the contract was entered into. For that reason, the Tribunal is reluctant to consider the Parties' "commercial discussions" invoked by Subcontractor (see section 9.4.3 above) concerning the correspondence leading up to VOR 40 as evidence for their understanding at the time of the Contract. At the time of these discussions, the responsibility for selectivity was indeed a contested matter. Hence, the Tribunal cannot follow Subcontractor's reasoning when it is asserted that the "Draft MoU and VO 65 shows Contractor undoubtedly were to compensate Subcontractor for the LVS changes as a consequence of the updated SLDs from Eng. Package E". The fact that it turned out not to be any such VO 65 strongly indicates that the Parties were *not* aligned in this respect.

(745) Subcontractor asserts that the design changes issued by Contractor/AI in Engineering transmittal no. 149 in September 2020 and until April 2021 related to LVS "were a result of Contractor's/AI's defective engineering". The Tribunal struggles to see the relevance of the latter in the present context where the question is whether the Parties' subsequent conduct may enlighten their understanding of the distribution of engineering responsibilities *at the time of the Contract* (*ex ante*). Whether their

deliveries eventually turned out to be defective or not, however, is a purely ex post event that cannot have been considered at the time of the Contract. Furthermore, the argument is circular. Whether or not Contractor's/AI's engineering turned out to be "defective" regarding selectivity depends on whether or not verifying selectivity *was* a part of their scope of work.

9.4.6 Summary and conclusion regarding the selectivity issues

(746) It follows from an objective interpretation of the Contract that Subcontractor's obligation to provide detailed engineering includes verification of selectivity. The latter is supported by the Parties' subsequent conduct as expressed in the Design Manual and the EPE of 12 July 2018. The Parties' subsequent conduct – after the selectivity issues were discovered – does not provide an unambiguous picture of how the Parties understood the responsibility for selectivity. Based on an overall assessment of the Parties' subsequent, which was addressed in detail under the Hearing, however, the Tribunal finds it clear that the Parties' subsequent conduct does not clearly and consistently indicate that they had the asserted common understanding at the time of Contract.

(747) Based on the above, the Tribunal concludes that Subcontractor was obliged to provide detailed engineering, including verification of selectivity, and hence the selectivity issues cannot be considered a Variation.

9.4.7 The implications of the conclusion on other submissions

(748) The conclusion above is that Subcontractor was obliged to provide detailed engineering, including verification of selectivity. On this basis, the selectivity issues in VOR 40 are not considered a Variation.

(749) The conclusion, that VOR 40 is not considered a *Variation*, has several implications. *First*, it is not necessary for the Tribunal to determine cost and schedule effects of VOR 40. *Second*, it is not necessary for the Tribunal to consider whether the selectivity claims in VOR 40 were timely submitted under COC Art 16.1. *Third* and for the same reason, it is not necessary for the Tribunal to consider whether the selectivity claims are time-barred under Art 20.4. *Fourth*, VOR 40 is not relevant considering whether Contractor's right to order Variations under CoC Art 12.1 was exceeded.

(750) A recurring submission is that Contractor's misuse of the VO-system entails a "deemed VO" (or "as claimed") mechanism. The Tribunal does not, however, understand Subcontractor's submissions regarding misuse to entail that a claim *not* considered to be a Variation shall nevertheless be deemed a Variation. In any case, the Tribunal cannot see any contractual or legal basis for such a submission, and reference is made to the Tribunal's assessment in section 6 above.

9.5 Tribunal's assessment of disputed matter II: CoC Art 2.2

(751) Subcontractor has invoked CoC Art 2.2 as a separate basis of VOR 40, and the submission is as follows: Bane NOR has awarded Contractor EoT for the period covered by VOR 40. According to Art 2.2 of the CoC, Subcontractor is entitled to receive the benefits of such entitlements. Hence, the Subcontractor is entitled to EoT as claimed. Furthermore, because Bane NOR did not claim liquidated damages for this period, Contractor is not entitled to claim liquidated damages from the Subcontractor for the same period.

(752) As pointed out above in section 7.10.2, Art. 2.2 is a so-called "flow-down-mechanism" structured around *Contractor's* "right or entitlement" under the "Main Contract". Subcontractor may be entitled to receive the "benefit" of such entitlements, which entails that Subcontractor's "benefit" is *derived* from the Main Contract. Hence, the key question under Art 2.2 is not whether Subcontractor has a "right or entitlement" under the Contract, but whether Contractor is entitled towards Company under the Main Contract. The Tribunal considers the latter to have a strong bearing on CoC Art 2.2 and VOR 40. It is not contested that Company contracted both general and detailed engineering, including selectivity, to Contractor. For the same reason, Contractor cannot be "entitled" to EoT or additional compensation *from Company* based on the selectivity issues set out in VOR 40. The contested matters of selectivity were solely related to the contractual relationship between Contractor and Subcontractor.

(753) Furthermore, as concluded above in section 7.10.2, when Art 2.2 explicitly and clearly refers to "*right or entitlement* ... under the *Main Contract*" (Tribunal's emphasis) it cannot reasonably be understood to include subsequent side agreements, addendums, settlements etc. Hence, to the extent Company granted Contractor EoT under such a subsequent agreement, and such EoT overlaps the delay caused by the selectivity issues set out in VOR 40, Subcontractor is not entitled to the same EoT under Art 2.2.

(754) Based on the above, the Tribunal cannot see that the CoC Art 2.2 may serve as a separate basis for the claims based on VOR 40.

9.6 Tribunal's assessment of disputed matter III: Did VOR 40 include other claims than the selectivity claims?

(755) Based on the conclusion above, that the selectivity issues set out in VOR 40 cannot be considered a Variation, it is not necessary for the Tribunal to consider whether the *selectivity* claims put forward in VOR 40 were timely submitted under COC Art 16.1.

(756) However, provided that VOR 40 includes other claims than the selectivity claims, and such claims are considered Variations, it will be necessary to determine whether such claims are precluded under CoC Art 16.1.

(757) On this basis, the first question to be determined by the Tribunal is whether VOR 40 can be considered to include further claims than the selectivity claims.

(758) The purpose of the notification mechanism in CoC Art 16.1 has a bearing on determining the "scope" of a VOR. The fundamental aim of a VOR is to bring a disputed matter on the table to enable Contractor to consider the cost and/or schedule effects (if any) and to facilitate an appropriate process to address the disagreement as per the dispute resolution mechanisms in CoC Art 16. The latter entails that a VOR must, to a reasonable extent, specify what is considered a Variation. As a starting point, the latter must be determined based on a regular interpretation of the relevant VOR. Where the VOR is brief, as regards VOR 40, but explicitly refers to letters related to the claims set out in the VOR, such letters may be relevant to understand the scope of the VOR. Such letters may typically *elaborate* on the claims set out in the VOR. If a claim is not mentioned in the VOR, however, it cannot be considered *covered* by the VOR merely because it is mentioned in letters referenced in the VOR. The latter approach would undermine a key purpose of a VOR, namely to state what is eventually considered a Variation. The latter may often deviate from the positions taken in previous letters. Furthermore, the dispute resolution mechanisms in CoC Art 16 require that the contested Variations are clearly identified. On this basis, the Tribunal concludes that where such letters might be understood to have a broader scope than the subsequent VOR, the VOR prevails.

(759) In the present case, Subcontractor asserts that VOR 40 must be understood to include two categories of claims beside the selectivity issues. According to Subcontractor's Outline Statement Part 5 (section 2.1.2), the *first* category covers (i) the additional panel boards shown in Contractor's revised SLDs of 7 February 2021 (FA2 p. 797), and (ii) design changes to SCADA. In respect of the latter item (ii), reference is made to the submissions of signal lists, interface lists, etc., for PLC and RTU equipment (FA7 p. 17) and Contractor's instruction to include control of ventilation in Subcontractor's SCADA PLC (FA7 p. 3458), and the "Detailed budget – VOR 40 Production of changes LVS Cabinets" of 25 June 2021 (FA17 p. 626). The *second* category covers work related to the control and monitoring of the ventilation system, which is related to VOR 108.

(760) The "Subject" of VOR 40 of 19 April 2021 reads "Production of Changes LVS Cabinets", and the further text reads:

> "Reference is made to Contractor's letter "UFB-SF-L-00231" dated on 12th April 2021.
>
> Reference is also made to Subcontractor's letter "853-001-LT-ASE-AGJV-1542" dated 19th April 2021.
>
> Pursuant the provisions under the Art. 16.1 of the Conditions of Contract, Subcontractor hereby issues this VOR 040 as the work is not part of Subcontractor's obligations under the Contract by virtue of the facts duly substantiated in the aforementioned Subcontractor's letter.
>
> Since Contractor has decided to not contribute to a solution in this regard within the deadlines set out in the letter "853-001-LT-ASE-AGJV-1517" dated 8th April 2021 [FA11 p. 438], Contractor has exhausted Subcontractor's possibility to assess such changes prior of the submission of both the Monthly Report of April 2021 and the CSB with cut-off date 25th April 2021. Thus, Subcontractor hereby informs Contractor that the Contract Schedule Baseline shall be updated through this VOR 040 once the changes on the LVS could be properly assessed."

(761) VOR 40 provides limited guidance on the scope of VOR 40 beyond what is set out under the "Subject": "Production of Changes LVS Cabinets". Based on the events leading up to the "Production of Changes LVS Cabinets", which is touched on above, it is evident that those "Changes" included changes due to the selectivity issues that were discovered after production of the "LVS Cabinets". The latter is not contested. The question is whether VOR 40 also covers other claims.

(762) The first letter referenced in VOR 40 is Contractor's letter "UFB-SF-L-00231" of 12 April 2021 (FA12 p. 336). The letter has the heading "Re-Selectivity and LVS Alternatives", and in the first sentence it refers to "Subcontractor's letters "853-001-LT-ASE-AGJV-1513 (Selectivity) of 7 April 2021 and "853-001-LT-ASE-AGJV-1517 (LVS Alternatives) of 8 April

2021. After having summarized its understanding of the Contract, Contractor states that "Contractor's view on the matter is summarized below with additional reference to the letter recently sent by Contractor on the Selectivity topic (ref. letter UFB-SF-L-00244 – Selectivity)". On the next page, Contractor under the heading "Selectivity" proceeds to elaborate on why Subcontractor's understanding of the responsibility for selectivity is considered wrong. Thereafter, Contractor proceeds to elaborate in detail on its understanding of the responsibility for detailed engineering and selectivity.

(763) The next letter referenced by Subcontractor in VOR 40 is its own letter of 19 April 2021 (FA11 p. 463), which has the same heading as Contractor's letter "UFB-SF-L-00231" of 12 April 2021. The first two sentences letter go straight to the selectivity issue. In the following Subcontractor contests Contractor's understanding of the responsibility for detailed engineering and selectivity, and it is reiterated under item 1 that the root cause of the "changes on the Low Voltage System" is that the design provided by Contractor did not fulfil the requirements of selectivity.

(764) With regard to Subcontractor's first category of claims referenced above, the said sub-items (i) and (ii) might possibly be understood to be *related* to the "Subject" of VOR 40: "Production of Changes LVS Cabinets". The Tribunal cannot, however, see that the two letters referenced in VOR 40 explicitly refer to sub-items (ii) and (iii) regarding panel boards or design changes to SCADA. More importantly, the Tribunal cannot see that VOR 40 – read in conjunction with the two letters – can reasonably be understood to include sub-items (ii) and (iii). The conclusion is that the first category of claims cannot be considered covered by VOR 40.

(765) Regarding Subcontractor's second category of claims, the Tribunal cannot see any indications in VOR 40 or its referenced letters that it covers control and monitoring of the ventilation system. Subcontractor, however, refers to the "Detailed budget – VOR 40 Production of changes LVS Cabinets" of 25 June 2021 (FA17 p. 626). As the said budget is dated more than two months after VOR 40 was issued (19 April 2021), the question is whether such a subsequent document may be relevant to determine the scope of VOR 40. In principle, such a subsequent document may, like a revised VOR, be relevant to extend the scope of an already issued VOR, provided (1) that it explicitly refers to the relevant VOR, (2) clearly identifies the new claim, *and* (3) it is submitted within the applicable preclusive deadline. The latter (3) follows from the fact that a subsequent document cannot have any retroactive bearing on whether a claim was timely

submitted as a part of a VOR; *in casu* VOR 40. Requisite (1) is met as the heading expressly refers to VOR 40. The Tribunal cannot, however, see that the Detailed Budget fulfills requisite (2) as it basically concerns "Production of Changes LVS Cabinets" and does not mention control or monitoring of the ventilation system. Subcontractor has referred to item 1.5 regarding "New signals and programming of MCC". When the latter is read in conjunction with the heading of item 1 in the Detailed Budget, which reads "Production of Changes LVS Cabinets", however, the Tribunal cannot see that it can reasonably be understood to include or be related to the control or monitoring of the ventilation system. In any case, even if such an understanding could be inferred from the wording of item 1.5, it would not clearly identify the new claim. On this basis, control and monitoring of the ventilation system cannot be considered covered by VOR 40. For the same reason, it is not necessary to determine whether such a claim control and monitoring of the ventilation system was timely submitted under VOR 40.

(766) The conclusions above have several implications. First, it is not necessary for the Tribunal to consider whether any of the claims in the said two categories were *timely* submitted as a part of VOR 40, because such assessment is only relevant for claims that *are* considered covered by VOR 40. Second and for the same reason, it is not necessary for the Tribunal to consider Subcontractor's submission that Contractor submitted DVO 20 too late to invoke time-bar against VOR 40. Third, it is not necessary for the Tribunal to consider whether the delayed DVO 20 entails that the claim must be "deemed accepted" based on Contractor's misuse of the VO-system, because the submission presupposes that the claim was covered by a timely VOR. In any case, there is no contractual or legal basis to consider a claim not covered by a VOR "deemed accepted" as Contractor's misuse presupposes that Subcontractor has submitted the claim as a part of a timely VOR.

(767) The Contractor has, however, made the following statement: "If the Tribunal finds that VOR 40 is a Variation, the costs for the PME changes are included in the direct costs as described above. If the Tribunal finds that VOR 40 does *not* represent a Variation, i.e. that it was in Subcontractor's scope to perform selectivity calculation, Contractor has *accepted* to compensate Subcontractor for changes to the PME scope, *provided the claim is not time-barred*" (Tribunal's emphasis). The Tribunal understands Contractor's admission to entail that if the changes to the PME scope *are* considered covered by VOR 40 *and* VOR 40 is not considered time-barred, Contractor accepts to compensate

Subcontractor for "changes to the PME scope". The Tribunal cannot, however, see that the so-called "PME changes" can be considered covered by VOR 40. Such changes are not mentioned in VOR 40, and in the absence of clear indications in the two referenced letters to PME changes it is hard to see that such changes can reasonably be inferred from VOR 40. Hence, Contractor's admission is not applicable as the "changes to the PME scope" cannot be considered covered by VOR 40.

10 VOR 33/DVO 15: INSPECTION AND PROTECTION OF TPS CONDUCTORS

10.1 Introduction and factual background

(768) VOR 33 concerns Subcontractor's claim for EoT and cost compensation related to works carried out to preserve and protect the traction power supply ("TPS") wires in Tunnel 3 and Tunnel 4. The TPS wires transport high-voltage electricity to the trains and run throughout the tunnels.

(769) According to the tender specifications, copper was the material for TPS longitudinal bonding conductors (earthing). On February 4, 2019, Contractor issued VO 27 (FA6 2668), instructing Subcontractor to change from copper to aluminum.

(770) Subcontractor started the installation of TPS wires in Tunnels 1 and 2 in May 2019. On 12th June 2019, Contractor issued VO 31 regarding repair works on earthing cables in Tunnel 2 and "check" of TPS and earthing cables in the same tunnel (FA6 p. 3817). In a letter of 14th June 2019 (FA11 p. 92), Subcontractor responded that the instructed check had revealed water leaking over installed conductors and damaged cables caused by this leakage.

(771) In a letter dated 13 August 2019 (FA12 p. 85), Contractor instructed Subcontractor to implement the required measures to preserve and protect installed equipment. Following further correspondence and discussions, Contractor issued VO34 on 5 September 2019 (FA6 p. 3907) for further inspection of TPS and earthing installations in Tunnels 1 and 2.

(772) These inspections eventually led to Contractor's decision to dismantle the installed TPS wires in Tunnel 1 and 2 by VO 36, dated 17 October 2019 (FA6 p. 3935). Subcontractor did not reinstall TPS in Tunnel 1 and Tunnel 2. Instead, Contractor engaged Norocs to perform this work. Norocs performed the work in January and February 2019.

(773) Contractor decided to postpone the installation of TPS wires in Tunnels 3 and 4 by VO 37, dated 17 October 2020 (FA6 p. 3936). According to VO 37, the installation of TPS in Tunnel 4 (outbound) was to commence on 27th July 2020 and 18 November 2020 in Tunnel 3 (inbound).

(774) The installation of TPS wires in Tunnel 4 started in August 2020. Shortly after commencement, Subcontractor discovered leaky spots. Following e-mail notifications of the leakages, Subcontractor issued VOR 33 on 20 August 2020.

(775) In VOR 33, Subcontractor stated (CB1 p. 1639):

> "Subcontractor hereby notifies Contractor that Subcontractor has implemented all the necessary measures to temporary (*sic*) protect the TPS Conductor against the strong alkaline water leakages in Tunnel 4 and that such measures are beyond what Subcontract could reasonably have expected at the moment when the Contract was entered into, as the Tunnel should have been in a dry condition according to the document "*UFB-30-A-00012 Technical Specification EPC TBM - Watertightness of segmental lining*" enclosed within the Part I Documents of the Appendix E of the Contract.
>
> Thus, the works related to the visual inspections and temporary protection which Subcontractor is performing at the end of each shift, depicted in the emails and letter in subject, shall be considered out of the Subcontractor 's Scope of Works and the provisions of the Art. 12.3 of the Conditions of Contract shall apply accordingly."

(776) In a letter from Subcontractor to Contractor on 21 August 2020 (FA11 p. 264), Subcontractor argued that the work described in VOR 33 was Contractor's responsibility under the second paragraph of Art 4.3 of the CoC.

(777) Contractor rejected Subcontractor's claim in a letter to Subcontractor on 9th September 2020 (FA12 p. 192). Following further correspondence and discussions between the Parties, Subcontractor notified Contractor in a letter of 9th December 2020 that the temporary measures would be expanded to the entire length of TPS conductors in Tunnel 3 and Tunnel 4 (FA11 p. 344).

(778) Contractor issued DVO 15 on 23rd December 2020 (CB1 p. 1641). In this DVO, Contractor argued that the preservation and protection of installed equipment was Subcontractor's responsibility under Art 5.3.3 and 5.1.4 of Appendix A of the Contract. Further, Contractor rejected that the tunnel should have been dry and argued that Subcontractor ought to know that wet spots could happen and that it was Subcontractor's obligation to mitigate this.

10.2 The Parties' submissions concerning VOR 33

10.2.1 Subcontractor's claim and submissions

(779) Subcontractor claims direct costs of EUR 368,009.68 and NOK 1,021,918.77 related to VOR 33. Further, Subcontractor claims 36 days of EoT, and EUR 1,078,526.13 and NOK 888,021.50 in prolongation cost. Subcontractor also claims EUR 13,042.50 in preparation costs.

(780) Subcontractor holds that the preservation work described in VOR 33 was unpredictable and outside Subcontractor's scope of work. The general clauses on preservation and temporary measures in Art 5.3.3 and 5.1.4 of Appendix A (Scope of Work) do not include unpredictable measures. Subcontractor had no reason to include water inspection or protection of the TPS in the contract price. It is usually not necessary to protect TPS wires against water leakages, and it was not predictable that strong alkaline water would leak from the ceiling, corroding the aluminum wire. Subcontractor also had reason to believe that the tunnel ceiling would be dry, as described in the technical specifications for water tightness in Appendix E of the Contract.

(781) Subcontractor had no reason to believe that protection would be necessary when the TPS installation resumed in August 2020. However, Subcontractor had every reason to believe that Contractor had then solved the water leakage issue discovered in 2019, which is why the TPS wires in Tunnels 1 and 2 were dismantled. In the very end, Subcontractor had to protect the TPS wires only because Contractor chose to keep using aluminum wires and focus on water handling.

(782) The water leakages that caused the need for wire protection must be considered a breach of contract by Contractor according to Art 27.1 of the CoC. When a VOR has been presented, a proposal for Variation must, in any case, be handled in accordance with CoC Art 16.1.

(783) VOR 33 was not included in Amendment No. 2. VOR 33 was submitted within the contractual time limits and is not time-barred. In DVO 15, Contractor did not state that VOR 33 was issued too late. The consequence is that the time-bar argument is lost.

(784) The requirement to present rolling schedule analysis in Art 13.3 of CoC does not apply to VORs, only VOs, and is thus irrelevant to VOR 33.

(785) DVO 15 was not presented until four months after VOR 33. This is not within reasonable time pursuant to Art 16.2 of the CoC. This is a misuse of the VO system, and the consequence is that VOR 33 must be deemed a VO and that Subcontractor is entitled to EoT and compensation as claimed.

(786) The limits to impose Variations to the Work under the third paragraph of Art 12.1 were exceeded when VOR 33 was issued. Consequently, Subcontractor is entitled to EoT, and cost compensation as claimed.

(787) Contractor's argument that all schedule effects and most cost effects would have been avoided if Subcontractor had protected the feeders in full in August 2020 is not correct.

(788) When leakages were observed, the first method was to visually inspect and install plastic covers in areas that could potentially be damaged. Because leakages were discovered after Contractor had performed its definitive sealing measures, the method was changed to include the entire length. Subcontractor had no reason to believe that there would be a need for a complete plastic cover after Contractor had performed remedial works and informed Subcontractor that it could start in tunnel 4 in August 2020.

(789) The basis for the EoT is that the inspection and protection of the TPS impacted the critical path of Subcontractor's work after Contractor had performed its definitive sealing measures, and Subcontractor had to protect the TPS at its full length in December 2020.

(790) Since Contractor has been awarded EoT from Bane NOR for the period covered by VOR 33, Subcontractor is entitled to EoT based on Art 2.2 of the CoC independently of any other provision that may lead to a time bar or reduction of the claim. Since Bane NOR has not claimed liquidated damages for this period from Contractor, Contractor is not entitled to liquidated damages from Subcontractor.

(791) Subcontractor's claim is sufficiently documented in the breakdown and calculations of disputed VORs in the final account, the economic study of 20th February 2023, and the claim composition of 5th July 2023. Subcontractor has also fulfilled the documentation requirement in the final account pursuant to Art 20.4 of the CoC.

(792) Since Contractor has not issued a DVO within a reasonable time, the consequence is that the argument that Subcontractor's claim is not sufficiently documented must be dismissed. For the same reason, the pricing regulations in Appendix B do not apply, and Subcontractor is entitled to compensation as claimed.

(793) If the Tribunal finds that Subcontractor has not fulfilled the conditions for documentation, the consequence is that Subcontractor is entitled to payment based on a common price.

10.2.2 Contractor's submissions

(794) Contractor holds that VOR 33 does not constitute a Variation to the work under the Contract. Subcontractor's scope of work includes all necessary preservation and protection measures to protect the TPS wires against any damage, cf. Art 4.1 and 4.2 of the CoC, cf. Art 5.1.4 and 5.3.3 of Appendix A. Subcontractor failed to understand its own scope of work, despite several reminders from Contractor.

(795) Subcontractor was aware of the strong alkaline water but did nevertheless not preserve the wires as they were obliged to do.

(796) The decision to implement plastic covers should have been an inherent part of the installation in Tunnels 3 and 4 but was made in December 2020, several months after the installation works began.

(797) There is no room for contract revision under the Contract Act (*No*: "Avtaleloven") Section 36 or the doctrine of failed assumptions (Norwegian: "forutsetningslæren").

(798) Contractor rejects Subcontractor's alleged schedule impact of 36 days. VOR 33 had no impact on the Contract Schedule. The work under VOR 33 was part of Subcontractor's scope of work. In any case, the HKA Expert Report Delay (FA4 p. 172) and Ankura Expert Report 1 (FA4 p. 47) conclude that VOR 33 did not cause any critical delay.

(799) The work under VOR 33 could have been done in parallel with critical work. There is no evidence of resource allocation impacting critical works. It is Subcontractor's own risk that they decided only partly to protect the wires in August 2020, so they had to return to do it again in December 2020.

(800) Subcontractor has not calculated the costs in accordance with the Contract and has not documented the expenses related to the claim for EoT. Subcontractor's claim for direct

cost is not substantiated. The alleged EoT cost relies entirely on unsupported rates and lump sums, and Subcontractor has failed to provide any evidence in support of its claimed sum.

(801) Even if VOR 33 is accepted as a Variation to the Work, Subcontractor has not complied with its duty to mitigate costs and losses. The strategy in August 2020 was negligent because Subcontractor only protected minor parts of the wires while performing installations. Due to this approach, Subcontractor had to return in December 2020, allegedly taking people from the LVS works being on critical path and incurring additional costs. If Subcontractor had protected all wires during installations, all schedule and cost effects would have been avoided. Hence, the maximum impact Subcontractor may be entitled to is compensation for direct costs due to protection in August 2020.

(802) Any EoT claim is lost because the claim has not been notified in a timely manner or submitted in accordance with Art 13.3 of CoC. Any compensation claim is also time-barred because Subcontractor did not fulfill the documentation requirements for the final account in Art 20.4 of the CoC.

10.3 The Tribunal's assessment

10.3.1 The basis of VOR 33

(803) The Tribunal shall assess whether Subcontractor is entitled to claim costs and extension of time due to extra inquiries and protective measures performed in Tunnel 3 and 4 from August 2020 until January 2021. Contractor holds that the wording of i.a. CoC Article 4.2, cf 4.1 and Appendix A sections 5.1.4 and 5.3.3 make clear that the protection measures Subcontractor conducted in 2020 lay within Subcontractor's contractual obligations and that VOR 33 thus lacks basis. Subcontractor disputes this.

10.3.2 Contractual starting points

(804) Contractor has invoked the provisions in CoC Art 4.2 and 4.1 in support of its view. Article 4.1 is a general provision stating that Subcontractor shall perform the Work "in a professional and careful manner and in accordance with the contract". The Tribunal cannot see, however, that it provides specific guidance regarding the disputed topic. Article 4.2 first paragraph, however, reads:

> "All materials shall be delivered mechanically complete. All materials not classified as bulk materials shall be delivered with signed MCCRs. Appropriate preservation measures shall have been carried out."

(805) Article 4.2 makes it clear that Subcontractor is obliged to perform "appropriate preservation measures". The word "preservation" normally points to maintaining or upholding a certain condition and avoiding inherent decay, whereas the disputed protective measures Subcontractor applied in this case, aimed to prevent damage from the external environment. Regardless of the literal meaning, the Tribunal considers the wording of Art 4.2 not to provide much guidance regarding if, when and how such "preservation measures" shall be considered "appropriate". The term "appropriate" clearly indicates that it is not a general and unconditional obligation. Instead, it points to an assessment of what kind of preservation measure could be reasonably expected to be carried out by Subcontractor, taking into account what was necessary to ensure proper preservation in the relevant situation. The latter must necessarily be dependent on the relevant circumstances; for example, the relevant period of time in which the materials are to be preserved. In addition, "appropriate" makes it relevant to take into account proportionality; that there is a reasonable relationship of the preservation costs and the achieved preservation. Furthermore, what is considered "appropriate" should as a clear starting point be understood as a reference to the time of the Contract. Hence, additional preservation required due to circumstances that could not have been reasonably have foreseen at the time of the Contract, cannot easily be considered to be included in Subcontractor's obligation to preserve. Even more so where the reason for the need of additional or unforeseen preservation is beyond the control of Subcontractor. On this basis, the key question to be assessed below is whether Subcontractor, at the time of Contract, should have foreseen the need to apply plastic protection to the TPS conductors/wires.

(806) Contractor has also invoked the provisions in sections 5.1.4 and 5.3.3 of Appendix A. The first provision requires Subcontractor to:

> "...during all phases of the Work, take all necessary precautions to protect the Contract Object against any adverse exposure, possible damage or degenerations whatsoever."

(807) The second provision requires that Subcontractor:

> "....shall perform preservation for packing, transport, storage and construction, at both Subcontractor's and Sub-Subcontractor's fabrication sites, as well as during site installation and commissioning prior to start-up of equipment and systems."

(808) The Tribunal cannot see that the latter provision has any particular effect beside of CoC Art 4.2 first paragraph. It merely provides typical and straightforward examples of when it may be appropriate to ensure preservation.

(809) Article 5.1.4 governs precautionary "protection", under which Subcontractor shall ensure that the contract object is protected throughout the entire execution phase. Subcontractor's obligation is consequently not limited to certain types of measures. Again, the Tribunal struggles to see that the provision has any particular effect besides CoC Art 4.2 first paragraph.

(810) On this basis, the Tribunal concludes that the key question to be assessed also under the said provisions in Appendix A is whether Subcontractor, at the time of Contract, should have foreseen the need to apply plastic protection to the TPS conductors/wires.

10.3.3 The leakages as such: Could Subcontractor expect to work in a dry tunnel?

(811) The need for protective measures was caused by leakages of water dripping from cracks in the tunnel ceiling, causing damaging corrosion to the installed wires underneath. In the original version of VOR 33, Subcontractor argued that the protective measures employed to mitigate the situation were beyond what Subcontractor reasonably could have expected as the Tunnel "should have been in a dry condition according to the document "UBF-30-A-00012 Technical specification EPC TBM – Watertightness of segmental lining". Said document states i.a. (FA8 p. 312 on p. 314):

> "Contractor shall ensure a dry tunnel, which permits damp spots with no visible signs of water remaining on a hand immediately after touching the spot. No dripping/visible flow of water whatsoever. In the event that such wet spots appear, whether through the joints between the segments or through the body of the segment, Contractor shall propose and carry out remedial measures."

(812) Contractor rejected any responsibility in DVO 15 (23 December 2020 – CB1 1641), arguing that Subcontractor could not expect the tunnels to be dry as 1) the said document only established an obligation from Contractor towards Company; not from Contractor towards Subcontractor, 2) a literal interpretation of the term "dry tunnel" does not accommodate to common practice in the sector and is not in line with the requirements predefined by Company, and 3) the said document also made it clear that "in the event of such wet spots appear" Contractor should propose and carry out remedial measures.

(813) In The Tribunal's opinion the "*UBF-30-A-00012 Technical specification EPC TBM – Watertightness of segmental lining*" does not provide specific requirements with regards to watertightness of the tunnels during the construction phase, only on delivery. However, since a number of other contract provisions, cf. Appendix A Art 5.2.11 and Appendix F Art 1.2, presuppose that Contractor should finish its civil works in the tunnel *prior* to Subcontractor's installation of TPS wires. It is appropriate to infer from the document that the Parties' intention was that the ceilings should be watertight during Subcontractor's installation. If not, the Tribunal would expect the Contract to provide a far more detailed regulation of water leakages.

(814) Contractor's second objection concerns the understanding of the term "dry tunnel". The Tribunal agrees with Contractor that Subcontractor could not expect a completely dry tunnel. However, the latter was not the situation, because the leakages and water inflow in the tunnel at the time of Subcontractor's execution clearly exceeded what could reasonably have been foreseen by Subcontractor at the time of the contract. In the summer of 2019, Contractor decided to perform an extensive mitigation program lasting until the summer of 2020, and thus rearranged the entire progress plan of the tunnel works. However, the evidence presented to the Tribunal shows significant leakages after the summer of 2020 as well. See, for example, FA6 p. 4646, FA 11 p. 262, FA6 p. 4648 and FA p. 4665, and other letters listed in Subcontractor's Outline Part 3, Amendment no. 2, CSB rev. 03 and the baseline for EoT, VOR 33, VOR 35, VO 58, VOR 38 and VO 64, p. 18, as well as videos and pictures in FA2 p. 654-660, and Subcontractor's letters FA 11 pp. 350,371, 391 and 403. Contractor therefore continued its mitigation program until the fall of 2021. There seem to have been problems with leakages after this as well. On this basis, the Tribunal finds it clear that the extent of the water leakages in Tunnels 3 and 4 clearly exceeded what Subcontractor could reasonably have expected.

(815) Contractor's argument 3) was apparently not upheld at the Hearing. For the sake of completeness, the Tribunal nonetheless points out that "Contractor" in the quote above does not refer to Subcontractor, but to Contractor, being responsible for the civil works and the tightness of the tunnel. Even so, and regardless of this, the Tribunal cannot see that the document says anything about "Contractor's" entitlement to compensation for any such measures.

10.3.4 The high PH level of the water

(816) Subcontractor contends that in addition to an unforeseen amount of water leakages, the high PH level of the water played a significant role in the development of corrosion, which was another unforeseen event for which Contractor bears the risk.

(817) It follows from DNV's report, *"Testing of aluminium Tunnel cables – Environmental exposure"*, dated 3 April 2020 (FA6 p. 4259), that the water leaking into the tunnels contained a very high PH (Alkaline) content. In his witness statement, Daniel Recas Nicolas of Subcontractor (CB2-2 p. 199) stated that the high PH content was caused by "the injections that AGJV was doing in the tunnel to seal it better". This has not been refuted by Contractor.

(818) As pointed out above, Subcontractor holds that the injection works - and thus the high Alkaline content in the water was a risk on the part of Contractor. The Tribunal cannot, however, see that the latter as such made it unforeseeable that Contractor would rely on injections, which again could affect the PH level of water leakages. Hence, it was only the magnitude of the water leakages at the late stage and the trouble mitigating the leakages that can reasonably be considered unforeseeable.

10.3.5 The decision to replace copper wires with aluminum wires

(819) On 4 February 2019, Contractor issued VO 27, instructing Subcontractor to replace copper as material in the Earth Longitudinal Bonding Conductors in the tunnels. A similar replacement process for the TPS wires was performed based on the subsequent revisions of the SLDs. Later examinations have shown that aluminum is much more vulnerable to water leakages with high PH content than copper, cf. DNV's report mentioned above.

(820) Subcontractor holds that the change could not be predicted at the tender stage and that the change directly triggered the need to carry out the contested preservation measures. In the Tribunal's opinion, it is evident that the change from copper to aluminum played a significant role in the chain of events and that the corrosion damages probably would not have been an issue without the change.

(821) In addition, Subcontractor has argued that the change of material resulted in a claim for a decrease in the contract price, as aluminum is cheaper than copper. Subcontractor thus holds that the measure was commercially motivated. Regardless of whether the

economy was the motivation or not, the Tribunal notes that Contractor, after the problems with aluminum wires became known, chose not to change back to copper wires but instead opted to manage the difficulties through "focusing on water control", cf. Contractor's MPR of February 2020 (FA 19 p. 1168). As pointed out above, the water control entailed an extensive injection program in combination with using rubber profiles to lead the water from the leakage points in the ceilings down to trenches at the bottom of the tunnels. If Contractor instead had reverted to copper wires, which it later did for the wires in Tunnels 1 and 2, the increased material costs would have been borne by Contractor. The Tribunal cannot see that Subcontractor should bear the risk for Contractor's choice to focus on water control instead of reverting to copper wires.

10.3.6 Overall assessment

(822) Based on the above, The Tribunal concludes that several events impacted the tunnel works in a way that Subcontractor could not have foreseen at the time of the contract. The combination of these events, in particular the magnitude of the water leakages, made the protective measures disputed in VOR 33 necessary. Since the measures could not have been foreseen at the time of the contract, they must be considered a Variation to the Work.

10.3.7 Contractor's assertions regarding "failed mitigation process"

(823) Contractor has in its submissions and under the Hearing contended that Subcontractor did not comply with its duties to mitigate the situation. The assertion is based on the fact that Subcontractor performed limited protection measures in August 2020, and then had to come back in December of the same year and establish a more complete protection. Contractor holds that if Subcontractor from the beginning had conducted a complete protection in August, the total costs would have been lower and no delay would have been incurred. Subcontractor disputes this and has referred to the fact that the limited measures conducted in August were implemented on the assumption that Contractor then had mitigated the leakage problems. Thus, the reason Subcontractor had to come back was that Contractor's mitigation-works eventually failed.

(824) The contested matter cannot be considered with the benefit of hindsight, but as the situation appeared during August of 2020 when the first preservation measures were conducted. The Contractor had the previous summer issued several VOs, including VO 37, that entailed a postponement of the planned installment of TPS-wires in tunnel 3

and 4. Contractor's subsequent mitigation process was completed in the summer of 2020, and on this basis, Subcontractor was allowed to commence its installation works. In this context, after the extensive mitigation program had been conducted by Contractor, the Tribunal cannot see that Subcontractor had reason to expect more than the said limited protective measures. This was in The Tribunal's opinion a prudent approach given the circumstances. Furthermore, the Tribunal has not seen any indications that Contractor, at this time, suggested more complete measures or had any objections to Subcontractor's approach. This only became a topic later in the year, after Subcontractor detected that Contractor's measures to mitigate the leakages were not as successful as expected. Based on the above, the Tribunal cannot see that Subcontractor's claim can be reduced due to a failed mitigation process.

10.3.8 Amendment 2

Contractor holds that any impact on the progress due to several of Subcontractor's "civil claims" – VOR 33 amongst them – must be rejected, as in Contractor's view the time impact was finally settled in Amendment 2 of 1 October 2020 (FA8 1186). Subcontractor disputes this.

(825) The background of the Amendment 2 was the extensive and unforeseen leakages in the tunnels that were discovered in 2019 and that lead to extensive mitigation measures, throughout 2019 and 2020. Most of the measures were conducted by Contractor, but the problems also impacted Subcontractor's works. A number of VORs and VOs were subsequently issued and the Parties conducted talks as to what compensation and extension of time Subcontractor was entitled to. These talks resulted in the Amendment 2.

(826) In the amendment, the Parties agreed to adjust Milestone 24 (Ready for Commission Certificate) to 21 April 2020 and Milestone 25 (Delivery Date) to 21 April 2020. In addition, the Parties agreed that Subcontractor, subject to certain further conditions, was to be compensated by way of a Lump Sum of 1.000.000 EUR.

(827) The dispute regarding Amendment 2 in the present case pertains to whether the arrangement entailed a full settlement of Subcontractor's delay claims, due to VOR's known at the time of the settlement, as Contractor claims, or whether the amendment only solved the impact of VO 037, VOR 018, 028 and the subsequent DVO no 010 and 014 as Subcontractor claims.

(828) In the Tribunal's view the solution must be based on an interpretation of the amendment itself. In the introduction to the Amendment 2, the Parties accounted for the background of the amendment, listing a number of issues and VOs, VORs and DVOs that had been issued. In the WHEREAS, seventh dash point, it is stated:

> "The Parties have agreed to amend the Appendix C of the Contract Chapter 2 "Contract Milestone Schedule", Milestone 24 "Ready for commission Certificate (RFCC)" and milestone 25 "Delivery Date" with an Extension of Time and the compensation associated to it to be perceived by Subcontractor and to close the aforementioned Variation Order 037, Variation Order Requests No 018 and 028 and the subsequent Dispute Variation Orders No 10 and 14."

(829) The wording of this provision clearly assumes that the amendment is limited to the said documents and claims. Contractor agrees that the scope of the amendment concerning adjusted remuneration was limited in this way. However, Contractor argues that the purpose of Amendment 2 was to settle all time claims known at the date of the agreement, hence not limited to the said claims. In Contractor's view this follows from the fact that the Parties included the following provision in the Amendment section 4.5:

> "In line with the above, and subject to the provisions of this Amendment No.2, the Parties agree that Subcontractor shall submit a CSB with cut-off date on 04th October 2020 in order to establish a new valid and approved Contract Schedule that reflects the agreements made under this Amendment no 2."

(830) According to Contractor it makes no sense that the Parties should establish a new CSB without including all known time impacts, as such CSB would not be complete, nor would it be correct.

(831) The Tribunal acknowledges that it could have been appropriate to include all known time effects at the date to the agreement, thus establishing a new and complete basis for the subsequent progress. However, the Tribunal cannot see that that was what the Parties agreed to. In addition to the quote from the introduction to the Agreement included above, the Tribunal also refers to the section 4.5 in the Amendment:

> The Parties agree to release all the disputes related to the Contract Schedule and not to enforce any claim, cause of action right, title or interest against the other Party and/or any of its successors, based solely on the Variation Order No. 037, Variation Orders Request No. 018 and 28 and the subsequent Dispute Variation Orders No. 010 and 014. The Parties shall jointly withdraw the expert appointment request made in connection with the Dispute Variation Order No. 10.

The Tribunal particularly highlights the expression "...solely on the Variation Order..." which in the Tribunal's view clearly limits the scope of the Amendment and refers to

both cost and time effects. Against this clear wording the Tribunal concludes that the scope of Amendment 2 was limited to settling VO 037, VOR 018 and 028 and DVO 010 and 014.

10.3.9 CoC Art 2.2, 13.3, and 20.4

(832) As the Tribunal has concluded that VOR 33 is a Variation to the Work, there is no reason to assess whether CoC Art 2.2 may serve as a separate basis for the same claim. As concluded above in section 7.5.3, the "rolling" mechanism in CoC Art 13.3 only applies to Variation Orders, and hence not to VOR 33.

(833) As concluded above in section 7.8, the Tribunal considers claims submitted to arbitration under Art 15.3 prior to the Final Account not to be subject to any preclusion under Art 20.4. As the present claim was submitted to arbitration in the RfA, and hence prior to the Final Account, VOR 33 is not precluded under Art 20.4.

10.3.10 Conclusion

(834) Based on the above, The Tribunal concludes that VOR 33 is considered a Variation to the Work

11 VO 58 – REPLACEMENT OF PF FEEDER WIRE

11.1 Introduction and factual background

(835) The dispute under VO 58 concerns to what extent Subcontractor is entitled to an adjustment in the contract price and EoT due to an instruction from Contractor to replace a broken feeder wire.

(836) As accounted for in section 10 above, the Railway Systems works in the tunnels were stopped due to water leakages in October 2019, cf (FA 3936). The works resumed in August 2020 but were shortly after paused due to Contractor's remedial works, cf section 20 in the minutes from the Weekly construction meeting on 20 August 2020 (FA6 4687) and VOR 35. Shortly after Subcontractor resumed its activities (in September), the damages to the feeder wire were discovered.

(837) VO 58 was issued on 11 September 2020 (CB 1 p. 1242) and states:

> "Subcontractor is instructed to:
>
> Remove the PF feeder wire broken between tensioning bracket F-016-20 in chainage 16+248 and tensioning bracket F-017-20 in chainage 17+247.

Procure new feeder cable and install in mentioned stretch

Compensation: To be agreed.

Impact on Contract Schedule: None."

(838) In a letter dated 16 September 2020 (CB 1 p. 1243), Subcontractor disputed that the VO did not impact the schedule. Repair works were undertaken from 22 – 24 September 2020.

(839) On 12 April 2023, Contractor issued VO 58 rev. 01 to amend the compensation (CB 1 p. 1246). Contractor argued that Subcontractor had not documented any costs, but they were willing to grant a final compensation of EUR 32 401 based on items claimed by Subcontractor. However, Contractor did not accept any adjustment to the contract schedule.

11.2 The Parties' submissions related to VO 58

11.2.1 Subcontractor's claim and position

(840) Subcontractor claims three days of EoT, EoT-costs of EUR 100,945.27 and NOK 115,183.33, direct cost of EUR 32,184, and cost related to the preparation of the claim of EUR 5,506.96

(841) Regarding the claim for EoT, Subcontractor holds that the critical path sequence started with TPS in tunnel 4. The three days it took to perform the additional work related to VO 58 on the critical path entailed a subsequent delay of three days.

(842) VO 58 was presented before the signing of Amendment No. 2, but it was not included in Amendment No. 2 or CSB Rev. 3. Contractor had no reason to believe that the CSB Rev. 03 would include the delay caused by VO 58.

(843) Subcontractor disagrees that they should have been able to handle the additional work as a part of its obligations regarding flexibility- and coordination obligations. Subcontractor cannot be expected to plan for or be liable for damages caused by others when Contractor issues a VO related to ongoing work on the critical path.

(844) Regarding the rolling analysis requirement under CoC art. 13.3, the deadline was 14 December 2020. In this respect, Subcontractor has presented three alternative lines of arguments: Firstly, if the Tribunal agrees with Contractor that Subcontractor has never presented an analysis as required under art. 13.3, the claim cannot be time-barred,

because the rolling time-bar mechanism only applies to claims related to VOs covered by a rolling analysis.

(845) Secondly, Subcontractor holds that they have fulfilled the requirements in Art 13.3 of a rolling analysis by the Schedule Impact Description issued on 18th October 2020, where 3 days of EoT were claimed. The schedule impact was described in the monthly progress report of October 2020, dated 26 October 2020. Contractor did not respond to the analysis and has therefore not given "notification of its decision within reasonable time»" according to the third paragraph of Art 13.3 of the CoC. The consequence is that the claim must be deemed accepted.

(846) Thirdly, if Subcontractor's letter of 21st April 2021 is considered to be the first analysis presented pursuant to Art 13.3 of the CoC, Subcontractor agrees that the analysis was not timely. However, if so, Subcontractor holds that they are nevertheless entitled to EoT pursuant to Art 2.2 of the CoC or on the basis that the limits for Variations to the Work under the third paragraph of Art 12.1 of the CoC have been exceeded or based on Contractor's disloyal conduct.

(847) The claim for EoT is time-barred under Art 15.3 of the CoC. If a rolling analysis is considered not to have been submitted, Contractor cannot have responded to such analysis, and thus, no claim can be time-barred under Art 15.3. If the analysis presented on 18th October is considered timely and accepted by Contractor, then Art 15.3 does not apply. If Contractor's response in the letter of 19th April 2021 sets a deadline for court proceedings on 2nd June 2021, Subcontractor agrees that court proceedings were not initiated within the deadline. In such case, Subcontractor is still entitled to EoT as claimed due to consequent and systematic misuse by Contractor of the VO-system, disloyal conduct throughout project execution, exceedance of the limit for Variations to the Work, and also based on Art 2.2.

(848) Article 2.2 of the CoC provides an independent basis for the claim for EoT. Bane NOR has awarded Contractor EoT for the period covered by VO 58.

(849) The claim is sufficiently documented, and the presentation of the claim in the final account fulfills the requirements in Art 20.4 of the CoC.

11.2.2 Contractor's position

(850) Subcontractor is not entitled to additional compensation or EoT for VO 58. Contractor rejects the basis for the claim. According to CoC Art 11 second paragraph,

> "Subcontractor shall plan the Work in a manner which allows for significant flexibility and resources to handle such variations and disturbances as can reasonably be expected for a project of this nature, without this affecting his ability to perform the Work in accordance with Appendix C."

(851) The instruction under VO 58 must be considered a Variation that could "reasonably be expected". To avoid critical delay, they should have handled the instruction with significant flexibility within their planning and coordination obligations under Art 11 of CoC and sections 3.6 and 5.1.3 of Appendix A.

(852) VO 58 did not impact the contract schedule, and Subcontractor has not substantiated that it affected the critical path. Contract Amendment No. 2 and CSB Rev. 03 gave Contractor reason to believe VO 58 had no schedule impact. Subcontractor's Schedule Impact Description of 19 October 2020 does not substantiate that the work under VO 58 was on the critical path at that time. The same applies to the Contract Schedule Analysis of 21 April 2021 and the updated version of this analysis of 8 July 2021. The delay analysis report rev. 00 of 17 August 2022 did not include VO 58. However, it was included in the Rev. 1 of 11. November 2022, after the work was completed. This demonstrates the inconsistencies in Subcontractor's schedule claim.

(853) Ankura's schedule analysis in Ankura Expert Report 1 and 2 (FA4 p. 48-49, FA23 p. 5) does not provide sufficient documentation for the EoT claim. HKA Expert Report Delay (FA4 p. 189) has not evaluated specifically whether VO 58 caused a critical delay.

(854) Subcontractor's claim for EoT is time-barred according to Art 13.3 and 15.3. Monthly Progress Reports cannot replace the rolling three-month analysis required after CoC Art. 13.3. None of the delay analyses contain exhaustive studies of the schedule impacts or special measures that could prevent delay.

(855) The Contract Schedule Analysis was submitted more than seven months after VO 58. Contractor then provided its decision in accordance with Art 13.3 in the letter of 22 April 2021. The schedule claim was not submitted to court proceedings within six weeks after this decision, as required in Art 15.3 of the CoC. The claim for EoT is, therefore, time-barred.

(856) Contractor has accepted to cover direct costs of EUR 32,401 for the construction work performed by Subcontractor. Subcontractor now claims additional EUR 32,184 in direct costs and EUR 5,506.96 in preparation costs. Contractor does not know the reason for the increase in direct costs and holds that Subcontractor is not entitled to additional compensation for direct costs.

(857) Subcontractor has not substantiated its claim for EoT costs nor submitted any documentation other than the economic assessment for the costs related to the EoT. Subcontractor has not demonstrated the rates used in the economic assessment. The cost claim is time-barred due to non-compliance with the conditions for the final account under Art 20.4 of the CoC.

(858) The total claim for prolongation costs presented by Kroll, with the addition of costs allegedly incurred by Subcontractor, is not in line with legal requirements. Kroll has not assessed the cost claim for VO 58.

(859) HKA Quantum Expert Report 1 (FA23 6086) assessed the cost claim for VO 58. The report highlighted that EoT costs equal a daily rate of EUR 44,376 and NOK 38,294. Subcontractor has not provided any justification for the alleged 3 days claimed and has failed to provide any evidence supporting the claimed sum.

(860) Based on this, Subcontractor has failed to substantiate any causation between the replacement work and the costs claimed. Therefore, the cost claim under VO 58 must be rejected.

11.3 The Tribunal's assessment

11.3.1 Introduction

(861) Subcontractor's total claim under the VO 58 amounts to 138.636 EUR and 115.183 NOK divided between Direct Costs 32.184 EUR, Extension of time costs, 106.235 EUR + 115.183 NOK and VO preparation costs,5.506 EUR

(862) Contractor has accepted to pay direct costs amounting to 32.401 EUR. Contractor seems to believe that Subcontractor claims an additional 32.184 EUR. The Tribunal does not see it that way. The claimed amount seems to be the same as the amount Contractor has already accepted, cf CAD 3-2. In the Tribunal's view, the direct costs pertaining to this claim are thus not disputed. The essence of the dispute thus pertains to whether

the undertaking of the repair works was an event that entitles Subcontractor to a claim for EoT.

11.3.2 The Tribunal's assessment of Art 3.6 and 5.1.3 of Appendix A

(863) In support of its submission that Subcontractor is not entitled to EoT under VO 58, Contractor has invoked Art 3.6 and 5.1.3 of Appendix A. Article 3.6 obliges Subcontractor to, amongst other things, "fully cooperate with Contractor, Company's other contractors and third parties", to "perform all necessary activities in order to identify all interfaces and perform interface planning and construction coordination".

(864) In the Tribunal's view, Art 3.6 of Appendix A is not relevant to the VO 58 claim. The provision seems to merely provide Subcontractor's cooperation duties in the engineering phase, which is not relevant under VO 58. Regardless of the latter, VO 58 is neither a matter of cooperation nor an interface issue. Subcontractor shall, pursuant to the first paragraph of Art 3.6 of Appendix A, cooperate with the Parties involved in the development and construction of the project "in order to achieve continuity and compatibility of all systems, installations and operations...". Hence, the scope of the provision is not repair works constituting a Variation. Under the second paragraph of Art 3.6 of Appendix A, Subcontractor is obliged to identify all interfaces and to perform interface planning and construction coordination to avoid interface problems. There are, however, no indications that the damages to the feeder cables could have been avoided through more careful planning or a more diligent search for interfaces. On this basis, the Tribunal considers Art 3.6 of Appendix A not to be applicable in the present context.

(865) According to Art 5.1.3 of Appendix A, Subcontractor shall "make every effort to identify potential problems at the earliest possible stage" and perform "... handling of interfaces and coordination with Contractor and Company's other contractors". The wording points towards the execution phase and is therefore, in principle, relevant for VO 58. However, as is the case with Art 3.6, the Tribunal cannot see that there are any indications that the damages to the feeder wires could have been avoided by better planning by Subcontractor. Nor is this a case of not handling interfaces or coordinating sufficiently with other contractors. On a separate note, not decisive for the Tribunal, Subcontractor asserts that the damage was caused when Subcontractor was absent from the tunnel, which is not challenged by Contractor.

(866) Based on the above, the Tribunal concludes that the EoT claim cannot be rejected based on Art 3.6 and 5.1.3 of Appendix A.

11.3.3 The Tribunal's assessment of CoC Art 11

(867) Contractor's main argument for rejecting Subcontractor's alleged cost- and schedule effects under VO 58 seems to be that Subcontractor, according to the second paragraph of CoC Art 11, was obliged to plan the Work in a manner providing sufficient flexibility and resources to handle and absorb Variations to the Work and disturbances as can be reasonably expected in a project like this without impacting the progress. In Contractor's view, the damage to the feeder wire was an event that Subcontractor reasonably should have expected. The latter is contested by Subcontractor.

(868) The Tribunal understands Contractor's submission to entail that Subcontractor – in the absence of the provision set out in the second paragraph of CoC Art 11 – would have been entitled to EoT based on the starting point in CoC Art 13.

(869) The second paragraph of CoC Art 11 reads (Tribunal's emphasis):

> "Subcontractor shall plan the Work in a manner which allows for *significant* flexibility and resources to handle such *variations and disturbances* as can be *reasonably expected* for a project of this nature, without this affecting his ability to perform the Work in accordance with Appendix C."

(870) The Tribunal notes that such a paragraph is not found in NTK. At the outset, the provisions seem to entail that Subcontractor cannot claim adjustment of the agreed schedule on the basis of "variations and disturbances", provided that they could be "reasonably expected". Hence, the provision seems to modify the starting point in CoC Art 13.3. It is not uncommon to include provisions that transfer risk for a given number of days delay to contractor, cf, for instance, Statens Vegvesens standard contracts, where contractors normally assume the risk for six days of delay. The typical purposes of such clauses are to ensure certain flexibility and float in the schedule, and to introduce a threshold to avoid minor claims for EoT. By contrast, the second paragraph of CoC Art 11 seems not to prevent Subcontractor's entitlement to additional compensation due to minor Variations, which sits well with CoC Art 13.2.

(871) As indicated, the key test under the second paragraph of CoC Art 11 is what can "be reasonably expected". The provision does not provide much guidance on how to determine what is considered to be "expected", except for the term "reasonably". As

indicated, however, the provisions seem to modify the clear starting point under Art 13. Unless the provision in the second paragraph of Art 11 is restrictively interpreted, there will be an evident conflict between the two provisions, which presumably was not intended. The latter calls for a narrow interpretation of "reasonably expected". On this basis, the Tribunal concludes that the latter term should be understood as a reference to what, at the time of the Contract, taking into account the "nature" of the project, was likely to occur, namely schedule effects of minor disturbances and minor Variations. It would be very hard to align with CoC Art 13 if the provision more in general prevented Subcontractor from claiming schedule effects of major Variation Orders. Furthermore, at the time of Contract, it is hard to see that major Variation Orders and major disturbances should be "reasonably expected". In the very end, the latter would give Subcontractor incentives to include excessive flexibility and float in the schedule, which would hardly promote an efficient project execution.

(872) Based on the latter, the question under the second paragraph of Art 11 in the present case is whether the replacement of the feeder wire due to the damages caused by someone else could be "reasonably expected" at the time of Contract. In principle, such damages might be considered "disturbances", but the Tribunal cannot see that the latter can be understood to include major damages of the present nature. For the same reason, a Variation Order to replace such a feeder wire could not be reasonably expected at the time of Contract. The present damages to the feeder wire must have appeared highly unlikely at the time of Contract, and it is very hard to see how Subcontractor could have planned for such an event. As indicated, the latter would entail that Subcontractor would have to include excessive flexibility and float in its schedule. Provided that VO 58 could not reasonably be expected at the time of Contract, the Tribunal cannot see that it is relevant that the schedule effect of VO 58 was merely three days. The second paragraph of Art 11 is only applicable if a Variation order like VO 58 was reasonably to be expected at the time of Contract, which it was not.

11.3.4 The Amendment 2 argument

(873) Contractor has argued that the extension of time claim under VO 58 was included in the Amendment 2 settlement. Subcontractor has disputed this. The Tribunal refers to its account and assessment of the Amendment 2 topic in section 10.3.8 above. The Tribunal concluded that Amendment 2 only solved issues under VOR 37, VOR18/DVO

10 and VOR 28/DVO14. Neither the amendment nor CSB 3 will have any bearing on VO 58.

11.3.5 The Tribunal's assessment regarding time-bar of schedule effects

(874) Contractor holds that any claim for EoT is time-barred based on COC Art 13.3 regarding rolling analysis. Subcontractor disputes this. The tribunal refers to its assessment in section 7.5 above, where this argument is rejected. The claim is not time-barred under CoC Art 13.3.

(875) Contractor also holds that the claim is lost because Subcontractor did not take legal action within the time limit set out in CoC Art 15.3.

(876) Contractor issued VO 58 on 11 September 2020, stating that the VO had no schedule impact. Subcontractor rejected this in its letter of 16 September 2020. In its letter of 19 October 2020 Subcontractor claimed 3 days EoT. The claim was maintained in Subcontractor's Contract Schedule Analysis of 21 April 2021, and subsequently in an updated Contract Schedule Analysis of 8 July 2021. Contractor rejected the claim in its letter of 22 April 2021. Subcontractor submitted VO 58 to the Tribunal in its Request for Arbitration of 29 October 2021 (FA1 50). In its response (Answer with counterclaims) of 14 January 2022, Contractor held that the claim was time barred (FA1 71)

(877) It is clear that it took more than the 6 weeks laid out in Article 15.3 from the time of Contractor's decision (22 April 2021) to the request for Arbitration was submitted (29. October 2021). The Tribunal cannot concur that VO 58 must be deemed accepted, cf. the Tribunal's assessments in section 7.2.2 above. Neither is the Tribunal of the opinion that there has been any misuse of the VO system, cf. section 7.2.2 above. The Tribunal therefore concludes that the claim under VO 58 is time barred.

11.3.6 Conditions of Contract Article 2.2

(878) Subcontractor has finally invoked Article 2.2 in support of its claim. The Tribunal refers to its general remarks on Article 2.2 in section 7.10 above. VO 58 is a claim that stems from the relationship between Contractor and Subcontractor and which Contractor may not have forwarded to Bane NOR, as Bane NOR could not possibly have caused the damages. Thus, the Tribunal considers it highly unlikely that AGJV has been awarded any compensation or Extension of Time due to this. It follows from this that CoC Article 2.2 cannot serve as basis for VO 58.

11.3.7 Conclusion

(879) The Tribunal's conclusion is that Subcontractor's EoT-claim under VO 58 is time-barred.

12 VOR 38/DVO 17 – UNFINISHED CIVIL WORKS

12.1 Introduction and factual background

(880) VOR 38 concerns Subcontractor's claim to adjust the contract schedule and compensation due to alleged schedule impact in Subcontractor's OCL work caused by Contractor's unfinished civil works.

(881) On 30 October 2020, Contractor submitted new working windows to Subcontractor ("Windows of Work"). This information formed the basis for Subcontractor's CSB revision no. 4. In connection with implementing the information to the CSB revision, Subcontractor issued VOR 38 on 2 December 2020 (CB1 p. 1646) and claimed that the civil works impeded the progress of Subcontractor's work and caused delays.

(882) Subcontractor states in VOR 38:

> "Reference is made to Contractor's email "Updated Windows of Work" with document attached "AGJV sequence proposal_rev20201030" dated 30th October 2020 and to the Contractor's document "20201130_ Weekly work plan".
>
> Subcontractor is currently involved in the revision of the CSB pursuant the provisions under the Art. 9.2.2. of Appendix D of the Contract and, for such purpose, Subcontractor has used the Contractor's aforementioned information as valid and non-controversial source in order to assess and include relevant Third Party activities as well as Contractor activities since there is no alternative source of information in that regard available for the fulfilment of Subcontractor's obligation under the Art. 9.1 of the Appendix D of the Contract.
>
> Enclosed in the aforementioned Contractor's documents, the performance of civil works activities in Tunnel 2 by Contractor (i.e. rubber profile/sealing works) are planned, and, thus, Subcontractor shall include those activities in its CSB revision in accordance of the aforementioned Art. 9.1 of the Appendix D of the Contract.
>
> As a result of the abovementioned Contractor's activities integration into Subcontractor's CSB, the Delivery Date set out in Appendix C of the Contract is delayed and, thus, the Work cannot be performed according to milestones set out in Appendix C.
>
> Furthermore, the provisions under the chapter 5.2.11 "Railway systems" of the Appendix A of the Contract articulates as follows:
>
> "The scope of Subcontractor is referred to the installation and erection of railways systems on a finished civil construction".

Hence, and pursuant the provisions of the Art. 4.3 paragraph 2 of the Conditions of Contract, Subcontractor hereby asserts that Contractor is impeding the Subcontractor progress of Work according to the milestones set out in Appendix C of the Contract as a consequence of an unfinished civil construction."

(883) In a letter dated 19th February 2021 to Contractor (FA11 p. 391), Subcontractor informed that the ice conditions in Tunnel 2 could impact Subcontractor's activities. On 3rd March 2021, Subcontractor issued rev. 01 of VOR 38 (CB1 p. 1648). Here, they stated that the ice conditions in Tunnel 2, as well as the unfinished civil works as described in the original VOR 38, impeded Subcontractor's progress and caused delays:

"This revision 01 is issued to pursue the current situation and status of the civil works in both Tunnel 1 and Tunnel 2, as the execution of the Subcontractor's critical path is still affected by such situation and, therefore, the Contract Schedule as well.

As shown in the pictures and videos enclosed herein (attachment 1), the current situation inside Tunnel 2, where there are remarkable water inflows and water presence in form of ice, is not only preventing Subcontractor to perform its activities but also has led to an unsafety situation which has blocked the Tunnel 2 in its entirety (please, refer to the Contractor's email "210208 WEEKLY WORK PLAN'1 dated on 08th February 2021 where it is stated in section Tunnel 2 "Elecnor is planning to lay the OCL contact wire and messenger wire where the tunnel is closed due to safety reasons") trapping Subcontractor's machinery therein (please, refer to Subcontractor's letter "853-001 -LT-ASE-AGJV-1440-Tunne! 2 current situation").

Thus, fact is that the civil works in Tunnel 2 & 1 have not finished yet and that such circumstance is still jeopardizing and preventing Subcontractor to perform its activities within the critical path, for instance the OCL laying between CP 01 and CP 03 in Tunnel 2. Hence, Subcontractor hereby asserts that the facts, substantiation and contractual grounds given in the Revision 00 of this VOR still full enforce as the situation has remained invariable since the first submission or it has become even more critical."

(884) Subcontractor also stated that they would submit a calculation of the schedule effect and contract price, but informed that up to the date of revision 1 of the VOR 38 the schedule effect was 111 days, and the impact on the contract price was EUR 3.326.459,10.

(885) Contractor issued DVO 17 on 8th March 2021 (FA7 p. 3492), rejecting Subcontractor's claim based on that Subcontractor was responsible for its planning activities and that it was wrong that civil works in Tunnel 2 affected Subcontractor's work:

"In accordance with the Appendix A, Subcontractor is responsible for planning activities. That is one of its main obligations under the Contract in order to execute a Project successfully. Subcontractor's planning has been far from satisfactory as pointed out in prior correspondence sent by Contractor to Subcontractor in this regard (ref. letter Contractor's letter "UFB-SL-00182", of 18/11/2020).

> Contractor also reminds Subcontractor that the AGJV sequence proposal(s) are tools to facilitate Subcontractor's planning of own activities. It is within Subcontractor's own contractual obligations to propose and execute its Works in the manner that Subcontractors considers appropriate for the best of the Project. Therefore, the statement "there is no alternative source of information" is not, by any means, a statement that Subcontractor can validly or reasonably invoke to justify or excuse the performance of its own contractual obligations. Reference is made to Sections 1.4 and 2.1.1 of Appendix A, and Section 9.2 of Appendix D.
>
> Subcontractor also wrongfully implies that the performance of civil works activities in Tunnel 2 by Contractor (i.e. rubber profile/sealing works affects Subcontractor's Delivery Date set out in Appendix C, delaying the milestones therein established."

(886) Following Subcontractor's monthly report of March 2021 (FA13 p. 2507), Contractor issued a letter to Subcontractor on 1st April 2021 rejecting Subcontractor's claim for EoT because there was no legal basis for VOR 38 (FA12 p. 315). In a letter of 9th April 2021 to Subcontractor, Contractor also held that the appearance of ice in the tunnels could not reasonably have surprised Subcontractor (FA12 p. 333).

(887) On 9 April 2021, Contractor issued DVO 17 revision 1 in response to VOR 38 revision 1 (CB1 p. 1656). Here, Contractor rejected Subcontractor's claim under VOR 38 revision 1 and also held that the claim was time-barred.

12.2 The Parties' submissions

12.2.1 Subcontractor's claims and submissions

(888) Subcontractor claims 46 days of EoT under VOR 38, EUR 1,494,354.90, and NOK 1,275,399.47 in EoT costs, and EUR 13,590 in preparation costs.

(889) Subcontractor holds that Contractor's impedance of Subcontractor's OCL work in the tunnels as described in VOR 38 must be considered a breach of contract under Art 27.1 of the CoC, cf. second paragraph of Art 4.3.

(890) Subcontractor did not breach its contractual flexibility- and coordination obligations. Subcontractor could not be expected to plan for or be liable for delay caused by Contractor's delayed civil works, especially not when Contractor did not manage to keep the progress according to the information given in the working windows and in light of the status per Amendment 2 of 1 October 2020.

(891) The EoT claimed in VOR 38 is reflected in the weekly and monthly progress reports.

(892) The VOR 38 rev. 1 is not a new claim. It is an update. The reference to the ice in Tunnel 2 illustrates the unfinished civil work. The subject of VOR 38 is "Unfinished Civil Works", and the presentation in VOR 38 reflects this.

(893) VOR 38 rev. 0 was submitted timely. If VOR 38 rev. 1 is considered a new event by the Tribunal, Subcontractor holds it was timely. Contractor did, in any case, not invoke that VOR 38 rev. 1 was time-barred in the DVO.

(894) Contractor submitted DVO 17 rev 0 three months after the VOR 38. This is not within reasonable time pursuant to Art 16.2. If VOR 38 revision 1 is regarded as a new claim, Contractor responded by DVO 17 revision 1 one month after the VOR. This is not within reasonable time pursuant to Art 16.2, in particular, considering that works were being performed, and Contractor must have understood that Subcontractor needed a clarification of the situation. The DVO does not mention that the VOR was submitted too late.

(895) In any case, Subcontractor argues that the limit to impose Variations to the Work under the third paragraph of Art 12.1 of the CoC was exceeded when VOR 38 rev. 0 and rev. 01 were submitted.

(896) Regarding the EoT claimed under VOR 38, Subcontractor holds that access to the tunnel ceiling for the performance of TPS and OCL was a prerequisite for Subcontractor to perform the work. The TPS and OCL were on the longest critical path until LVS took over in April 2021.

(897) The rolling analysis requirement under Art 13.3 of the CoC only applies to VOs, not VOR, and is, therefore, not relevant to VOR 38. In the event that Art 13.3 is regarded as applicable to VORs, Subcontractor holds that the limit to impose Variations to the Work was exceeded when VOR 38 was presented. Consequently, Subcontractor is entitled to EoT and compensation even if the rolling analysis requirement was not fulfilled.

(898) Subcontractor is, in any case, entitled to EoT under VOR 38 according to Art 2.2 of the CoC, independent of any other provisions that may lead to a time bar or reduction of the claim presented by Subcontractor. Since Bane NOR has awarded Contractor EoT for the period covered by VOR 38, Subcontractor is entitled to the benefits of such entitlement pursuant to Art 2.2. Contractor is, in any case, not entitled to liquidated

damages for this period when Bane NOR has not claimed liquidated damages from Contractor for the same period.

(899) The economic claim under VOR 38 is sufficiently documented, and Subcontractor fulfilled the requirements for the final account under Art 20.4 of the CoC.

12.2.2 *Contractor's submissions*

(900) VOR 38 is not a Variation to the Work. Contemporaneous evidence indicates that Contractor was able to coordinate the works to avoid clashes and schedule impacts of their work. Subcontractor could not expect to be alone in the tunnels and was expected to cooperate with Contractor's planning and coordination efforts.

(901) Subcontractor accepted full responsibility for the conditions at the site, cf. Art 9 of the CoC Article 9. Subcontractor did not fulfill its cooperation- and coordination obligation under Art 4.3 of the CoC.

(902) VOR 38 was not outside of what Subcontractor reasonably could expect, except maybe the ice. However, the latter concerned a very limited stretch and limited period without any impact on the critical works. Subcontractor did not fulfill its planning obligation in Art 11.1 of the CoC or its obligations under section 3.6 of Appendix A. Subcontractor did not fulfill the obligation to cooperate with other (sub)contractors under section 5.1.3 of Appendix A.

(903) Subcontractor had no legitimate expectation of a dry tunnel. Contractor's obligations towards Bane NOR are not relevant.

(904) VOR 38 revision 01 is time-barred. The impact caused by ice was neither issued timely under Art 4.3 of the CoC nor Art 27.

(905) Contractor further holds that VOR 38 had no impact on the contract schedule. Subcontractor has not demonstrated any causation in accordance with CoC Art 13 and background law. The number of days claimed is not substantiated.

(906) The expert report concludes that VOR 38 did not cause any critical delay, as the critical path went through the LVS activities, cf. HKA Expert Report Delay (FA4 p. 178).

(907) In any case, Subcontractor can only claim the events and impacts referred to in the VOR(s). Subcontractor cannot claim disturbance caused by Norocs when this was not

put forward in the VOR. Subcontractor cannot claim the alleged schedule effects of contact grouting in summer 2021 when this was not included in the VOR. Ice cannot be claimed because it was not included in a timely VOR.

(908) Subcontractor's EoT claims under various analyses differ greatly and are inconsistent. Ankura Expert Report 1 (FA4 p. 67) seems to conclude that VOR had a critical delay of 54 days in window 5, although this was several months before the VOR was issued. HKA Expert Report Delay (FA4 p. 178) concludes that VOR 38 did not cause any critical delay.

(909) Subcontractor's claim for direct cost is not substantiated, cf. HKA Quantum Expert Report (FA23 p. 6130). The claimed prolongation costs are not supported by substantial evidence and must be rejected.

12.3 The Tribunal's assessment

12.3.1 The contractual basis for the claim

(910) VOR 38 is a claim for compensation due to delay only. Subcontractor has not presented claims for direct costs. There is no disagreement as to the fact that Subcontractors progress was impacted due to Contractor's unfinished civil works. Contractor, however, holds that the adjustments made did not exceed what Subcontractor should reasonably have expected, cf CoC Article 4.3. Subcontractor holds the opposite view and argues that the Contractor's delay constituted a breach under CoC Article 27.

(911) VOR 38 was initially a response to Contractor's updated Windows of Work provided 30 October 2020 (FA6 5048). The new Windows of Work was significantly different from the previous work window (19 April 2020) and showed 1) a later commencement of Subcontractor's OCL works and 2) Contractor works (rubber profiles, injection, cabling and permanent way) immediately in front of and in parallel with Subcontractor's works in the tunnels. It is not disputed that the changes were caused by prolonging Contractor's sealing works in the tunnels.

(912) The water leakages that Contractor worked to mitigate created special problems in the cold-weather period, as the water froze and created ice crevasses incompatible with conducting OCL works as planned. This was the immediate background of VOR 38 rev 1.

(913) Contractor has acknowledged that the new Windows of Work postponed the commencement of the OCL installation works, which increased the extent of parallel activities. Contractor also agrees that ice in the tunnels was prevalent during the winter.

(914) However, in Contractor's view, any delay incurred was caused by Subcontractor's failure to plan and coordinate its works with other ongoing activities. In addition, Contractor holds that the impediments to the progress were minor and did not go beyond what Subcontractor reasonably should have expected. In principle, these are two separate submissions, but in practice, they are to some extent interwoven. The Tribunal will assess both submissions under section 12.3.2 below.

(915) Contractor has invoked a number of contractual provisions in support of its rejection, i.e., CoC Article 4.3, CoC Article 11.1, Appendix A section 3.6 and Appendix A section 5.1.3. These will be assessed under section 12.3.3 below.

(916) Contractor has also invoked CoC Art 9, which states that "Subcontractor has investigated and examined Contractor's site, its surroundings and local conditions" and that it has accepted "full responsibility" for i.a. "the conditions of Contractor's site, its nature and its suitability for execution of the Work" and for "the weather and climate conditions". In the Tribunal's view, this provision is irrelevant to the case. There is nothing in the conditions at the site as such that indicated delays in the Contractor's execution. The CoC Article 9 argument will therefore not be assessed further.

12.3.2 *Did Subcontractor comply with its obligations to coordinate its works with other ongoing civil works?*

(917) CoC Article 4.3, reads:

> "Subcontractor shall within the framework established by the Contract, cooperate and coordinate his progress and performance of the Work with Company, Contractor, other contractors, Norwegian Public Road Administration [...] land owners, authorities and other Third Parties affected by the Work, and organize his operations to ensure that all activities on the Site(s) are carried out efficiently and without delay."

(918) The Parties agree that Subcontractor had an obligation to coordinate its activities with other parties in the project. However, CoC Article 4.3 second paragraph clearly assumes that Subcontractor's coordination duties have certain limitations. The dispute thus pertains to the extent of Subcontractor's obligation, i.e. whether the circumstances invoked by Subcontractor went "beyond what Subcontractor could reasonably have expected" or not.

(919) The new Windows of Work of 30 October was submitted less than a month after Amendment 2 was signed and only two weeks after the CSB rev 03 was submitted. At that stage, the OCL works were already significantly delayed. In the Tribunal's opinion, the further postponement of the commencement of OCL works and the assumption of increased parallel activities in the window are not events that Subcontractor could have avoided by more careful planning and/or adequate coordination with other contractors. On the contrary, the fact that the new window was submitted just two weeks after the Parties had planned and established a completely new CSB implies that the adjustments were not a result of poor planning and/or lack of cooperation but due to delay in Contractor's remedial works. The delayed commencement was significant and clearly went beyond what Subcontractor reasonably could have expected under Art 4.3 second paragraph. It also went beyond what Subcontractor was obliged to mitigate under CoC Article 11.

(920) Furthermore, even if a certain amount of parallel work may be considered an "inherent" or recurring issue in a major project like the present, it is The Tribunal's opinion that the extent and nature of the suggested parallels in the new window were neither "inherent" nor foreseeable to Subcontractor. There are no indications that the Parties ever considered that Contractor should conduct extensive sealing works at the same time as Subcontractor conducted its OCL activities. And more important, the Tribunal cannot see that Subcontractor reasonably should have foreseen the latter. Nor was it foreseeable that (Noroc's) TPS activities and (Subcontractor's) OCL activities would run in parallel, even if the former activity was planned to be executed during the night. In this respect, a reference to the project's progress plans is illustrative. No time slots were reserved for remedial works, and TPS and OCL works were sequential work, not parallel work, within each tunnel. The latter must be considered the benchmark to consider what Subcontractor could reasonably be expected to foresee under CoC Art 4.3 (2), and hence significant deviations could not reasonably be expected.

(921) Contractor has argued that Subcontractor could have coordinated the different activities in a manner that nevertheless enabled the execution of different activities within the same time period. Contractor also argues that Subcontractor, in fact, did this. In this context, Contractor has referred to a number of weekly work plans and progress reports and the fact that Noroc's TPS works were performed during night

shifts. Subcontractor does not deny that coordination activities took place, but rejects that the replacement activities did not impact the critical path.

(922) It is difficult for The Tribunal to get a clear picture of the coordination activities that were actually performed and to what extent Subcontractor, through this coordination, could and should have mitigated the situation. The Tribunal is not oblivious to the fact that there probably were periods, for instance, in December 2020, when no other activities were performed in the tunnels, which, in principle, could have been utilized by Subcontractor for OCL works. However, ad hoc utilization of time windows is indeed challenging because it is hardly possible to plan for and especially when the work in question requires heavy equipment. The Tribunal has also noted that Contractor has not provided any specific examples of Subcontractor's alleged non-contractual planning.

(923) The Tribunal has noted that these measures allegedly were established to protect Contractor from Subcontractor taking commercial advantage of the information available. Contractor has not presented any evidence to support this allegation. Even if this was a challenge, Contractor should have applied other sanctions against such conduct, including termination as a last resort.

12.3.3 Other assertions

(924) Contractor has invoked Appendix A section 3.6. As set out in section 11.3.2, the provision only applies in the engineering phase. Thus, the provision does not apply to VOR 38.

(925) Contractor has further invoked section 5.1.3 of Appendix A, which obliges Subcontractor to i.a., plan and manage its works "in close cooperation with other contractors and Contractor and to "ensure all construction activities are coordinated in such manner as to avoid any adverse effects to the work", and to "handle interfaces and coordination with Contractor and Company's other contractors." As set out in section 11.3.2, the Tribunal does not consider the provision to have any effect beside of CoC Art 4.3 and 11.

(926) Contractor argues that Subcontractor could not expect a "perfectly" or "completely" dry tunnel. As concluded above in section 10.3.3, the Tribunal finds it clear that the nature of and magnitude of water leakages were, in any case, far from "completely" dry. For

the same reason, it is not necessary for the Tribunal in the present context to consider what in general shall be considered "completely" dry.

(927) Contractor has also argued that Contractor was "not bound to make any part of the site available exclusively to Subcontractor", cf. CoC Article 4.3 (3). This is correct. However, it is uncertain whether this is contended by Subcontractor. It follows from Art 5.2.11 of Appendix A that Subcontractor should perform its works on a finished civil construction. This did not entail that Contractor had to finish all its works before Subcontractor commenced any of its works, only that Contractor should finish significant activities in the planned sequence before Subcontractor commenced its work in the same sequence. This sequential progress was, to a large extent, abolished in the new window.

12.3.4 Preliminary conclusion

(928) Based on the above, the Tribunal's opinion is that the new Windows of Work of 30 October 2020 entailed rescheduling the progress of the work in a way that Subcontractor could not have foreseen, planned for or coordinated its way out of. Hence, the new window exceeded what Subcontractor had to accept under CoC Art 4.3, and VOR 38 must therefore be considered a Variation to the Work.

12.3.5 Ice conditions and other circumstances – VOR 38 rev. 1 and the scope of VOR 38

(929) In VOR 38 rev 1 of 3 March 2021, Subcontractor invoked ice conditions in the tunnel as relevant to its claim, as ice allegedly caused further delay to its works. In its letter of 21 April 2021, Subcontractor attributed 10 of the total 46 days of delay to delays caused by the ice.

(930) Contractor rejects Subcontractor's claim partly due to the ice being another issue than VOR 38 Rev. 0, and in Contractor's opinion, therefore, time barred due to late notification. Contractor also holds that the ice was a minor problem and, therefore, a circumstance for which Subcontractor was liable, cf. CoC Art 4.3 and 11.1.

(931) The Tribunal will first assess whether the problem with ice was a separate event outside the scope of VOR 38 rev. 0. VOR 38. Rev. 0 pertained to the changes in the Windows of Work on 30 October 2020. The request was rooted in the delay in Contractor's remedial works in the tunnels ("unfinished civil works"). As set out in section 10.3.8, the remedial works aimed to prevent water inflow in the tunnels.

(932) The ice crevasses formed in January/February 2021 were caused by the same water inflow and, therefore, a result of the same conditions that triggered rev 0. That Subcontractor at the time did not view the water as a new and separate issue, follows from the wording of rev 1, where Subcontractor, amongst other, stated, "the civil works in Tunnel 2 & 1 have not finished yet, and that circumstance is still jeopardizing and preventing Subcontractor from performing its activities within the critical path". Subcontractor also pointed to the fact that "...the situation has remained invariable since the first submission [of VOR 38 rev 0 – VGR's comment]...". Contractor did not dispute this at the time. Nor was preclusion or the need for a separate VOR addressed in the DVO 17 rev 1 of 9 April 2021.

(933) Whether the issue of the ice crevasses was a new condition that required a separate VOR must be decided by an overall assessment of all relevant conditions, taking into account how the original VOR could reasonably be understood.

(934) In this case, the Tribunal points to the fact that the event that generated the obstacle was clearly defined in the original VOR and that both rev 0 and rev 1 address obstacles due to what is, in principle, the same issue, namely water inflow. Even if ice creates other challenges than water, the connection between the two obstacles is, in this case, so close that it would not be reasonable to demand a separate VOR. The Tribunal also put significant weight on the wording of VOR rev 1, cf. the quotes above. If Contractor meant that the account provided in the VOR was caused by another incident, it would have been natural to point to this fact. This was not done, neither in the initial response, nor in the subsequent DVO. The Tribunal, therefore, concludes that the effects of the ice crevasses are not a new circumstance that is time-barred due to late notification.

(935) The next question is whether the ice in fact impeded Subcontractor's progress and to what extent. Contractor has argued that Subcontractor exaggerated the ice condition problems and that the problem, in reality, was insignificant and should have been handled and absorbed by Subcontractor without impacting the progress cf. CoC Article 11.1. Subcontractor disputes this.

(936) Apart from the VOR itself and some pictures, the evidence provided regarding the extent of the problem is limited. The absence of – or rather a shortage of - contemporaneous evidence is invoked by Contractor as evidence that the challenges were insignificant. However, in addition to the documents mentioned above,

Subcontractor has referred to a set of Weekly reports from February and March that describe the lack of access to the tunnels due to ice. Thus, there are clear indications that ice conditions did impact Subcontractor's execution.

(937) During the Hearing, the Parties also referred to other elements regarding VOR 38, especially the fact that Contractor continued its grouting works until July or even August 2021 and also that Norocs performed some of the works which allegedly impeded Subcontractor's progress. The Tribunal's understanding of the situation is that the extension of time claim under VOR 38 was already fully developed in Subcontractor's letter 21 April 2021. Subcontractor's claim for an extension of time has not increased since then, and the Tribunal thus fails to see what extra impact these incidents may have had.

12.3.6 Contractor's submissions regarding time-bar

(938) Contractor holds that VOR 38 is lost due to Subcontractor not submitting a rolling schedule analysis in accordance with CoC Article 13.3 (2). Subcontractor disputes this.

(939) The tribunal refers to its general assessment in section 7.5 above, where this argument is rejected. The claim is not time-barred under CoC Art 13.3.

(940) Contractor also holds that the claim is lost due to Subcontractor not providing documentation pursuant to the provisions in CoC 20.4. The Tribunal does not agree with this, cf the general assessment under section 7.8 above

12.3.7 Conclusion

(941) VOR 38 is considered a Variation to the Work.

(942) The conclusion entails that there is no need to consider whether CoC Art 2.2 may serve as a separate basis for VOR 38.

13 VO 64 – OCL LAYING ACTIVITIES IN TUNNELS 1 AND 2

13.1 Introduction and factual background

(943) The dispute regarding VO 64 concerns the impact on the schedule and contract price of an instruction from Contractor to Subcontractor to discontinue the OCL installation in Tunnels 1 and 2.

(944) Contractor issued VO 64 on 10 February 2021 (CB1 p. 1276). It states:

> "This Variation Order is issued to instruct Subcontractor not to continue with the installation activities of the Contact Wire and Messenger Wire in inbound tunnel from CP 35 to the northern Interface point and in Outbound tunnel from CP 35 to the northern Interface point.
>
> Follow up meetings for the progress of the activities need to be carried out between Contractor and Subcontractor in order to assess when the installation of the Contact wire and Messenger wire can continue."

(945) VO 64 further assumes that there would be no impact on the contract schedule and that compensation was to be agreed upon.

(946) On 5th March 2021, Subcontractor issued a letter requesting Contractor to instruct the resumption of the OCL activity no later than 29 March 2021 (FA11 p. 396). They also held that the instruction should be regarded as a "suspension" of Subcontractor's work under Art 18.1 of the CoC. Contractor submitted a letter on 26 March 2021 confirming that Subcontractor could resume the OCL installation on 29 March 2021, as requested (FA12 p. 310).

13.2 The Parties' submissions

13.2.1 Subcontractor's claim and submissions

(947) Subcontractor claims 17 days of EoT, EUR 599,293.33 and NOK 505,813.86 in EoT- costs, and EUR 6,795 in preparation costs.

(948) Due to the instruction in VO 64, Subcontractor could not continue performing critical work, i.e. OCL in Tunnel 1 and Tunnel 2. This gives Subcontractor a right to EoT. Subcontractor performed work that was possible to do, but the critical work could not be performed.

(949) The schedule effect and basis for calculating the EoT are described in Subcontractor's monthly progress report of February 2021 and the schedule analysis of 21st April 2021.

(950) Subcontractor should not have been able to handle additional work pursuant to the Contract's regulation of flexibility and coordination. Subcontractor cannot be expected to plan for or be liable for Contractor's need to stop the work because of delay caused by Contractor or Norocs.

(951) The deadline for the rolling analysis under Art 13.3 of the CoC was 14th March 2021. If Subcontractor is considered not to have submitted a rolling analysis, the claim cannot be time-barred under this provision, nor Art 15.3 of the CoC.

(952) If the delay analysis in the MPR of February 2021 is regarded as sufficient pursuant to Art 13.3, the analysis must be considered timely. Contractor did not respond to the analysis and has therefore not given "notification of its decision within reasonable time" pursuant to the third paragraph of Art 13.3. The consequence is that the claim must be deemed accepted. Further, in such case, Subcontractor holds that Art 15.3 of the CoC does not apply.

(953) If Subcontractor's letter of 21st April 2021 is considered the first time Subcontractor presented an Art 13.3 analysis for VOR 64, the analysis is not timely. Further, the response invoked by Contractor in the letter of 19th April 2021 led to a milestone on 2nd June 2021 for court proceedings under Art 15.3 of the CoC, which Subcontractor did not meet. In such case, Subcontractor holds that they are entitled to EoT due to the consequent and systematic misuse by Contractor of the VO-system, disloyal conduct throughout project execution, and the exceedance of limit for Variations under Art 12 of the CoC.

(954) Subcontractor is, in any case, entitled to EoT under VO 64 pursuant to Art 2.2 of the CoC, independent of any other provisions that may lead to a time bar or reduction of the claim presented. Since Bane NOR has awarded Contractor EoT for the period covered by VO 64, Subcontractor is entitled to the benefits of such entitlement pursuant to Art 2.2. Contractor is, in any case, not entitled to liquidated damages for this period when Bane NOR has not claimed liquidated damages from Contractor for the same period.

(955) The economic claim under VOR 38 is sufficiently documented, and Subcontractor fulfilled the requirements for the final account under Art 20.4 of the CoC.

13.2.2 Contractor's submission

(956) Contractor holds that Subcontractor is not entitled to 17 days EoT. Contractor's instruction did not impact the contract schedule because the critical path was on the LVS works in the cross passages and Subcontractor could perform other works while the OCL work could not continue.

(957) Subcontractor had an extensive planning and coordination obligation under the Contract, cf. Art 4.3 and second paragraph of Art 11.1 of the CoC. The instruction under VO 64 must be considered a Variation that reasonably could be expected in a project of this nature. With a project of this size, Subcontractor had to expect Variations as VO 64 and should handle such variations with significant flexibility and avoid delays.

(958) Subcontractor was also obliged to coordinate its work with other contractors and avoid adverse effects on the work, cf. section 3.6 second paragraph and section 5.1.3 of Appendix A. This includes an obligation to align its progress and working sequence with other project activities, including civil works performed by Contractor

(959) Article 18.1 of the CoC was not applicable to this situation. The provision is a safety valve if Contractor needs to adapt to the progress of the project's development in general. VO 64 was not an extraordinary situation.

(960) Subcontractor's schedule analyses and delay analysis report of 17 August 2022 do not substantiate that the discontinuance of the OCL had an impact on the contract schedule. The analyses are inconsistent. Ankura Expert Report 1 (FA4 p. 62) confirms that the critical path ran through the LVS system. The HKA Expert Report Delay 1 and 2 concluded that VO 64 did not result in any critical delay (FA4 p. 214 and FA23 p. 6699).

(961) Subcontractor's claim for EoT is in any case time-barred according to CoC Art 13.3 and 15.3. Subcontractor's schedule analyses do not fulfill the requirement for rolling analysis in Art 13.3. The analysis from Subcontractor was not submitted within the three-month period that expired in February 2021. Contractor rejected the schedule impact and made its decision in the letter issued on 22 April 2021. Subcontractor did not submit the claim for schedule impact to arbitration within six weeks after Contractor's decision, as required in Art 15.3 of the CoC.

(962) Contractor also rejects Subcontractor's cost claim. Subcontractor has not presented any documentation to substantiate the claim for preparation costs. The cost claim is also time-barred due to lack of compliance with the provision of the Final Account in Art 20.4 of the CoC.

(963) Neither has Subcontractor substantiated its claim for EoT costs. The EoT cost breakdown included in the Final Account proposal is insufficient. Subcontractor has

not used the rates in the contract. The total claim for prolongation costs presented by Kroll is not in line with legal requirements. The HKA Quantum Expert Report 1 (FA23 p. 6169-6170) highlights that the claimed EoT costs equal a daily rate of EUR 35,253 and NOK 29,754. HKA highlights that Subcontractor has not provided any justification or substantiation in support of the 17 days claimed and has failed to provide any evidence supporting the claimed amount.

13.3 The Tribunal's assessment

13.3.1 Introduction

(964) VO 64 was submitted on 10 February 2021 to allow Norocs (and Contractor) to finish their works in the tunnel before Subcontractor commenced its works. As such, VO 64 has a lot of similarities with VOR 38 pertaining to the same type of work (OCL instalment) in the same tunnels (Tunnels 1 and 2) and within the same timespan (February/March 2021). VO 64 thus appears as a particular case within the wider and more general VOR 38 topic.

(965) Under CoC Art 13 Subcontractor is, as a starting point, entitled to EoT and/or additional compensation to the extent caused by a Variation. However, consequences that should have been avoided or mitigated through Subcontractor's adequate planning and coordination is Subcontractor's risk.

13.3.2 Did Subcontractor fail to plan its progress with sufficient flexibility, cf CoC Art 4.3 and 11.1 (2)?

(966) Contractor holds that the instruction comprised in VO 64 was a Variation that Subcontractor reasonably should have expected and, by careful planning and adequate coordination, should have been able to absorb without incurring any delay according to CoC Art 4.3 and 11.1 (2). In Contractor's view, Subcontractor's claim proves that Subcontractor failed to comply with the said obligation.

(967) The Tribunal understands the said provisions to provide an obligation for Subcontractor to plan its works flexibly to allow for and absorb certain foreseeable incidents. Subcontractor shall also coordinate and carry out necessary measures to avoid potential conflicts with other contractors. The Tribunal cannot, however, see that the further content of this obligation can be set out in general. Hence, whether Subcontractor has complied with these obligations must be considered based on the specific circumstances and context of VO 64.

(968) In addition to pointing out the size and complexity of the project in general, Contractor has argued that several weekly progress reports in February and March of 2021 prove that the Parties planned for and that Subcontractor was able to perform other works instead of the planned OCL works. The argument seems to be that the instruction did not cause a net delay. The Tribunal cannot follow this line of reasoning. The said reports do not explicitly address the contested matter. Furthermore, Subcontractor does not argue that it was prevented from performing any work. Subcontractor's submission is that the other works performed in this period did not mitigate the delay on the critical path in Tunnels 1 and 2. A significant part of the "alternative" work carried out by Contractor in the relevant period seems to have been performed in Tunnels 3 and 4 (earthing, TPS support punches, handrail arrangement, pulley installation, TPS and OCL punches etc.), in the cross passages (cable laying for telecom and signaling) and other places (firefighting supports and pipe assemblies and cable tray works in Atit North etc.). The Tribunal cannot see that Contractor has explained or proven that the work carried out in Tunnels 3 and 4 as such could or should have mitigated the critical delays incurred in Tunnels 1 and 2.

(969) In the assessment of VOR 38 above, the Tribunal concluded that the unfinished remedial works in Tunnels 1 and 2 were not an event Subcontractor could or should reasonably have expected or mitigated by adequate planning and coordination. In addition to the arguments referred to there, the Tribunal points to the fact that the instruction in VO 64 was given immediate effect, allowing Subcontractor little or no time and flexibility to consider adjustments to mitigate the effects of the instruction on the progress. The Tribunal has also noted that Contractor has not made any specific objections to Subcontractor's assertion that it, at the time of the instruction, had performed all OCL-works in Tunnels 1 and 2 that were possible to perform.

(970) Based on the above, the Tribunal concludes that Subcontractor did not fail to comply with CoC Art 4.3 and 11.1 (2) regarding VO 64.

13.3.3 Has Subcontractor failed to coordinate its scope with other contractors, cf. Art 3.6 and 5.1.3 of Appendix A?

(971) Contractor also holds that Subcontractor has breached its coordination- and interface duties set out in Appendix A, sections 3.6 and 5.1.3.

(972) The Tribunal finds it clear that section 3.6, which concerns Subcontractor's obligations in the engineering phase, are not relevant to VO 64. The instruction triggering VO 64, and the timing of the instruction, could not have been foreseen or considered under section 3.6 as a part of the engineering phase.

(973) The provision in section 5.1.3 of Appendix A requires Subcontractor to make every effort to identify potential problems relating to other contractors' works and mitigate their impact. The provision also states that Subcontractor shall allow for the effect of parallel work in his prices and schedule milestones. Similarly to CoC Art 4.3 and 11.1 (2), the Tribunal cannot however see that the further content of this obligation can be set out in general. It is, however, evident that such a provision in Appendix A cannot be properly understood as an unconditional obligation to mitigate and absorb any delays. The obligation must, read in conjunction with CoC Art 4.3 and 11.1 (2), be limited to what Subcontractor could reasonably have foreseen and mitigated. Hence, the Subcontractor could not assume that everything would progress as planned. At the same time, it is evident that Subcontractor could not and should not plan for what was unlikely to happen. The reason for VO 64 was Contractor's remedial works, and the instruction was due to the magnitude of the remedial works. The Tribunal cannot see that Subcontractor could and should have prepared for remedial works of such a magnitude. Neither Subcontractor nor Contractor could expect the magnitude of the remedial works.

13.3.4 The significance of Subcontractor's letter of 5 March 2021

(974) Contractor has pointed to the fact that Subcontractor, in its letter of 5 March 2021, requested Contractor to instruct the resumption of the works by no later than 29 March 2021 and that Contractor, in its letter of 26 March 2021, confirmed that Subcontractor could resume installation from said date.

(975) The Tribunal understands Contractor's assertion to entail that Subcontractor, in its letter of 5 March, implied that a resumption of the work no later than 29 March would have no schedule impact. Subcontractor disputes this and has argued that its letter of 5 March was sent to mitigate the impacts of the instruction, not to confirm that no delay had been incurred.

(976) In the Tribunal's opinion, Subcontractor's letter might be understood as asserted by Contractor, namely as a notification to Contractor that the instruction would not

impact the progress if works were allowed to resume by 29 March 2021. In the letter, Subcontractor stressed "the necessity to resume the OCL activity ... as a matter of urgency in order *to avoid* impact on the Project's progress" (Tribunal's emphasis). However, in the letter, Subcontractor also referred to the adjusted progress plan included in the Monthly Progress report for February (2021), where the starting date was set to 29 March, and stated that "... that assumed date could *already* imply an impact on Contract Schedule and therefore the Contract Price" (Tribunal's emphasis). On this basis, the two statements are not necessarily entirely consistent. The effect of Contractor's assertion is that such statements may be considered a kind of implicit or explicit admission or waiver. There should, however, due to the severe effects be a threshold to consider such letters to constitute an admission or waiver. Hence, it should follow relatively clearly from a straightforward reading that the intention was to waive or admit a certain legal position. Otherwise, writing such letters, which are frequent in large projects, would turn into a legal exercise.

(977) Based on this, the Tribunal disagrees that the letter may be reasonably understood to entail that Subcontractor has lost its entitlement.

13.3.5 Contractor's submissions regarding CoC Art 13.3 and 15.3

(978) Contractor holds that VO 64 is lost due to Subcontractor not submitting a rolling schedule analysis in accordance with CoC Art 13.3 (2). Subcontractor disputes this. Subcontractor does not dispute that Art 13.3 applies to VOs, but contests that the EoT-claim under VO 64 is precluded thereunder.

(979) Thus, the question is whether Subcontractor has complied with its obligations under CoC Art 13.3 second paragraph. The provision reads:

> Effects that are not possible to agree on in the individual Variation Order, shall be claimed collectively by Subcontractor after the expiry of each three-month period starting from the signature of the Contract. Such claim shall cover every effect of the Variations to the Work prescribed over the relevant three-month period. The claim shall contain an exhaustive analysis of the schedule consequences that Subcontractor considers such variations will entail. The analysis shall state which special measures that can be implemented in order to comply with the Contract Schedule and what effect it will have if such measures are not implemented.

(980) The analysis must according to CoC Art 13.3 third paragraph be submitted "no later than 15 days after the expiry of the three-month period that the analysis concerns". VO 64

was issued on 10 February 2021. As the Contract was entered into on 29 February 2016, the expiry date in this case is 15 March 2021.

(981) After VO 64 was issued, Subcontractor reported progress in MPRs. VO 64 was included in the MPR for February 2021 issued on 1 March 2021, within the expiry date. The Tribunal must decide whether the said report met the requirement of a rolling analysis.

(982) The MPR (FA13 p. 2370) spans 40 pages and provides an overview of Subcontractor's progress at that time. Section 8 in the report provides a register over VOs and VORs, which includes VO 64. Section 1, *Summary,* provides an outline of the progress, and refers, *inter alia*, to Amendment 2, and states that "new impacts" had taken place after that, and which could not be managed under the Amendment 2. Subcontractor has invoked several VORs, in addition to VO 64 reading:

> "In addition, Contractor submitted on 11th February 2021 the Variation Order No. 064 "OCL installation in T 1 and 2" instructing Subcontractor to "not to continue with the installation activities of the Contact Wire and Messenger Wire in Inbound tunnel from CP 35 to the northern Interface point and in Outbound tunnel from CP 35 to the northern Interface point".
>
> As thoroughly stressed in the past by Subcontractor, these activities (OCL) are Subcontractor's critical path so, despite that Subcontractor has tried to be as flexible as possible, a preliminary impact in the Contract Schedule has been identified in this Monthly Report as the VOR 038 has impeded to mitigate the impact by executing other Subcontractor's critical activities.
>
> Hence, whereas the final impact as a result of the facts hereinabove depicted cannot be assessed thus far, the current progress of Work has been already affected and, hence this Monthly Report of February 2021 depicts a preliminary impact on the milestones set out in Appendix C of the Contract by pushing the Delivery Date and RFCC milestones up to 17th August 2021, for the events given hereinabove in the chapter 1 of this report."

(983) These updates were further developed in subsequent MPRs. The Tribunal considers the said MPRs to meet the rolling analysis requirements in CoC Art 13.3. As stated above in section 7.5.3, the term "analysis" is not unambiguous, and the depth of the analysis must take into account the time limit of 15 days. Furthermore, the purpose of the provision, to inform Contractor of the situation, is in the Tribunal's opinion achieved.

(984) Based on the above, the EoT-claim under VO 64 is not considered precluded under the rolling analysis mechanism under CoC Art 13.3.

(985) The next question is whether the EoT-claim under VO 64 is nevertheless time-barred under CoC Art. 15.3.

(986) VO 64 was issued on 10 February 2021. In the VO it was stated that the Variation did not have any schedule impact. However, schedule effects of, *inter alia*, VO 64 were included in Subcontractor's subsequent Weekly Progress Reports. In its letter 00225 of 1 April 2021 (CB p. 2072), Contractor contested the schedule effects. Subcontractor thereafter submitted its viewpoints to VO 64 in a letter of 4 June 2021 asserting that the VO did have schedule impact. This was followed up in Subcontractor's updated Schedule Analysis of 8 July 2021, and later in the Delay Analysis Report of 17 August 2022.

(987) The start of the 6-week period that follows from CoC Art 15.3 is the date Contractor rejected Subcontractor's EoT-claim. This is not the date of the VO as Article 15.3 refers to Article 13.3 (3), which states that the relevant starting point is Contractor's rejection of a rolling analysis. In this case no such separate analysis has been provided. However, in the present context, the Tribunal considers the running weekly and monthly progress reports as sufficient. Hence, the start of the 6-week period must be the date that Contractor rejected Subcontractor's claim in such report. In the present case, Contractor rejected the impact noted in Subcontractor's MPR of March 2021 in letter 1 April 2021, while Subcontractor did not submit the claim to arbitration before the RfA in October 2022.

(988) The Tribunal cannot follow Subcontractor's submission that Contractor did not to respond within "reasonable time" as per CoC Art 13.3 (3) i.f., because Contractor contested the schedule effect in its letter of 1 April 2021 (CB p. 2072). In any case, a late response in this respect cannot be considered a misuse with the effect that the time-bar provision in CoC Art 15.3 does not apply. The latter time-bar provision must be considered a firm procedural time-bar provision that cannot be set aside without a clear support in the wording of the provision. For the same reason, neither the wording of CoC Art 2.2 nor Art 15.3 provide any support that Subcontractor can rely on Art 2.2 when a claim is time-barred under Art 15.3.

13.3.6 Conclusion

(989) Based on the above, the Tribunal concludes that the EoT-claim under VO 64 is time-barred under CoC Art 15.3.

14 VOR 80/DVO 49 – POWER INCREASE UPS

14.1 Introduction and factual background

(990) The dispute under VOR 80 concerns the procurement and installation of additional UPS equipment due to increased power consumption in the cross passages. The Parties disagree whether VOR 80 constitutes a Variation, and if so, to what extent Subcontractor is entitled to EoT and cost compensation.

(991) UPS is the battery system providing emergency power to high-priority loads if the input power source or the main power fails. A number of UPS are installed in 42 cross passages at FSS Åsland, FSS Vevelstad, Tren (Telecom building North) and Tres (Telecom building South).

(992) Increases in power loads, such as motorized doors and handrails, increased the required power to be provided by the UPS system, which again necessitated procuring and installing additional UPS equipment and batteries.

(993) In VO 13 of 26 July 2017 (FA24 p. 6024), Subcontractor was instructed, among other things, to use Eltek as its subcontractor of UPS. EPE was issued to Subcontractor on 12 July 2018 (FA 26 p. 2), and Revision 04C of this package was used as a basis for procurement of UPS (FA6 p. 2077). Subcontractor signed the contract with Eltek on 22 November 2018 for the UPS equipment and batteries (FA6 p. 2467). The UPS equipment was delivered on-site on 29 April 2019 and 11 June 2019. The UPS batteries, however, were scheduled for delivery later to ensure they were not energized later than one year after being manufactured, which is beneficial to ensure a long lifetime of such batteries.

(994) Subcontractor began installing UPS equipment shortly after delivery, finishing mainly in March 2020. On 2 September 2020, Contractor submitted Engineering Transmittal no. 149 (FA6 p. 4753), which included modifications of the SLDs in terms of power increase in the UPS. As indicated, the reason for the modifications was increased power consumption, e.g., the addition of motorized doors and handrails. This required structural modifications and additional battery cabinets in eight low-voltage areas.

(995) At first, Subcontractor did not discover the modifications in the design of the LVS panel board. On 15 February 2021, the UPS batteries were delivered to the warehouse on site. Subcontractor started installing the UPS batteries in mid-August 2021. On 26 August 2021, Subcontractor submitted a letter to Contractor and informed about the discovery

of modifications in the power of several UPS in the Single Line Diagrams (FA7 p. 5591). On this basis, Subcontractor invoked Art 4.3 of the CoC arguing that there were inconsistencies in the engineering documents, that the changes were not marked in clouds, and included a list of the discovered deviations. They also requested a meeting.

(996) Contractor responded to Subcontractor's letter on 27 August 2021 (FA7 5598) confirming that a meeting had already been held. To assist Subcontractor, however, Contractor committed to provide documentation about the loads to be supplied in all cross passages.

(997) Subcontractor followed up with a new letter to Contractor on 9 September 2021 to Contractor (FA7 p. 5288). In the letter, Subcontractor requested Contractor to update the layout of the cross passages where the new UPS were to be installed. They also requested Contractor to calculate the overall power factor for each cross-passage.

(998) On the same day, 9 September 2021, Subcontractor submitted VOR 80 "Power Increase UPS" stating that (CB1 p. 1724):

> "Reference is made to both Subcontractor's letter "853-001-LT-ASE-AGJV-1781" and "853-001-LTASE- AGJV-1817" dated 26th August 2021 and 09th September 2021 respectively.
>
> Pursuant the provisions under the Art. 16.1 of the Conditions of Contract, Subcontractor hereby issues this VOR 080 as the work is not part of Subcontractor's obligations under the Contract by virtue of the facts duly substantiated in the aforementioned Subcontractor's letters.
>
> Reference is also made to Subcontractor's letter "853-001-LT-A5E-AGJV-1330" dated 17th November 2020.
>
> The limit in Art. 12.1 paragraph 3 of the Conditions of Contract is exceeded. Contractor has no right to order Variations to the work, and the variation order system of the Contract is no longer valid."

(999) In letters of 26 September 2021 (FA7 p. 6048) and 5 October 2021 (FA7 p. 6351), Subcontractor requested Contractor to confirm the power factor value to be adopted. The so-called power factor measures how efficiently the UPS is using electrical power. Contractor responded in a letter of 06.10.2021 that the decision on the power factor to be used was Subcontractor's responsibility.

(1000) On 6 October 2021, Subcontractor submitted the purchase order for the additional UPS equipment and batteries to Eltek (FA7 p. 6373). On 22 October 2021, Subcontractor

confirmed that they had implemented mitigation measures to reduce the impact of the modification to the UPS system (FA7 p. 6469).

(1001) Subcontractor began structural modification in the low-voltage areas in December 2021 and started installing the UPS equipment towards the end of January 2022. The UPS batteries were planned to be delivered on-site on 9 February 2022. Eltek's supplier, Polarium, however, issued a letter on 9 February 2022 notifying a force majeure incident regarding the delivery of the UPS batteries (FA7 p. 7060). Subcontractor forwarded the information to Contractor on 10 February 2022 (FA7 p. 7064).

(1002) On 12th April 2022, Contractor issued DVO 49, where VOR 80 was disputed (CB1 p. 1726). Contractor argued that the claim under VOR 80 was not substantiated and documented pursuant to the Contract. Further, Contractor held that Subcontractor was responsible for the construction engineering of the UPS pursuant to section 1.4 of Appendix A of the Contract. They also argued that Subcontractor had failed to substantiate the causation between the alleged changes and costs.

14.2 The Parties' submissions

14.2.1 Subcontractor's claim and submissions

(1003) Subcontractor claims EUR 132,002.61 in direct costs and preparation costs. Further, Subcontractor claims 110 days of EoT and EUR 3,488,367.91 in EoT costs.

(1004) Subcontractor holds that the engineering changes underlying VOR 80 constitute a Variation to Subcontractor's scope of work, due to Contractor's breach of Contract under CoC Art 27.1. In any case, the changes underlying VOR 80 constitute a Variation pursuant to Art 16.1 of the CoC.

(1005) Contractor is responsible for the consequences of the modified engineering of the UPS. Contractor is responsible for the detailed engineering of the RS, and changes made to Contractor's engineering are Contractor's responsibility and risk. The reason for the increased power consumption necessitating the UPS modifications was Contractor's defective engineering and additional power consumers.

(1006) Contractor failed to notify Subcontractor of the modified UPS engineering when it discovered the error in May 2020. Contractor failed to submit revision 08C to Subcontractor. Revision 09C was received through Transmittal 149 on 02.09.2020.

Contractor failed to update the LVS Power Consumption Study and UPS System Sizing documents.

(1007) Subcontractor could not have discovered the UPS modifications in September 2020 and did not have a general duty to search for errors. Contractor carries the risk of not updating its engineering deliverables when providing changes. Article 6 of the CoC only applies to Part I documents. EPE deliverables were not part of Part I documents. There is no general duty to search for errors, according to Art 6. In any event, a duty to search for errors does not go further than what was necessary for Subcontractor's own use of the relevant documents.

(1008) Subcontractor acted as a prudent subcontractor when they identified and notified the engineering changes when they became aware of the errors. Subcontractor also contributed to mitigating the potential delays following the discovery of the UPS modifications.

(1009) Contractor's submissions regarding engineering under VOR 80 are unclear and contradictory. Subcontractor cannot be responsible for detailed calculations and dimensioning of the UPS based on the design inputs when Contractor and AI, in fact, provided these detailed calculations and input. Subcontractor holds that Contractor was responsible for providing the power factor value, which they also did.

(1010) The fact that Contractor has accepted procurement costs related to new UPS and batteries implies that Contractor is liable for the UPS modifications.

(1011) While Subcontractor issued VOR 80 timely, Contractor misused the VO system by issuing DVO 49 seven months after VOR 80. This was not within a reasonable time, and the consequence is that the VOR 80 must be considered a Variation to Subcontractor's scope of work. The consequence of the misuse and the lack of contribution from Contractor to find a workable solution is that Subcontractor's claim under VOR 80 must be considered justified.

(1012) Contractor's time-bar argument is lost when DVO 49 was presented after seven months. The DVO did not invoke preclusion. The rolling analysis requirement under Art 13.3 of the CoC only applies to VOs, not VORs, and is therefore not relevant to VOR 80.

(1013) The limit to impose variations pursuant to the third paragraph of Art 12.1 of the CoC was exceeded when the variations were imposed in the summer/autumn of 2020. Consequently, Subcontractor is entitled to the costs and EoT as claimed. In any case, the adjusted rates shall be allowed and compensated as claimed.

(1014) Since Bane NOR has awarded Contractor EoT for the period covered by VOR 80, Subcontractor is entitled to EoT based on Art 2.2 of the CoC independent of any other provision that may lead to a time bar or reduction of the claim. Contractor is, in any case, not entitled to liquidated damages when Bane NOR has not claimed liquidated damages from Contractor

(1015) Subcontractor's claim is sufficiently documented. A thorough description of factual and contractual grounds was provided in the Statement of Claim of 24th May 2022 and in the proposal for the final account of 12th January 2023. The claim was further elaborated in C2 of 20th February 2023 and in the Claim Composition of 5th July 2023. In addition, the claims have been subject to an independent expert evaluation by Kroll. Kroll sets out a stricter level of proof than the rules for substantiating a claim under Norwegian law. Subcontractor's claim also consists of elements that Kroll cannot attribute to VOR 80 with 100% certainty.

(1016) Prolongation cost is based on day rate calculations, which is accepted in principle under Norwegian law.

(1017) Since Contractor did not issue a DVO within a reasonable time and did not demand reimbursable work when the work was performed pursuant to section 4 of Appendix B, the consequence must be that Subcontractor is entitled to payment as claimed. The principles of loyalty impose a burden to react, and the consequence of breach is that Subcontractor shall be entitled to compensation as claimed. Another consequence of being late must be that an argument on lack of documentation is lost since Subcontractor's possibility to defend against the allegations is limited.

(1018) The consequence of lack of documentation is, in any case, not that the claim is lost. The consequence must be that Subcontractor is entitled to payment based on "common price" or alternatively what Contractor "must have understood", cf. the principle used for day rate in LH-2020-131143.

(1019) The final account includes sufficient documentation as required in Art 20.4 of the final account. The time-bar provision in Art 20.4 applies to claims not included. It does not apply to claims included but not sufficiently documented.

(1020) In any case, the arbitration process was initiated for VOR 80 before the time limit in Art 20.4 of the CoC expired. The principle in section 15 of the Statute of Limitations regarding claims under arbitration and court proceedings also applies to the Contract.

14.2.2 Contractor's submissions

(1021) Contractor rejects the alleged basis for the claim. There was no impediment from Contractor's side under Art 4.3 of the CoC, and Subcontractor did not submit a request in accordance with Art 16.1 within 24 hours as required. Contractor did not give a written instruction by Contractor's representative pursuant to Art 16.1 of the CoC. If Subcontractor initiates works based on instructions other than those according to Art. 16.1, Subcontractor cannot claim EoT or additional costs.

(1022) Contractor holds that the Contract was not breached pursuant to Art 27 of the CoC, and TT 149 did not represent such breach.

(1023) Subcontractor was responsible for providing a complete fit-for-purpose UPS system, cf. section 1.4 and section 5.2.11.5 of Appendix A to the Contract. Subcontractor needed to procure and install the UPS required to complete the RS. Contractor holds that Subcontractor's early procurement of the UPS was imprudent.

(1024) Subcontractor was responsible for the late discovery of the modifications. The absence of clouds in the SLDs did not in any way exempt Subcontractor from its responsibility to execute its work in accordance with the drawings. Subcontractor had an obligation to study the drawings carefully in accordance with its engineering responsibilities and search for errors, cf. Art 6 of the CoC.

(1025) Subcontractor knew that it lacked revised drawings and instructed their supplier to review the drawings carefully. Subcontractor's assertion that it was impossible to detect the modifications made to the UPS system is unfounded. The increase in apparent power in the UPS was present in Engineering Transmittal No. 149. There were only 46 drawings, all with the same outline.

(1026) The installation of the UPS batteries took place around the same time as Subcontractor made the discovery, and an earlier discovery would have resulted in less, if any, subsequent impact. Subcontractor must bear the responsibility for any effects, including cost and schedule implications.

(1027) Contractor rejects the claim for EoT. Subcontractor has not substantiated the 110 alleged days of delay. Under Art 13.3 of the CoC, Subcontractor must demonstrate "effects" on the contract schedule and is only entitled to the actual effects. Causation must be established. Contractor holds that the modifications to the UPS had no impact on the Contract Schedule. The UPS was not on the critical path during the project at any time. Subcontractor could have commenced with the energization and performed SAT with old batteries but chose not to. Subcontractor failed to mitigate delay and comply with its planning obligations.

(1028) Subcontractor's delay analysis in the proposal for the Final Account of 12 January 2023 does not apply the "As-planned vs as-built Windows Analysis" as it claims. The analysis is only a reiteration of Subcontractor's own estimates and forecasts rather than an analysis of the actual delay incurred. The monthly schedule analyses from September 2021 to February 2022 did not demonstrate any causation between the alleged variation and the 110 days of critical delay. The Delay Analysis Report version 0, submitted on 17 August 2022 and version 1, submitted on 11 November 2022, concluded that VOR 80 caused 63 days of critical delay. Contractor disputes all analyses as VOR 80 was never on the critical path. Since the late discovery of SLD updates in September 2020 was Subcontractor's risk, Subcontractor's one-year postponement of the UPS work is Subcontractor's own risk. Contractor further holds that Subcontractor delayed the procurement process after discovering the TT 149 updates.

(1029) Ankura's schedule analysis, which concluded that VOR 80 impacted the critical path from 11 October 2021 to 25 March 2022, resulting in 165 days of delays in window 7, is based on a method that is not sufficient to demonstrate that the delay was related to VOR 80. HKA disagrees with Ankura that VOR 80 caused a critical delay. HKA holds that Ankura's reliance on forecasted delivery dates leads to theoretical delay calculations, which is not supported by what happened on-site.

(1030) Subcontractor never issued a rolling analysis pursuant to Art 13.3; thus, the EoT claim is time-barred.

(1031) Contractor further rejects Subcontractor's cost claim under VOR 80. Contractor holds that the cost claim is time-barred because the documentation requirement in the Final Account under Art 20.4 of the CoC has not been fulfilled. Subcontractor provided some documentation for the first time in the Claim Composition of 5 July 2023. The EoT cost is claimed globally as part of the first Kroll report, but there is no specific documentation for VOR 80. Documentation for the direct cost was not provided before the second Kroll report. Subcontractor has not presented any documentation to substantiate the estimated preparation costs.

(1032) Contractor further argues that the cost claim is not substantiated. Regarding the EoT cost, the total claim for prolongation cost presented by Kroll, with the addition of costs allegedly incurred by Subcontractor, is not in line with legal requirements under Norwegian law.

(1033) Regarding the direct costs, all procurement of UPS batteries and mitigation costs have been compensated for under VO 13. Subcontractor has not substantiated entitlement to EUR 119,291.30 of direct costs or preparation costs. Kroll II concluded that Subcontractor is entitled to NOK 218,607.06 and EUR 111,683.39, but rejected the preparation costs. The HKA Expert Report I concludes that Subcontractor has failed to provide substantive evidence supporting its claimed sum. The HKA Expert Report 2 calculated material costs to NOK 168,333, in addition to EUR 56,432.83 and NOK 39,783 for the work performed.

(1034) If the Tribunal finds that Subcontractor's cost claim is not time-barred, Contractor accepts to compensate EUR 40,000 and NOK 208,116. The amount is to be deducted against Contractor's counterclaim.

14.3 The Tribunal's assessment

14.3.1 Introduction

(1035) It is not contested that Contractor modified the UPS system in the spring of 2020. The contested matter to be determined by the Tribunal is whether the modifications constitute a Variation, and if so, whether Subcontractor is entitled to 1) compensation for direct costs, 2) EoT-costs and 3) the costs for preparing VOR 80.

(1036) Subcontractor has, as a contractual basis for its claim, invoked both CoC Art 27.1 and Art 16.1. Contractor asserts that none of these provisions are applicable. Concerning Art

16.1, Contractor holds that the instructions were not formalized in an "instruction" nor provided by a "Contractor's representative", and therefore Subcontractor cannot rely on Art 16.1 as basis for VOR 80. Concerning Art 27, Contractor holds that Engineering Transmittal No. 149 did not entail a breach of the Contract.

(1037) Furthermore, Contractor has invoked CoC Art 4.3 under which Subcontractor shall (Tribunal's emphasis):

> "....within the Framework established by the Contract, cooperate and coordinate his progress and performance of the Work with Company, Contactor other contractors, Norwegian Public Roads Administration (NO: "Statens Vegvesen"), land owners, authorities and other Third Parties affected by the Work, and organize his operation's to ensure that all activities on the Site(s) are carried out efficiently and without delay.
>
> If, in the opinion of Subcontractor, the progress of the Work is *impeded* by Contractor, persons or entities referred to above in this Article *beyond* what Subcontractor *reasonably could have expected*, Subcontractor shall immediately, or in no event later than 24 hours, after he encounters such circumstances, submit a request in accordance with Art. 16.1."

(1038) The Tribunal cannot see that Art 4.3 is relevant to determine *whether* VOR 80 *constitutes* a Variation. The provision governs cooperation and coordination and stipulates an obligation to include certain flexibility to absorb and mitigate schedule effects in this respect, provided that the effects are not beyond what Subcontractor reasonably could have expected. Provided that VOR 80 is considered a Variation, however, the provision may be relevant to determine whether Subcontractor should have absorbed or mitigated schedule effects (if any).

14.3.2 Did the modifications constitute a Variation?

(1039) Subcontractor contends that the modifications of the UPS system represented a change of the UPS system as designed in EPE and thus an event for which Contractor is liable under CoC Art 16.1. Contractor acknowledges that the UPS system was modified, but asserts that at least a part of the modifications must be considered a part of Subcontractor's overall fit-for-purpose obligations under Art 1.4 of Appendix A.

(1040) The initial design and capacity of the UPS system seems to have been based on load input from Contractor, cf. for instance, MoM of 4 April 2018 (FA6 2037), where it was stated that "Loads are calculated included 30 % spare, according to excel sheet from Contractor 05.03. 2018". In action item 4 in the same MoM, it was referred to a future "Quotation [Tribunal's comment: from Eltek to Subcontractor], based on updated excel sheet from Contractor 05.03.2018 and agreed design above".

(1041) The load input was included in a "Power Consumption study" prepared by Bane NOR dated 26 June 2018 (FA26 1237) and in the System Sizing tunnel document (FA2 1207). Both sets of documents were thus provided by Contractor or on the part of Contractor. Finally, and more importantly, the loads were included by Contractor in the single-line diagrams Rev 4C (FA6 2077) in the EPE.

(1042) Contractor argues, however, that the power factors included in the EPE and the said documents were temporary and hence that the final loads were to be determined by Subcontractor as a part of its detailed engineering and overall fit for purpose obligation. Contractor has also referred to Note 3 on the single-line diagrams (Rev 4C) in support of this assertion, where it is stated: "UPS output power (KVA) according to no. of rectifiers installed." According to Contractor, the quote indicates that it was up to Subcontractor to ensure the final and correct calculations of the power loads after the final number of rectifiers was established.

(1043) The Tribunal concurs that the said quote may indicate that the provided values were preliminary. The quote does not, however, state whether it was up to Contractor or Subcontractor to make the final decision with regard to the number of consumers (in particular with regard to the number of motorized doors) and hence the final loads to determine the capacity of the UPS system. At the outset, determining the loads may be considered a part of Subcontractor's detailed engineering. At the same time, however, it is evident that determining the loads was dependent on the number of consumers, which was to be decided by Contractor. In any case, regardless of whether or not determining the loads was a part of Contractor's general engineering or Subcontractor's detailed engineering, as it turned out Contractor provided the loads. Contractor provided the loads as a part of EPE in July 2018, which may be understood as it was up to Subcontractor to determine the final loads as a part of its detailed engineering. The latter understanding, however, does not sit well with the fact that Contractor provided the loads also in subsequent revisions, including the critical revision 8C in May 2020.

(1044) On this basis, when Contractor consistently chose to provide the loads, Contractor cannot in hindsight prevail with its assertion that it was nevertheless Subcontractor's responsibility to do so.

(1045) For the same reason, the Tribunal cannot follow Contractor's assertion that it was improper that Subcontractor used the Power Consumption Study, the System Sizing

Tunnel document and the Single Line Diagrams rev 4C as the basis for Subcontractor's purchase order to Eltek on 22 November 2018 for the procurement of UPS equipment. It may be argued that Subcontractor could have awaited subsequent revisions, for example revision 8C, and in hindsight it is easy to say that it should have awaited even more final loads than revision 4C. What Subcontractor should have done shall, however, not be determined based on the benefit of hindsight. The Tribunal cannot see that Subcontractor, at the time of procurement in November 2018, had reason to believe that it was premature to commence procurement. There was nothing in the EPE or other design documents indicating that Subcontractor was supposed to await further instructions (or revisions) regarding the design and loads for the UPS system. On the contrary, the letter "C" used in the single line diagram meant, according to section 5.9.2 of Appendix to the Contract, that the drawings were "approved for construction" and hence also approved for procurement. Furthermore, at the time of procurement Subcontractor had no reason to expect the *significant* increase in the number of motorized doors and/or handrails that were later introduced by Contractor. Hence, the procurement of equipment in 2018 was not imprudent.

(1046) The Tribunal concurs with Contractor that Subcontractor is obliged to provide a "fit-for-purpose" RS, but struggles to see that it has a distinct bearing on the present matter. To determine what is required to provide a "fit-for-purpose" RS, Subcontractor is dependent on input from Contractor. As set out above, based on the load input provided by Contractor at the time of procurement, there is no reason to believe that the procured system would not have been "fit-for-purpose". Hence, the problem was not that Subcontractor did not comply with its "fit-for-purpose" obligation. The problem was that Contractor subsequently introduced additional loads by introducing *additions* to the design set out in the EPE, which should not have been foreseen by Subcontractor at the time of procurement. The latter distinguishes VOR 80 from VOR 40, which basically concerns lack of verification of elements *included* in the EPE.

(1047) Contractor asserts that the costs for additional UPS equipment are, in any case, precluded under Art 16.1 because the costs were incurred even though there was no formal instruction from Contractor's Representative. The argument seems to be that Subcontractor chose to carry out the extra procurement and the required reinstallation without having received such a formal instruction. The latter argument could have been applicable if Subcontractor had carried out the extra procurement and reinstallation

prior to submitting VOR 80. However, the preclusive mechanism in CoC Art 16.1 is not applicable to the present situation where Subcontractor – *prior* to carrying out an "instruction" not issued by Contractor's Representative in writing – submits a VOR claiming that the relevant work constitutes a Variation to the Work. We might, for example, imagine that the Parties have discussed a specific work in a meeting and jointly concluded that the work shall be carried out. Even though the said joint conclusion cannot be considered a written instruction from Contractor's Representative, Subcontractor's right to claim that the said work constitutes a Variation to the Work cannot be considered precluded under Art 16.1, provided that Subcontractor submitted a timely VOR. The latter example does not fall within the scope of Art 16.1. Hence, we are back to the firm starting point under NTK and the present CoC; that a claim submitted in a timely VOR cannot be considered precluded. See section 6 above with further references, where it is also pointed out that the reasoning for preclusion under Art 16.1 second paragraph is not applicable if a VOR is submitted before the contested work is carried out, because Contractor then has no reason to believe that Subcontractor considers the contested work to be a part of the scope of Work. The latter was the situation in the present case. The new power loads were first discovered by Subcontractor on 26 August 2021, apparently in connection with the forthcoming commissioning works. After discussing the situation with Contractor, *inter alia*, in a meeting 27 August 2021 (cf. letter from Contractor 27 August 2021; FA7 p. 5598), it was de facto agreed that Subcontractor should commence the necessary modifications on the UPS system. This process started with Subcontractor submitting a new purchase order to its supplier, Eltek, on 6 October of 2021. However, at that stage, Subcontractor had already, on 9 September 2021, submitted VOR 80 claiming cost compensation and EoT.

(1048) Based on the above, the Tribunal concludes that the modifications of the UPS system set out in VOR 80 must be considered a Variation, which is not precluded under Art 16.1. Hence, the incremental *costs related to procurement and reinstallation* due to the modifications of the UPS system shall be compensated by Contractor.

(1049) The starting point under the CoC Art 13 is that Subcontractor is also entitled to EoT equivalent to schedule effects (if any) caused by a Variation, which is not contested. The latter starting point is, however, not applicable to the extent a delay should have been avoided by Subcontractor. The latter is contested. Contractor asserts that

Subcontractor should have discovered the modifications earlier under its obligation to "search" under CoC Art 6 and hence avoided any delays due to the modifications. Subcontractor, however, asserts that it should not have discovered the modifications earlier because Contractor did not comply with its contractual obligations to communicate changes, which must be considered a breach under CoC Art 27. This matter is assessed in the next section.

14.3.3 Which Party carries the risk of the modifications not being discovered earlier?

(1050) It is contested whether the duty to "search" as set out in CoC Art 6 applies to Part I Documents, and what follows from a more general obligation to search. Subcontractor asserts that Article 6 of the CoC only applies to Part I documents. The EPE deliverables were not part of Part I documents. There is no general duty to search for errors, according to Art 6. Provided that Art 6 is not applicable to the EPE deliverables, a general duty under the background law (if any) to search for errors does not in any case go further than what was necessary for Subcontractor's own use of the relevant documents. Contractor rejects this and holds that Subcontractor should have discovered the modifications included in Engineering Transmittal No. 149 of 2 September 2020. In Contractor's opinion, the fact that the revisions to the UPS system were not discovered proves that Subcontractor failed to comply with this. If so, Contractor holds that all consequences incurred after this date are the responsibility of Subcontractor.

(1051) The wording of CoC Art 6.1 reads:

> Subcontractor shall immediately and continuously from the time of receipt search thoroughly for defects, discrepancies and inconsistencies (hereinafter "errors") in Part [Blank] Documents. and shall without undue delay notify Contractor of any error discovered.
>
> Contractor is responsible for errors which are discovered in Part I Documents unless otherwise stated in Art. 6. 3.

(1052) The CoC Art 6.1 provides a so-called "search" obligation for Subcontractor to actively investigate material received from Contractor. Under Art 6.3 Subcontractor is not only considered to be in breach of its obligation to "search" if it did not notify about what it *did* discover; it also includes what it "ought to have discovered". The legal effect of not complying with the said obligation is set out in Art 6.3, which basically states that Subcontractor may be responsible for costs and delays that Contractor would have avoided if Subcontractor *had* timely notified Contractor about such errors. That

Subcontractor's breach of Art 6 may entail that Subcontractor loses its entitlement to EoT also applies where Subcontractor would otherwise be entitled to EoT under CoC Art 27, cf. Art 27.1 second paragraph i.f.

(1053) The latter entails that there may be a complex relationship between Art 6 and Art 27, which cannot be set out in general. The present Contract, however, provides a regulation having a strong bearing on the said relationship, namely the Document Management Requirements set out in the Contract (FA8 p. 343 f.), where it follows from section 5.9.2 that all revisions shall be marked by clouds:

> "5.9.2 Marking of revision changes on documents and drawings
>
> Changes to new revisions shall be marked on documents and drawings. Markings from earlier (old) revisions must be removed on new revisions. Changes on documents shall be marked with a vertical line on the left side of the text, while changes on drawings shall be marked with a cloud and a corresponding revision letter in the triangle ."

(1054) In the Tribunal's opinion, it is not straight forward whether Subcontractor's search obligations under CoC Art 6.1 apply to the SLDs comprised in Engineering Transmittal 149. It may seem artificial that Art 6.1 should only apply to Part I Documents, but the wording is firm. As set out below, however, the Tribunal is of the understanding that the main reason that the modifications were not discovered earlier was, in any case, that Contractor did not comply with its contractual obligation to properly identify changes in the SLDs as per section 5.9.2 in the Document Management Requirements. Hence, as elaborated on below, it is not decisive for the outcome of the EoT claim under VOR 80 whether or not the search obligation in Art 6.1, which goes further than any similar obligation derived from the background law, only applies to Part I Documents. The Tribunal does not find it required to conclude whether Art 6.1 may be applicable to Part I documents.

(1055) However, if Art 6.1 was applicable in the context of VOR 80, Subcontractor was in any case entitled to rely on the said section 5.9.2 calibrating its search obligation: It was, as a clear starting point, entitled to assume that Contractor would comply with its obligation to mark "revision changes".

(1056) Both Parties have invoked several court decisions (LH-2004-40378, LB-2008-130865) based on NS 3430 sections 7 and 8. The latter provisions are not comparable to the CoC Art 6 and can, therefore, not be considered relevant for the present matter.

(1057) There is no disagreement regarding the fact that Rev 8 C included modifications in the design compared to previous revisions. Contractor also acknowledges that rev 8C of the SLD' was never communicated to Subcontractor. Contractor's point of view is, however, that Subcontractor did receive Rev 9C and that Subcontractor should then have discovered the modifications and initiated mitigation measures following this.

(1058) The new loads introduced in 2020 resulted in a corresponding increase in power consumption. The increase did, however, not lead to an updated version of the Power Consumption Study. The new loads were on the other hand, included in a new revision (rev 11E) of the System Sizing tunnel document (FA25 2993). For some unknown reason, this revision was *not* communicated to Subcontractor. The changes were also included in rev. 8C of the SLD's of 29 May 2020, where they were highlighted with clouds (Rev 8C - A6 4591).

(1059) Rev 8C was sent to Bane NOR for comments but, again, *not* to Subcontractor. Instead, Contractor chose to integrate the comments received from Bane NOR in a new revision (9C) and sent this new revision to Subcontractor as a part of Engineering Transmittal 149. By then, the modifications in the UPS system were *no longer* marked by clouds. The changes were thus not discovered by Subcontractor until nearly a year later.

(1060) As a starting point, there can be no doubt that Contractor was responsible for communicating the modifications in rev 8C of the SLDs to Subcontractor. Given the importance of the modifications to the UPS system, it would, in the Tribunal's opinion, have been appropriate that Contractor, when Rev 9C was finally transmitted, not only forwarded the modified SLDs but also provided an account of the modifications. This was not done.

(1061) Although there has been no information regarding Contractor's choice not to communicate rev. 11E of the System Sizing tunnel document to Subcontractor, Contractor has explained that it wanted to integrate Bane NOR's comments to rev. 8C before the revised solutions were presented to Subcontractor. However, more than three months elapsed between Rev 8C and 9C in a critical phase of the project.

(1062) Regardless of this, Contractor's decision meant that the discovery of the modifications rested *solely* on the modifications of the SLDs. Therefore, it was of utmost importance that the modifications were adequately highlighted as per the said section 5.9.2.

(1063) Marking revisions by clouds is also in line with industry practice, which was mostly practiced between the Parties during the project. Hence, and as pointed out above, the modifications in the UPS system were marked by clouds in the rev 8C that was sent to Bane NOR for comments.

(1064) The clouds were subsequently, and correctly, removed from rev. 9C, as this revision did not entail a modification of Rev 8C. The latter entailed, however, that Subcontractor never enjoyed the clarity that the clouds were meant to provide.

(1065) Contractor has pointed out that Subcontractor at the time knew that rev. 8C was missing, cf. Subcontractor's e-mail to Laugstol of 9 September 2020 (FA6 4842) where it wrote:

> "Note that there has been another revision of the drawings in between (that we do not have) so not all the changes from previous revision of drawings that we had before are identified in these new ones. So please analyze the drawings carefully."

(1066) Contractor asserts that Subcontractor's awareness should have been heightened due to this. Subcontractor, however, argues that a manual comparison between the different versions of the SLDs would "far exceed" their obligations to assess the engineering deliverables. The number of drawings in rev 9C compared to rev 8C were relatively limited, and the modifications in the UPS system could therefore in the Tribunal's opinion in principle have been detectable without a massive effort. Also, the fact that Subcontractor had not received rev 8C – and knew this – should in the Tribunal's opinion have heightened Subcontractor's awareness. As indicated, however, the Tribunal cannot see that the latter easily prevail over Contractor's obligation to identify changes in the SLDs as per section 5.9.2, in particular in a context where Contractor knew – while Subcontractor did not know – that the SLDs contained non-identified changes of a significant nature.

(1067) Contractor has also pointed out that Subcontractor knew that changes were in the LVS, and should have understood that those changes could impact the UPS system, cf. the CSB rev 03, 04 and 05. According to Contractor, it was imprudent of Subcontractor not to investigate this connection closely. Contractor's statements in this regard point to the fact that the changes in the LVS system could entail refurbishing and procurement of new LVS cabinets, thus impacting the installation of the UPS batteries. The Tribunal, however, considers the latter insight to be evident with the benefit of hindsight, but at the time the connection between the LVS changes and any modifications to the UPS

cabinets appeared less straightforward. Awareness of one issue does not necessarily imply closer investigations of the other.

(1068) The Tribunal's assessment above does not provide an entirely clear picture. For example, Subcontractor's e-mail to Laugstol of 9 September 2020 may support that also Subcontractor contributed to the late discovery of the modifications. Even so, the purpose of the agreed system using clouds to identify changes is exactly to avoid mishaps of this nature. In the Tribunal's opinion, therefore, Contractor's choice not to communicate Rev 8C to the Subcontractor and the lack of clouds in Revision 9C were the dominant reasons that the modifications went unnoticed. Contractor also had plenty of other opportunities to inform Subcontractor of the modifications without doing so.

(1069) Based on the above, the Tribunal considers Contractor responsible for the schedule effects due to the modifications not being discovered until August 2021.

14.3.4 Is Subcontractor partly responsible due to mishandling of the situation after the changes were discovered in August 2021?

14.3.4.1 Introduction

(1070) Contractor has invoked several events after the discovery of the modification of the UPS equipment, for which it claims Subcontractor was responsible and which, according to Contractor, led to a prolonged mitigation process. Contractor holds that Subcontractor, regardless of the answer to the above questions, is responsible for costs caused by this prolongation.

14.3.4.2 Late placing of order to Eltek 6 October 2021 – the definitive power factor

(1071) Contractor claims that Subcontractor is responsible for unnecessary time spent placing the order for additional equipment and batteries to Eltek. The order was submitted October 2021 – approximately six weeks after the discovery. Contractor points to what it considers to be Subcontractor's repeated and unfounded requests for power factor calculations from Contractor. Subcontractor disputes this.

(1072) Subcontractor notified Contractor of its discovery of the UPS modifications in letter of 26 August 2021 (FA7 5591). Contractor responded the day after (Letter from Contractor to Subcontractor of 27 August 2021 – FA7 p. 5598) confirming that it would "provide detailed documentation about the loads to be supplied in all cross passages before the meeting Subcontractor S.A scheduled with its supplier next Monday 30. August 2021".

Contractor's response aimed at enabling Subcontractor to make the additional procurement through Eltek to lose as little time as possible. The said documentation was, as promised, provided by Contractor on 30 August 2021 (FA7 p. 5600), albeit with Contractor commenting that "UPS supplier shall calculate and assess the modifications in the already delivered equipment".

(1073) In the letters dated 9 and 26 September 2020 (FA7 p. 5288 and FA7 p. 6048, respectively) Subcontractor requested Contractor to provide the definitive power factor to be adopted. According to Subcontractor, this information was necessary for Subcontractor to place the order for new equipment to Eltek. The request was repeated in yet another letter of 5 October 2021 (FA7 p. 6359). In its response 6 October 2021, Contractor maintained that it had no responsibility for providing said calculations, holding that Subcontractor was responsible for a fit-for-purpose delivery, including determining the final power factor (FA6 p. 6370). Subcontractor then submitted the purchase order to Eltek the same day, basing the order on a maximum power factor of 1.

(1074) As is evident from the account above, the Parties disagree on who was responsible for determining the final power factor. The Contractor also holds that placing the order could have been done based on the factor applied in the original procurement of equipment, i.e. without conducting new calculations, and hence that Subcontractor's requests were unnecessary and only served to delay the mitigation process.

(1075) As pointed out above, the power factor measures how efficiently the UPS utilizes electrical power (on a scale from 0 to 1) and is, therefore, essential determining the size/capacity of the batteries/equipment. As such, a power factor was also established in the original design. Apparently, the factor was then set at 0,85, cf. the e-mail dialogue between Subcontractor and Eltek in September/October 2021 (FA7 p. 6351). It seems clear that the original factor was based on the design included in EPE provided by Contractor. The Tribunal is unaware of any discussions regarding the factor in this context. Neither does the power factor seem to have been addressed explicitly by Contractor in the revised design in the spring of 2020. Nor was it addressed in the Parties meeting on 27 August 2020, where Contractor committed to supplying Subcontractor with the necessary information.

(1076) In the end, it was Subcontractor who took the procurement decision, basing the purchase of new equipment on the most conservative factor possible. It seems clear

that this decision was based on a parallel dialogue between Subcontractor and Eltek spanning the same period as the said dialogue between Subcontractor and Contractor. The time it took for Subcontractor to obtain calculations from Eltek in the parallel dialogue implies that the question regarding the responsibility for the definite power value had a limited, if any, impact in terms of progress since Subcontractor worked on the issue the entire period. As the Tribunal will revert to below, this circumstance was ultimately consumed by other events invoked by Contractor.

14.3.4.3 Events after the order to Eltek on 6 October 2021

(1077) Contractor has invoked several other circumstances that prolonged the UPS system mitigation process. The extent and implications of these assertions have not been elaborated on, but the Tribunal will nevertheless comment on some of the circumstances that have been addressed.

A) Acceleration

(1078) Contractor has argued that a shortened delivery time of the UPS equipment agreed upon between Eltek and Subcontractor in October 2021 was paid for by Contractor. This extra measure was proposed and organized by Subcontractor and thus served to improve the situation. The fact that the measures were paid for by Contractor does not detract from this. The event does not impact Subcontractor's claim.

B) EFI 591

(1079) In its letter of 9 September 2021 (FA7 5288), Subcontractor asked for an update on the layout of the cross passages where the new/modified UPS were to be installed. Contractor responded by issuing EFI 591 on 19 November 2021. Subcontractor holds that it could not have started its mitigation process before the EFI 591 was provided, rendering any delay concerning the power value factor irrelevant. Contractor has argued that the EFI 591 was not performed and submitted to comply with its contractual obligations, but merely to assist Subcontractor and that Subcontractor, therefore, cannot invoke this to exculpate itself from its delays.

(1080) In the Tribunal's opinion, Contractor was, both in the original and the updated designs, responsible for the general engineering of the cross passages, including the layout of the LVS and UPS cabinets. The submission of EFI 591 was necessary to accommodate

the modified power loads; thus, it was an event for which the Contractor was responsible.

(1081) Since Subcontractor could not start its mitigation installment before the EFI 591 (19 November 2021), the delay regarding the power value factor assessed above seems irrelevant. Subcontractor commenced with the necessary structural modifications in the UPS panels in December 2021 and followed with installation of the UPS equipment in January 2022. Based on this, the Tribunal finds it difficult to see that Subcontractor has mishandled the mitigation process in a way that eventually prolonged the process.

C) Force Majeure

(1082) Contractor has contended that Subcontractor must carry the responsibility and consequences for delay caused by an "alleged" force majeure event in February 2022. The event seems to have caused a delay from 9 to 18 February 2022. Contractor has not stated what impact it has attributed to this event.

(1083) In February 2022, Subcontractor notified Contractor that the delivery of the UPS equipment was delayed due to external causes beyond its control. Bad weather conditions and the global air freight situation due to COVID-19 were mentioned (cf Letter 15.2.22; FA7 p. 7138).

(1084) In the Tribunal's opinion, this event is of minor (if any) significance. In any event, the event has not been invoked by Subcontractor, presumably because it had no schedule effect. Furthermore, the additional procurement was a part of a modification for which Contractor was liable. Subcontractor has never committed to mitigating the situation within a specific time limit. Hence, the fact that it took nine extra days to have the batteries on site is not an occurrence for which Subcontractor bears the risk.

D) Energization on original batteries

(1085) During the case preparation, Contractor argued that Subcontractor ultimately refused to conduct the commissioning of the UPS system on the originally purchased batteries, thus prolonging the mitigation period. Under the Hearing, Contractor took the position that other events delayed the energization. It is, therefore, not clear if this assertion is upheld.

(1086) Contractor's starting point for this argument is Subcontractor's letter of 26 September 2021 (FA7 p. 6048). In this letter Subcontractor required Contractor's approval to energize the Tele network ring with the UPS batteries currently installed and to replace the current batteries with new ones after the SAT. The idea was that by approving this proposal, the commissioning could start before all the new UPS/additional equipment was procured, installed and locally commissioned, which would otherwise not be the case.

(1087) Contractor approved the suggestion in its letter to Subcontractor on 9 November 2021 (FA7 p. 6537). Later, it became clear that the commencement of the commissioning was also delayed due to other circumstances. Subcontractor, therefore, decided to conduct the entire energization after installing the new batteries.

(1088) The Tribunal refers to the assessment above of Contractor's arguments regarding the period after the discovery of SLD rev 9C, where it concluded that Subcontractor in this period acted prudently and did what could be expected in the situation it was placed in. None of the topics raised seem to have had any significant impact on the events concerning costs or delay.

(1089) Contractor holds that Subcontractor's claim is lost due to not complying with the provisions set out in CoC Article 20.4 regarding documentation in the Final account. As concluded above in section 7.8, the Tribunal considers a claim submitted to arbitration under Art 15.3 prior to the Final Account not to be subject to any time-bar under Art 20.4. Since the present claim was submitted in the C1, and thus prior to the Final Account, VOR 80 is not precluded under CoC Art 20.4.

14.3.5 Conclusion

(1090) Based on the above, the Tribunal concludes that VOR 80 constitutes a Variation to the Work, and Contractor carries the risk that the modifications were not discovered earlier, and the mitigation process shall not be considered delayed by Subcontractor.

(1091) As the Tribunal has concluded that VOR 80 is a Variation to the Work, there is no reason to assess whether CoC Art 2.2 may serve as a separate basis for the same claim. As concluded above in section 7.5, the rolling analysis mechanism in CoC Art 13.3 only applies to Variation Orders, and hence not to VOR 80.

15 VOR 71/DVO 41 – ENERGISATION WITH PERMANENT POWER

15.1 Introduction and factual background

(1092) The dispute under VOR 71 concerns whether energization with permanent power during commissioning was part of Subcontractor's scope of work. Energization is the process of supplying electrical power to the various components of the RS. Subcontractor issued VOR 71 on 26 July 2021 (CB1 p. 1715). Contractor issued DVO 41 on 11 April 2022 (CB1 p. 1717).

(1093) During the project period, temporary power facilities were fed from the local power grid via the Åsland substation, distributed by temporary cables via temporary distribution substations and transformers to panels outside each cross passage. In 2020 and early 2021, Contractor and Bane NOR discussed whether energization during commissioning required permanent power facilities or whether the temporary power was sufficient. The background for these discussions was that Contractor had planned and assumed that commissioning could be performed with temporary power.

(1094) However, Bane NOR held that commissioning-related activities required a permanent power supply. On 29 January 2021, Bane NOR confirmed in a letter to Contractor their requirement that energizing for the commissioning related activities must be performed with permanent power (FA7 p. 386).

(1095) In a letter dated 19 February 2021 (FA7 p. 493), Contractor forwarded the letter from Bane NOR and instructed Subcontractor to follow and comply with Bane NOR's interpretation of the Contract and act accordingly.

(1096) Subcontractor responded in a letter to Contractor dated 18 March 2021 (FA7 p. 2343). Subcontractor here argued that Bane NOR's instruction did not apply to Subcontractor's scope of work and requested Contractor to specify which of Subcontractor's systems that were "... affected by Company's interpretation of permanent power for performing the integrated testing requirement under SAT". The request was repeated in a letter to Contractor dated 21 June 2021. In the said letter, Subcontractor requested that Contractor share the commissioning schedules.

(1097) In a letter dated 22 July 2021 (FA7 p. 5039), Contractor responded to Subcontractor that "[a]ll systems managed by Subcontractor require an integrated SAT testing performed with permanent power to complete the commissioning."

(1098) On this basis, Subcontractor issued VOR 71 on 27 July 2021 (CB1 p. 1715). The VOR 71 made references to Subcontractor's letters of 18 March and 21 June 2021, and Contractor's letter dated 27 July 2021, and stated that:

> "Pursuant [to] the provisions under the Art. 16.1 of the Conditions of Contract, Subcontractor hereby issues this VOR 071 as the work is not part of Subcontractor's obligations under the Contract by virtue of the facts duly substantiated in the aforementioned Subcontractor's letters."

(1099) Following further discussions between the Parties on energization for the commissioning activities, Contractor issued DVO 41 on 11 April 2022 (CB1 p. 1717) rejecting Subcontractor's claim under VOR 71. Hence, Contractor upheld its position and instruction that permanent power was required to fulfil Subcontractor's commissioning responsibilities under the Contract.

15.2 The Parties' submissions

15.2.1 Subcontractor's claim and submissions

(1100) Subcontractor claims direct costs of EUR 145,838.89, 44 days of EoT and subsequent prolongation costs of EUR 1,510,540.56, and preparation costs of EUR 11,169.74.

(1101) Subcontractor holds that VOR 71 constitutes a Variation. Energization with permanent power was not part of Subcontractor's contract obligations for two grounds. First, the Contract provides that energization with permanent power is part of Bane NOR's completion phase that would be performed after the Delivery Date under the Contract, cf. the Project Completion Requirements under Appendix E. This is also in line with normal practice and safety considerations.

(1102) Second, energization with permanent power was neither part of nor required to carry out Subcontractor's commissioning scope. Subcontractor's entire commissioning scope was feasibly planned to be performed with temporary power and it was also conducted mainly with temporary power. Hence, Contractor's and Bane NOR's preference for permanent power cannot be based on the Contract, but must be based on considerations beyond the Contract.

(1103) Furthermore, Contractor did not submit DVO 41 within "reasonable time" as required under Art 16.2 of the CoC. The consequence is that VOR 71 must be deemed a VO. In the DVO 41, Contractor did not invoke that VOR 41 was submitted too late. Thus, the time-bar argument under CoC Art 16.1 is lost. The dispute under VOR 71 was included

in the Statement of Claims dated 25 May 2022 and is thus presented timely, cf CoC Art 15.

(1104) The limit to impose variations under the third paragraph of Art 12 of the CoC was exceeded when VOR 71 was presented. Hence, Subcontractor is entitled to the claimed cost- and schedule effects. The time-bar regulations do not apply.

(1105) Contractor has been awarded EoT by Bane NOR for the period covered by VOR 71. According to Art 2.2 of the CoC, Subcontractor is entitled to receive the benefits of such entitlements. Hence, Subcontractor is entitled to the claimed EoT even if of any other provision may lead to time bar or reduction of the claim. As Bane NOR did not claim liquidated damages for this period, it also follows from Art 2.2 that Contractor is not entitled to claim liquidated damages from Subcontractor for the same period.

(1106) Subcontractor's claims under VOR 71 are sufficiently documented in the Statement of Claim dated 24 May 2022, the proposal for Final Account dated 12 January 2023, and the Claim Composition of 5 July 2023. Subcontractor also fulfilled the requirements for the Final Account in Art 20.4 of the CoC, and the latter is in any case not decisive after the claim was included as a part of the arbitration.

15.2.2 Contractor's submissions

(1107) Contractor holds that the instruction to perform energization with permanent power was within Subcontractor's scope of work.

(1108) Subcontractor is responsible for the power supply for all of the RS in the tunnels, cf. Art 5.2.11.2 ("TPS"), 5.2.11.4 ("IPS"), 5.2.11.5 ("LVS") of Appendix A of the Contract. Subcontractor is responsible for the complete commissioning of the contract object as an integrated system, cf. second and third paragraph of Art 1.4 of Appendix A.

(1109) Furthermore, energization with permanent power was a prerequisite for a fit-for-purpose commissioning. To test and verify that the systems meet the functional and operational requirements set out in the Contract, they must be energized by the same power source as to be used in the operation phase after the takeover. A temporary power supply does not have the reliability to simulate how the systems will function and operate under regular or irregular conditions.

(1110) Subcontractor was responsible for the power supply during commissioning. Contractor's obligation to provide temporary power under Art 9.3 of the CoC only applies to the construction phase. It does not limit Subcontractor's obligations to carry out a proper fit-for-purpose commissioning of the contract object. Contractor does not carry the risk for the power supply necessary for Subcontractor to perform its commissioning activities in accordance with the Contract. Subcontractor is responsible for both temporary in the construction phase and permanent power to perform the commissioning

(1111) Subcontractor's obligation to comply with electrical safety requirements, cf. Art 1.4 of the CoC, cannot as such be used as a basis to limit the obligation to perform the commissioning activities in accordance with the Contract requirements.

(1112) "Figure 2" in the Project Completion Requirements does not entail that energization with permanent power was only intended to take place after delivery.

(1113) Subcontractor is not entitled to an adjustment of the Contract Price or Schedule under VOR 71. Energization did not impact the contract schedule, which Contractor carries the risk of. If the Tribunal finds that energization was outside Subcontractor's scope, the delay is limited to the eight days Subcontractor used to perform the works, from 23 March to 1 April 2022. In any case, Subcontractor did not perform the energization of the OCL and TPS; thus, no delay in Subcontractor's progress occurred due to the energization of these systems.

(1114) Subcontractor's schedule analysis does not demonstrate any causality between energization with permanent power and the alleged 44 days of critical delay as required under Art 13.3 of the CoC. Ankura's schedule analysis holds that energization with permanent power did not cause any critical delay in the project. Ankura concludes that the critical path went through the UPS batteries (VOR 80) during the period energization was performed. HKA concludes that Energization with permanent power caused eight days of critical delay in the project.

(1115) Subcontractor did not provide a rolling analysis under Art 13.3 of the CoC for VOR 71. Thus, the claim for EoT is in any case time-barred.

(1116) Contractor rejects Subcontractor's entitlement to an adjustment of the Contract Price under VOR 71. The proposal for the Final Account is time-barred under Art 20.4 of the

CoC, because the costs were not documented in accordance with Art 20.4. Subcontractor first presented documentation related to the costs claimed under VOR 71 in the Claim Composition on 5 July 2023.

(1117) Contractor rejects Subcontractor's claim for direct costs for the energization of the LVS and IPS systems. The time-registration document is not a valid record of the work performed. Contractor also rejects the claim for preparation costs because no documentation to substantiate the claim has been presented.

(1118) Contractor also rejects the claim for EoT costs. Subcontractor has not substantiated the claim, and Kroll's calculation of the total claim for prolongation costs, with the addition of costs allegedly incurred by Subcontractor, is not in line with the applicable contractual and legal requirements.

(1119) Contractor's position is supported by HKA Expert Report I, which concludes that Subcontractor has failed to provide substantive evidence supporting the amount claimed.

15.3 The Tribunal's assessment

15.3.1 Introduction

(1120) The dispute in question basically concerns determining Subcontractor's commissioning scope under the Contract, namely whether energization with permanent power was a prerequisite for Subcontractor's commissioning.

15.3.2 Subcontractor's commissioning scope

(1121) In article 1.4 of Appendix A to the Contract, commissioning is included as a part of Subcontractor's scope in addition to the various parts of the Railway System (TPS, IPS, LVS, etc.). According to Art 1.5 of Appendix A, the Contract Object for which Subcontractor is responsible includes the RS and commissioning.

(1122) Article 6 of Appendix A states that "Subcontractor shall perform all the commissioning of the Contract Object, including the provision of procedures, temporary facilities, etc."

(1123) "Contract Object" is defined in the CoC article 1.9 as "the object which Subcontractor, according to the Contract, shall deliver, together with all parts thereof, except for Contractor's Materials before their incorporation into the Contract Object".

(1124) On this basis, it is safe to conclude that Subcontractor's Contract Object includes delivery of the RS *and* commissioning.

(1125) Subcontractor's commissioning scope does not include parts delivered by other (sub)contractors. If the commissioning of a system includes such parts, Subcontractor is only "obliged to cooperate with the contractor having the interfacing system during preparation and execution of such activities", ref. second paragraph of article 6 of Appendix A. The latter demonstrates that Subcontractor has not undertaken to carry out commissioning of all the systems. The Tribunal cannot, however, see that the second paragraph of article 6 of Appendix A enlightens the key question in the present context: Whether the Contract shall be interpreted to entail that Subcontractor shall provide commissioning based on permanent power?

(1126) In the absence of explicit regulation in the wording of the Contract, an important question is whether an answer to the contested matter may nevertheless be inferred from the scheme of the Contract, typically the comprehensive regulation of commissioning.

(1127) In the Tribunal's view, Subcontractor's commissioning scope is broad in the sense that it also includes the interaction between Subcontractor's SCADA system scope and other installations/systems *outside* of Subcontractor's scope. Hence, Subcontractor's commissioning scope is *not* limited to its *own* scope of work. The latter is clearly stated in article 5.5.1 ("Test Requirements") of Appendix E ("Project Completion Requirements") stating that it should be verified that "all interfaces to other equipment are functioning correctly". That the Tele Network System and the Ventilation System are outside Subcontractor's scope of work as such does not relieve Subcontractor from the obligation to *test* whether the interaction between these systems and SCADA functions is in accordance with the contractual requirements.

(1128) The RS is essential in the Follo Line project. Subcontractor was included in the project as an expert on RS, and according to the Contract the intention was that Subcontractor should have a key role in the commissioning phase. Understandably, Contractor wanted Subcontractor's assistance during the commissioning and the SAT. The control, regulation and monitoring system – SCADA or SRO - forming part of the LVS system was included in Subcontractor's scope. The SCADA receives and collects data from various technical installations.

(1129) The Tribunal considers the above to demonstrate that Subcontractor's commissioning scope was comprehensive, but the various provisions do not as such clearly indicate a particular answer to the contested matter whether commissioning was to be carried out based on permanent power. On this basis, the Tribunal must determine the question on the basis of a broader and more functional interpretation of the purpose of Subcontractor's commissioning scope. A key question in this context is whether *proper* commissioning of the present systems could be carried out without permanent power, which must be determined mainly on the *purpose* of the *agreed* commissioning. In the absence of clear indications of the purpose of a contractual clause, it is appropriate to rely on what must be considered to be the normal purpose of the clause in question.

(1130) As set out above, Subcontractor is responsible for testing and verifying that the RS' dynamic functionality and operability, the capacity of the power supply, and interfaces to other equipment comply with the design and are fit for purpose. That the fundamental aim of commissioning, testing and verifying is to ensure that the systems meet the contractual requirements in the operation phase, must be considered to have a strong bearing on the present matter. In the absence of energizing the systems with the power to be used in the operation phase, namely permanent power, the commissioning will in the very end merely be a kind of "dry run" and not a proper and realistic exercise that can be relied on.

(1131) The latter is supported by the witness statement of Tom Jacobsen from Bane NOR (FA 22 p. 2323, Tribunal's emphasis):

> "During commissioning, it is important to have access to the power that the systems will be energized by *after* takeover. This means testing with permanent power. However, when commissioning started around Easter 2022, we noticed that SIT testing was carried out with temporary construction power. We were very critical of this. During testing, the systems were energized locally, and the power was switched off after each system had been tested locally and system preserved. The testing then moved on to the next system and where the temporary power was switched on. *This had undesirable effects in the form of low voltage, voltage drops and voltage errors during testing.* When a system is being SIT tested, it must be ready for operation at the end of the test, which *requires* the use of permanent power. This was not done, which meant that *several systems had to be retested* when we gained access to permanent power after Easter 2022."

(1132) The Tribunal sees no reason to question the considerations made by Mr. Jacobsen. His statement is also in line with Bane NOR's letter of 18 August 2021 (FA 25 p.4746), in which they stated that it was the Contractor's responsibility to choose between temporary and permanent power. If temporary power was to be used, however, the

Contractor should later "power down and connect to a permanent 48V DC power source." The latter would entail that the said systems would have to be commissioned twice, which would hardly be a proper and effective approach to commissioning. That Bane Nor's and Mr. Jacobsen's understanding of the need of permanent power was appropriate, is to some extent also supported by the fact that Subcontractor does not contest that it was a sensible choice by Contractor to energize the IPS and the LVS with permanent power.

(1133) Based on the above, the Tribunal concludes that Subcontractor's commissioning scope must be understood to be carried out on the basis of permanent power. Hence, permanent power cannot be considered a Variation.

15.3.3 Extended Commissioning?

(1134) Subcontractor has argued that commissioning with permanent power must be considered so-called "Extended Commissioning" under article 5.5.9 of Appendix E, e.g. optional scope, and hence outside Subcontractor's commissioning scope.

(1135) The third paragraph of article 5.5.8 of Appendix E states that "if required in Scope of Work to perform an extended commissioning it shall be part of the SAT". In the Contract, there is no such regulation in the Scope of Work. Thus, an instruction to perform Extended Commissioning with permanent power would be a Variation to the Work.

(1136) To substantiate the argument, Subcontractor has referred to the diagram in Appendix E, section 3, Project Completion Principles (FA 8 page 380 ff). The diagrams (FA8, pages 380 and 381) illustrate that the commissioning shall be performed before the delivery date and the performance test after delivery. However, in the Tribunal's view, the diagram can only be considered a highly schematic illustration of the various stages of the project. For the same reason, the diagram does not give any specific and firm information about the content of Subcontractor's commissioning scope under the Contract.

(1137) According to article 5.5.9 of Appendix E, Extended Commissioning means "to prove that the system will operate satisfactorily in service". The extended test "shall only start when *all other* commissioning activities are *completed* for the involved systems so that

the functionality of the systems is fully verified to the extent possible" (Tribunal's emphasis).

(1138) The Tribunal considers the commissioning actually performed by Subcontractor was testing of the functionality of Subcontractor's Scope of Work – the Railway System, which includes SCADA - to secure that "all interfaces to other equipment are functioning correctly" under ref. article 5.5.1 of Appendix E. By contrast, "Extended Commissioning" as per article 5.5.9 could not start until the functionality of all involved systems had already been tested and verified as per article 5.5.1 of Appendix E. Only then is it possible "to prove that the systems will operate satisfactorily in service" under article 5.5.9.

The Tribunal also refers to the fourth paragraph of article 5.5.9 of Appendix E, which states that the extended test shall be performed "in a manner which is generally similar to the operation of the systems in commercial service." The examples mentioned under article 5.5.9 substantiate that the Extended Commissioning differs from the SAT in which Subcontractor participated.

15.3.4 Subcontractor's submission regarding the CoC Art 2.2 and deemed VO

(1139) Subcontractor asserts that Bane NOR has awarded Contractor EoT for the period covered by VOR 71, and hence Subcontractor is entitled to receive the benefits of such an entitlement based on the CoC Art 2.2.

(1140) As a basis for its claim under article 2.2, the Tribunal understands Subcontractor to rely on the four *subsequent* Settlements Agreements and Amendment 8 between Contractor and Company; see CAD 3. As concluded above in section 7.10.2, however, the Tribunal considers Art 2.2 not to apply to such subsequent agreements. Hence, article 2.2 cannot serve as a basis for VOR 71.

(1141) Subcontractor also holds that Contractor did not submit DVO 41 within reasonable time as required in CoC article 16.2, with the effect that VOR 71 is "deemed" a VO. As concluded above in section 7.2 the Tribunal cannot see that there is any basis for such a "deemed-VO" (or "as claimed") mechanism.

15.3.5 Conclusion

Based on the above, the Tribunal concludes that VOR 71 cannot be considered a Variation to the Work.

16 VOR 74/DVO 42 – AVAILABILITY TELE NETWORK

16.1 Introduction and factual background

(1142) The core disagreement under VOR 74 is whether the Tele Network System delayed Subcontractor's commencement of the SAT of the SCADA system. Subcontractor issued VOR 74 on 12 August 2021 (CB1 p.1720). Contractor issued DVO 42 on 17 March 2022 (CB1 p.1722).

(1143) SCADA was part of Subcontractor's scope of work, and SAT of the SCADA was a part of Subcontractor's commissioning scope. The Parties also agree that commencement of Subcontractor's SAT of the SCADA system was dependent on an operative Tele Network System. The Tele Network System was not part of Subcontractor's scope of work, and it was subcontracted by Contractor to Semmatic/OneCo.

(1144) The background for VOR 74 is that Subcontractor, according to the MPR of July 2021, planned to commence and complete the SAT of the SCADA system in the period from 27 September to 19 November 2021 (FA13 p.3624).

(1145) In the Minutes of Meeting dated 5 August 2021 of a meeting held on 4 August 2021 (FA7 p. 5282), the Commissioning Procedure is commented under item 05-03 as follows:

> "Please note that the front end systems (Master/Backup) either need a separate commissioning procedure or need to be included in the procedure for the LVS system. But be aware that the front end system cannot be commissioned before Banenor Tele network system is operative (earliest 21.12.2021)."

(1146) Subcontractor then issued VOR 74 on 12 August 2021 (CB1 p.1720) stating, *inter alia*, that:

> "Since SAT activity cannot be executed without having the Tele network system up and running (operative) the above date implies that Subcontractor cannot schedule the SAT activity up to 21st December 2021 impacting on both contract schedule and contract price."
>
> Pursuant to the provisions under 11.2 of the Conditions of Contract, amongst others, Subcontractor hereby issues this VOR 74 as the Tele network system is not under Subcontractor's scope of Work and therefore any consequence whatsoever as a result of the non-functionality of said system falls outside Subcontractor's liability."

(1147) The availability of the Tele Network System was also related to proper energization. In a letter of 18 August 2021 to Contractor (FA25 p. 4746), Bane NOR commented on energization of telecom distribution boards during commissioning:

"Company has not required all telecom distribution boards be powered by the UPS panel with 48V DC power. Company requirement is for stable, continuous 48V DC power. The source of this power, be it temporary or permanent, is Contractor responsibility.

Upon powering of the system it is undesirable to power off at the latest date due to the connection with NOS and FJEL and the resulting alarm/warning system in this event. Company can accommodate such a situation if it's duly informed with prior notice so as Company may notify NOS and FJEL. Thus, if Contractor so desires it may provide Company with temporary 48V DC power and at a later point, power down and connect to a permanent 48V."

(1148) Contractor commented on Subcontractor's MPR of August 2021 and VOR 74 in a letter of 20 September 2021 (FA7 p.6038):

"Subcontractor has included a new VOR (VOR 74 availability Tele Network System Operative) with an impact on the delivery protocol. The constraint date has been taken directly from Contractor CSB without considering the predecessor sequence: 21 of December 2021 is not a mandatory date instructed by Client or similar; it is the outcome from the sequence of activities. Tele testing is integrated in Contractor CSB and Bane NOR will test when the needed scope is ready. This means that TELE will be operative once ELECNOR has energized with a lag of 14 days, duration consider for TELE to test the network. The energization is purely dependent on ELECNOR's activities. In any case, it is mandatory that ELECNOR includes the energization of the system (before tele testing) to know the accurate date to start the SAT."

(1149) Contractor issued DVO 42 on 17 March 2022 (CB1 p.1722). The main reason for Contractor's DVO was that:

"... it is Subcontractor's responsibility to provide the power distribution for the relevant systems in EPC TBM tunnels. This means that Subcontractor must carry out all mechanical completion and obtain the Ready for Commissioning Certificate ("RFCC") so that the systems in the EPC TBM tunnels can be commissioned adequately. This obviously includes relevant energising as this forms part of the low voltage systems. Considering the fact that at the point of issuing the VOR no. 74 Subcontractor had not yet obtained the relevant RFCCs there is no basis for Subcontractor to argue that the tele network availability has any impact on the Contract Schedule. E.g. the RFCC for illumination, which forms part of Subcontractor's own Scope of Work did not achieve RFCC until late January 2022."

(1150) On this basis, Contractor's conclusion in DVO 42 was that:

"Due to the fact that the activities that fall under Subcontractor's own Scope of Work have activities pending that need to be executed before any commissioning can commence, there is no basis to claim any impact on the Contract Schedule or the Contract Price due to other interfacing activities that form part of the Commissioning."

(1151) Energizing with permanent power, which was necessary for the commissioning of telecom, eventually took place from 23 March to 1 April 2022. The commissioning of the Tele Network System was finalised on 25 May 2022.

16.2 The Parties' submissions

16.2.1 Subcontractor's claim and submissions

(1152) Subcontractor claims direct costs of EUR 23,231.72, EoT of 95 days, EUR 1,868,257.72 in prolongation costs, and EUR 3,811.19 in preparation costs for the VOR.

(1153) Subcontractor submits that the SAT of the SCADA system could not be performed since the Telecom Network System was delayed. The Tele Network System was expected to be operational on 4 November 2020 but was not operational until 25 May 2022.

(1154) The Tele Network System was Contractor's/Bane NOR scope of work under the Contract. Contractor was obliged to deliver an operational Telecom Network System in due time for Subcontractor to reach its delivery date of 21 April 2021 towards Company. This represents a breach of article 27.1 and 11.1 of the CoC. Subcontractor was not obligated to energize the IPS and LVS with permanent power to enable telecom commissioning. Telecom commissioning with temporary power was feasible.

(1155) The principle of loyalty and coordination obligations implies that Contractor's failure to notify Subcontractor of critical delays cannot lead to benefits under the Contract.

(1156) DVO 42 was issued seven months after the VOR, which is not within a reasonable time under article 16.2 of the CoC. Consequently, the VOR must be deemed a VO.

(1157) The limit to impose variations in the third paragraph of Art 12.1 was exceeded when VOR 74 was presented.

(1158) Under the CoC Art 2.2, Subcontractor is entitled to receive the benefits of Contractor's entitlement to an EoT granted by Bane NOR. This includes the whole period covered by VOR 74. Contractor is, in any case, not entitled to liquidated damages when Bane NOR has not claimed liquidated damages from Contractor.

(1159) Subcontractor's claim is sufficiently documented. The documentation requirements for the final account under article 20.4 of the CoC are fulfilled.

16.2.2 Contractor's submissions

(1160) Contractor submits that VOR 74 does not constitute a Variation as the commissioning of the tele network did in fact not delay Subcontractor's commissioning. Deviations from assumptions in progress planning do not as such entail a Variation.

(1161) For such deviations to constitute a Variation, the circumstance which causes the slippage must affect the Milestones in Appendix C. The unavailability of the Tele Network System did, however, not affect said Milestones and does not constitute a Variation

(1162) Circumstances for which Subcontractor bears the risk were driving the commencement of the tele network commissioning. Subcontractor had not met the prerequisites for commencement of the SAT when the tele network was unavailable.

(1163) Subcontractor is not entitled to EoT for VOR 74. The works under VOR 74 did not impact the contract schedule. Subcontractor's schedule analysis, which holds that the work under VOR 74 caused 95 days of critical delay, does not demonstrate any causation between the unavailability of the Tele Network and delays on the critical path and does not consider overlapping delays. Ankura's schedule analysis concludes that the works under VOR 74 caused 57 days of delay but did not demonstrate the necessary causation between the alleged Variation and the 57 days' critical delay. The analysis does not assess if and how the unavailability of the Tele Network system affected Subcontractor's progress. HKA's schedule analysis, which concludes that the commencement of the Tele Network commissioning caused 34 days of delay, neither assesses the responsibility for this delay nor whether Subcontractor was ready to start SAT works during the 34 days.

(1164) Subcontractor never issued a rolling analysis pursuant to article 13.3 of the CoC. Consequently, the claim for EoT is time-barred.

(1165) Subcontractor has not substantiated its claim for EoT costs amounting to EUR 1,868,257.72. Subcontractor has not demonstrated any causation between the unavailability of the Tele Network System and the EoT costs claimed. Subcontractor has not provided any documentation demonstrating that the EoT costs claimed have been incurred. Subcontractor has not used the rates in the Contract. The total claim for prolongation costs presented by Kroll, with the additional costs allegedly incurred by Subcontractor, is not in line with legal requirements.

(1166) Subcontractor has not substantiated its claim for direct costs of EUR 23,231.79. The Time Register document is not a valid record of the works performed. Subcontractor has not demonstrated any causation between the unavailability of the Tele Network System and the direct costs claimed.

(1167) Contractor rejects the claim for preparation costs. The claim has not been substantiated or documented.

(1168) Subcontractor's cost claim is time-barred pursuant to article 20.4 of the CoC because Subcontractor failed to deliver a valid final account.

16.3 The Tribunal's assessment

(1169) The main part of Subcontractor's claim under VOR 74 concerns EOT and EOT-costs, but also includes direct costs of Euro 23,231.72 and preparation costs of Euro 3,811.19.

(1170) The core disagreement under VOR 74 is whether the availability of the Tele Network *did* delay Subcontractor's commissioning, and if so, whether it also had a cost effect. The latter is a matter of assessing the presented evidence.

(1171) The Tele Network System was not a part of Subcontractor's Scope of Work, but Subcontractor's SAT of the SCADA system was dependent on it. Because the Tele Network System was on the critical path, delayed commissioning of the Tele Network System could delay Subcontractor's Delivery Date towards Contractor. The latter is not, as asserted by Contractor, changed by the fact that the schedule of the Contract does not set out a specific milestone for Contractor's provision of the Tele Network System. Hence, the absence of such milestone does not entail that such a delay may in principle be considered a Variation. The Tribunal's understanding, however, is that the Parties mainly disagree whether the delay of the Tele Network did delay Subcontractor's commissioning.

(1172) As indicated, the EOT-claim presupposes that the delayed commissioning of the Tele Network System *did* delay Subcontractors' SAT of the SCADA.

(1173) There is, as pointed out by Contractor, an overlap between the EOT-claim set out in the present VOR 74 and the EoT-claim set out in VOR 71. Hence, the Parties' disagreement regarding VOR 71 - whether permanent power was a prerequisite for Subcontractor's commissioning of the RS – may be relevant also for VOR 74. Above in section 15.3.2, the Tribunal concluded that Contractor's instruction to perform commissioning with permanent power does not constitute a Variation. The latter entails that there may be an overlapping delay.

(1174) Regarding the question whether permanent power was required for the commissioning of the *Tele Network System*, Subcontractor has referred to Bane NOR's letter of 18 August 2021 (FA 25 p.4746) to substantiate that permanent power was not a requirement for the commissioning of the Tele Network System, and hence that there was no overlapping delay.

(1175) The Tribunal cannot see that whether or not permanent power was necessary for Subcontractor's commissioning of the *RS*, including the SCADA system controlling all the systems in the tunnel, is necessarily the same issue as whether permanent power was required for the commissioning of the *Tele Network System*. In the letter, Bane NOR also points out that if Contractor desires, it may provide Bane NOR with temporary power and, later, "power down and connect to a permanent 48V DC power source". The Tribunal, however, understands the quoted part of the letter to entail that permanent power would eventually also be required for the commissioning of the Tele Network System. The latter is supported by Mr. Tom Jacobsen's witness statement referenced above regarding VOR 71, stating that "Energization with permanent power is a prerequisite for commissioning. This clearly applies *also* in relation to the Tele Network System" (Tribunal's emphasis). On this basis, the Tribunal concludes that the delay of the energization with permanent power and the delayed commissioning of the Tele Network System overlapped up to 1 April 2022, when Subcontractor energized with permanent power.

(1176) The commissioning of the Tele Network System was finalized on 25 May 2022. On this basis, the next question is whether Subcontractor can be entitled to EoT under VOR 74 from 1 April and until 25 May 2022.

(1177) According to Contract Appendix E section 5.5.8 (FA8 p.395), SAT is the stage "following RFOC". RFOC means "Ready for Operation Certificate". Contractor's letter of 30 April 2022, final paragraph states (FA7 p.7624, Tribunal's emphasis):

> "*Before the SAT can commence* Subcontractor is *required* to have the Ready for Operation Certificate "RFOC", in place, ref. the project completion requirements set out in the Contract, Appendix E, doc. .UOS-00-A-90053. As informed by the Subcontractor in its monthly reports, this is not the case. Hence, rather than discussing any issues related to Company testing of the tele network, Subcontractor should first safeguard compliance with its own commissioning phase obligations."

(1178) The RFOC documentation for system 6510 (RTUs) was submitted to Bane NOR 8 June 2022. Bane NOR issued the RFOC for the RTUs on the subsequent day, 9 June 2022. The

RFOC documentation for system 6520 (PLCs) was submitted to Bane NOR 17 June 2022. Bane NOR issued the RFOC for the PLCs 21 June 2022.

(1179) Based on the above, the Tribunal concludes that it was not the commissioning of the Tele Network System that delayed Subcontractor's SAT from 1 April (when energization took place). The latter entails that the lack of RFOCs would, regardless of the lack of availability of the Telecom Network System, have delayed commencement of the SAT until 9 June 2022. For the same reason, the lack of RFOC overlapped the delayed commissioning of the Tele Network System up to 25 May 2022.

(1180) The RFOCs for the RTUs and PLCs seem not to be contested between the Parties. In any case, Subcontractor has not submitted a VOR claiming that the timing of the issuance of RFOCs constituted a breach under CoC Art 27. If such a VOR is not submitted, Subcontractor "loses the right to claim that the work is Variation to the Work", cf. CoC article 27 with reference to CoC article 16.1 second paragraph.

(1181) Subcontractor cannot be heard with its submissions regarding CoC Art 2.2 and "deemed VO", and it is sufficient to refer to what is set out above in section 15 regarding VOR 71.

16.4 Conclusion

(1182) Based on the above, the Tribunal concludes that the EoT-claim under VOR 74, and hence EoT-costs under VOR 74, is rejected.

17 VOR 131/DVO 86 – DELAYED RFCC FOR TELECOM SYSTEM 4415

17.1 Introduction and factual background

(1183) The dispute under VOR 131 concerns the delayed issuance of the RFCC for Telecom System 4415, which is the system for the Tele Network panel boards. Subcontractor holds that the delay of the and the RFCC for the Tele Network System 4415 delayed Subcontractors SAT commissioning.

(1184) The background for the dispute is that Subcontractor issued a DOC for the LVS on 11 March 2022 (FA7 p. 7253) declaring that the work had been carried out in accordance with FEL 2018 and the project documentation attached to the DoC. However, Subcontractor added the following reservation in the DoC:

> "Elecnor has become aware that AGJV has done work on the electrical equipment without notice and without Elecnor's knowledge and control. The extent of such work

> is unknown. Elecnor's Declaration of Conformity covers all work done by Elecnor and Elecnor's subcontractors. The Declaration of Conformity does not cover work on the electrical equipment performed by AGJV or companies engaged or instructed by AGJV without the consent or knowledge of Elecnor. Elecnor rejects any possible responsibility, liability, or guarantee for defects or damages caused by or otherwise originating from work that is not performed by Elecnor or Elecnor's subcontractors."

(1185) In Subcontractor's letter of 28 March 2022 to Contractor, it was stated that the 28-day period for the tele network commissioning could commence 29 March 2022. (FA 11 p.833). Subcontractor had scheduled the commissioning of the telecom to take place over 28 days, from 30 March to 26 April 2022.

(1186) In Contractor's letter of 30 March 2022, Subcontractor was informed that Bane NOR would not be able to start their activities until Tuesday, 5 April 2022 (FA 7 p. 7406). Further, Contractor informed that:

> "In order for the company to be able to carry out the IP/MPLS fibre commissioning, the 48VDC supply and distribution system 4415 must have obtained the RFCC and all Telenetwork cabinets must be energised with 48VDC. As of today, the 4415 system is not RFCC, and none of the Telenetwork cabinets are energized."

(1187) On 1 April 2022, Subcontractor notified Contractor that the telecom system was on the critical path and that the delayed RFCC could have schedule effects (FA7 p. 7408). On the same day, Subcontractor issued VOR 131 (FA 7 p. 7412). In VOR 131, Subcontractor notified Contractor that the aim was:

> "...to cover the potential consequences and knock-on effects as a result of the non-achievement of the RFCC for the system 4415 before the completion of the energization with permanent (*sic*) by subcontractor of the relevant system needed for the start-up of the Telecom System."

(1188) On 5 April 2022, Contractor submitted a RFCC proposal for Telecom System 4415 (FA7 p. 9345). On 8 April 2022, Subcontractor participated in a SIT-SAT planning workshop. In the Minutes of Meeting of the workshop, item 03-04, it is stated that (FA21 p. 1378):

> "BN-Tele was planned to start commissioning 5 th of April, but they will not start before A punches on fibre cables are clear. For this reason, it is per date unclear when BN-Tele is ready with the network's need for the SAT. Best guess is that BN-Tele will start commissioning right after Easter."

(1189) In a letter of 30 April 2022, Contractor informed Subcontractor that an RFCC could not be issued for the system due to the reserved, unclear and limited DoC issued by Subcontractor (FA 7 p. 7624). Subcontractor issued an updated DoC on 4 May 2022, and then the RFCC for Telecom System 4415 was issued (FA 7 p. 7626).

(1190) The commissioning of the telecom system started on 9 May 2022 and was completed on 25 May 2022. Subcontractor's SAT activity began on 13 June 2022.

(1191) Contractor issued DVO 86 on 12 December 2022 (FA7 p. 9334), rejecting that VOR 131 constituted a Variation:

> "As follows from the Contract requirements from issuance of RFCC as well as the correspondence between the parties (ref. attachment 4, 6, and 7), it is clear that the correct DoC for the LVS was a pre-requisite for the issuance of the RFCC for system 4415. Hence, any progress delay incurred by Subcontractor due to this issue is a Subcontractor liability."

17.2 The Parties' submissions

17.2.1 Subcontractor's claim and submissions

(1192) Subcontractor claims 37 days EoT, EoT costs amounting to EUR 817,198.41, direct cost of EUR 1,592.23 and preparation cost of EUR 3,469.73.

(1193) Subcontractor holds that the delay of the RFCC for Telecom System 4415 represents a Variation. The delay was caused by circumstances for which Contractor is solely liable according to articles 27.1 and 11.2 of the CoC. Contractor acknowledged in the MPR of May 2022 that the DoC was not the reason for the delayed commencement of telecom commissioning. Contractor has also admitted that the RFCC was delayed due to several circumstances for which Subcontractor is not liable.

(1194) Alternatively, Contractor should have notified about any ambiguities in the DoC when it was issued. The consequence of late notification is Contractor's risk and responsibility.

(1195) Contractor's handling of VOR 131 is an example of disloyal behavior. Contractor did not inform Subcontractor of the delayed telecom system or updates on the schedule. They blamed Subcontractor even though they acknowledged that the delay was not due to Subcontractor's DoC. Any objection based on assertions of Subcontractor's obligation to coordinate, plan, mitigate and/or objections based on parallel causes from Contractor must be rejected.

(1196) The DVO was not presented until eight months after the VOR, which is not within reasonable time under article 16.2 of the CoC. Due to the misuse of the VO system, the VOR must be deemed a VO and Subcontractor shall be entitled to EoT and compensation as claimed.

(1197) The limit for imposing variations under the third paragraph of article12.1 of the CoC was exceeded when VOR 131 was presented. Consequently, Subcontractor is entitled to EoT and compensation as claimed.

(1198) Operational telecom was a prerequisite for Subcontractor's SAT performance. The delay under VOR 131 affected Subcontractor's critical path corresponding to 37 days.

(1199) The rolling analysis requirement under Art 13.3 of the CoC is only relevant to VOs and, therefore, not applicable to VOR 131.

(1200) Under article 2.2 of the CoC, Subcontractor is entitled to receive the benefits of Contractor's entitlement to an EoT granted by Bane NOR. Contractor has been awarded compensation for reaching the milestone delivery date, and Bane NOR has not claimed liquidated damages for the period covered by VOR 131. Subcontractor is, therefore, entitled to EoT regardless of provisions that would otherwise lead to preclusion or reduction of the claim presented by Subcontractor. Contractor is in any way not entitled to liquidated damages when Bane NOR has not claimed liquidated damages from Contractor.

(1201) The economic claim is sufficiently documented in the proposal for the Final Account dated 12 January 2023. The documentation requirement for the Final Account under Art 20.4 of the CoC is fulfilled.

(1202) The dispute was submitted to arbitration two months after Contractor submitted the DVO 86 and is thus not time-barred.

17.2.2 Contractor's claim and submissions

(1203) The late issuance of RFCC does not constitute a Variation, and Contractor rejects the grounds for the claim set out in VOR 131. Contractor has not been late in providing any deliverables that entitle Subcontractor to adjust the contract price or contract schedule under article 27.1 of the CoC. The late issuance of RFCC results from circumstances where Subcontractor carries the risk. Article 11.2 of the CoC is not applicable.

(1204) Subcontractor provided the LVS powering the telecom system, cf. article 5.2.11.5 of Appendix A to the Contract. Even though the telecom system as such falls outside of Subcontractor's scope of work, the documentation is still required to carry out

commissioning of a system powered by Subcontractor's LVS installation, cf. article 1.4 of Appendix A to the Contract.

(1205) The RFCC for Telecom System 4415 relied on a valid DoC for LVS because commissioning of the system required power from the LVS, cf. section 12 of FEL. According to Bane NOR, however, the DoC submitted on 11 March 2022 was invalid. The invalid DoC is therefore an independent cause of the late issuance of RFCC. In any case, Subcontractor contributed in other ways to the delayed commencement of commissioning of the telecom system. Commissioning of Telecom System 4415 could not commence any earlier due to Subcontractor's failure to confirm where to connect the SRO from the telecom rack in the UPS.

(1206) Regarding the alleged schedule impact, Contractor holds that Subcontractor has not substantiated that the late issuance of RFCC impacted the contract schedule.

(1207) Subcontractor did not achieve RFOC until 9 June 2022, and therefore the tele networks never became a critical activity. Instead, the tele network was available at the time Subcontractor achieved RFOC. Hence, the late issuance of RFCC did not impact Subcontractor's ability to perform the SAT.

(1208) Subcontractor's delay analysis submitted as part of the Final Account on 12 January 2023 is not a valid calculation of EoT. The delay analysis does not apply the "As-planned vs As-built Windows Analysis" as it claims. The analysis simply assumes that Subcontractor was ready to start SAT testing 15 days after the commencement of the commissioning of the Tele System, but evidence shows that Subcontractor was not ready at this time. Nevertheless, HKA concludes that 34 days is attributable to the time taken for the Tele Network to commence, but fails to consider the lack of RFOC.

(1209) Subcontractor's claim for EoT is in any case time-barred under article 13.3 of the CoC because they have not submitted any schedule analysis fulfilling the requirements.

(1210) Contractor also rejects Subcontractor's claim for adjustment of the contract price under VOR 131. The costs are not documented according to the requirements for the Final Account in article 20.4 of the Contract; thus, the claim is time-barred. Regarding the claim for direct costs, the HKA expert quantum report concludes that Subcontractor has not provided any justification or substantiation in support of the alleged time

claimed for additional personnel costs. HKA also considers the daily rate for EoT costs to be disproportionate.

17.3 The Tribunal's assessment

(1211) The core of the contested matter to be determined by the Tribunal is whether the RFCC of system 4415 Telecom delayed Subcontractors SAT activities. That is essentially a matter of assessing the asserted causation based on the presented evidence.

(1212) It is not contested that Subcontractor planned the commissioning of the Tele Network system to take 28 days, commencing 30 March and ending 26 April 2022. Bane NOR's commissioning of the Tele Network System commenced 9 May and ended on 25 May 2022.

(1213) Under DVO 86, Contractor held that the delay was caused by Subcontractor's insufficient and invalid DoC for the LVS. Subcontractor's DoC for LVS was issued 11 March 2022 and corrected 4 May 2022.

(1214) In Contractor's MPR of 30 April 2022, it was stated under section 7.9.1 that (FA 19 p.4171, Tribunal's emphasis):

> "On 22 April 2022, Company issued a letter ref. 201906970-1848 stating that Tele commissioning could not start because of a *statement in a DoC for the LVS* installation from Subcontractor Elecnor, *leading* Company to the *incorrect* understanding that the LVS installation was potentially unsafe. Contractor highlights that mentioned DoC is dated 11 March 2022, i.e. more than one month prior Company expressing its concern. Company stated that commissioning of the Telecom system *should not commence until* this issue had been resolved by Contractor.
>
> .....
>
> On 26 April 2022, during the workshop held, Company clarified that the punches raised on 22 April 2022 were to be categorized as Punch B items and that *the statement in the aforementioned DoC was not a showstopper* for the *commencement* of the commissioning of the telecom. In the same workshop, Company informed Contractor that the commissioning would start on 9 May 2022."

(1215) The Tribunal understands the last paragraph to clearly assume that Contractor did not consider the reserved DoC to prevent *commencement* of commissioning of the telecom systems.

(1216) Furthermore, under item 7.9.2 "Corrective Actions" in the same MPR, it is stated that (Tribunal's emphasis):

> "Issue raised by Company related to the DoC for LVS was *resolved by Contractor the very same day* (22 April 2022) in an e-mail from Contractor's representative to Company's representative, confirming that the commissioning could have commenced as advised by Contractor weeks earlier."

(1217) The quoted parts were reiterated in Contractor's MPR for May dated 3 June 2022 (FA 19 pp. 4285 - 4286).

(1218) In an e-mail from Bane NOR on 4 May 2022 (FA 22 p.606), with Contractor's comments, several different issues considered to prevent commencement of the telecom commissioning were presented and commented on. One of the issues was Subcontractor's reserved DoC for the LVS. Regarding the status of the said DoC, Contractor reiterated that "this was not needed to start the commissioning", and it was also stated that "DoCs are a requirement in the agreed checklists for commissioning, and we follow the established procedures. In any case, attached you can find a revision of the DoC issued today by Subcontractor."

(1219) Another issue at the time was the DoCs for Telecom Systems 4415 and 4430, which involved Bane NOR, Contractor and OneCo. According to Contractor's comment in the said e-mail from Bane NOR on 4 May 2022, it was necessary to downgrade the A Punches to B Punches in connection with the fiber cable measurements for system 7130. More importantly in the present context, it was stated both by Contractor and Bane NOR that (Tribunal's emphasis):

> "In any case, the various DoCs from OneCo for system 4415 and 4430 had been issued, it seems however that Bane NOR has commented only recently. *After several requests for the last remaining part of the DoC from OneCo, covering their part of 4415,* we became aware that the document was uploaded in PIMS last Thursday. We saw that *also this DoC had reservations, which cannot be accepted.* Kenneth sent over his comments last Tuesday. Some parts of the installation have been done without having drawings (the engineering did not cover all parts). This must be fixed, at least by issuing "as built" drawings."

(1220) Based on the contemporaneous evidence referenced above, the Tribunal cannot see that Subcontractor's reserved DoC delayed the RFCC of system 4415 Telecom. The Tribunal refers to Contractors MPR of 30 April 2022, where it is stated that the DoC for the LVS was solved and not considered a showstopper for the commencement of the commissioning of the telecom. Furthermore, the e-mail from Bane NOR of 4 May 2022 with Contractor's comments shows that the remaining parts of OneCo's DoC could not be accepted. On the 4 May 2022, the DoC from Subcontractor was already solved.

(1221) In Contractor's letter to Subcontractor of 30 April 2022 (FA 7 p. 7624), in which Contractor referred to Subcontractor's reserved DoC as the reason for the delay of the tele network testing, Contractor also commented on another issue (ref. also VOR 74) (Tribunal's emphasis):

> "*Before* the SAT can *commence* Subcontractor is required to have the Ready for Operation Certificates ("RFOC") in place, ref. the project completion requirements set out in the Contract, Appedix E, doc. UOS-00-A-90053. As informed by Subcontractor in its monthly reports, this is not the case. Hence, rather than discussing any issues relating to the Company testing of tele network, Subcontractor should first safeguard compliance with its own commissioning phase obligations."

(1222) Based on the evidence referenced above, the Tribunal cannot see that Subcontractor's reserved DoC turned out to delay commissioning of the Tele Network System. However, Subcontractor's claim is based on the assumption that the late issuance of the RFCC for system 4415 caused a critical delay in Subcontractor's own SAT activities. Because the tele network was available when Subcontractor issued the RFOC for the RTU on 9 June 2022, the Tribunal finds no causality between the late commencement of the commissioning of the Tele Network System and the delayed commencement of Subcontractor's SAT commissioning.

(1223) Subcontractor cannot be heard with its submissions regarding CoC Art 2.2 and "deemed VO", and it is sufficient to refer to what is set out above in section 15 regarding VOR 71, which applies accordingly to VOR 74.

17.4 Conclusion

(1224) Based on the above, the Tribunal concludes that the late issuance of the RFCC for system 4415 did *not* have any *effect* on Subcontractor's ability to commence and complete the SAT activities. Direct cost and preparation cost under VOR 131 will be considered in the Final Award.

18 VO 116 – TELE NETWORK

18.1 Introduction and factual background

(1225) The claim under VO 116 concerns the time used by Bane NOR for commissioning of the tele network system for the RS under the Contract. The claim is related to the contested matters under VOR 74 and VOR 131. VOR 74 is related to the slippage of Subcontractor's planned date for commencement of SAT due to a preliminary date for the availability

of Tele Network, while VOR 131 is associated with the issuance of RFCC for the Tele Network. VO 116 encompasses the period after these disputed claims.

(1226) The background for VO 116 is that Contractor issued a letter to Subcontractor on 21 August 2021 where they among other things informed that Subcontractor should plan for tele network commissioning to take 14 days (FA7 p. 5586):

> "Contractor has been in the process of clarifying with the Client the extent of the constraint regarding Telecom system activities. Once Contractor receives Client's clarifications, it will share them with Subcontractor. In the meantime, Subcontractor should work -for planning purposes- under the assumption of an estimate number of 14 days constraint activity."

(1227) In a subsequent letter dated 20 September 2021 to Subcontractor (FA7 p. 6037), Contractor stated that "TELE will be operative once ELECNOR has energized with a lag of 14 days duration consider for TELE to test the network".

(1228) On 1 March 2022, Bane NOR instructed Contractor to allow and plan for 28 days for the commissioning of the Tele Network System (FA7 p. 7234). On 15 March 2022, Subcontractor submitted a letter to Contractor, requesting Contractor "to confirm if the constrain of 14 Days required to put on operation the tele network is still full in force or not." (FA7 p. 9723). Subcontractor also stated, "it is worth noting that this activity is in Subcontractor's critical path."

(1229) Contractor responded on 21 March 2022 (FA7 p. 9725), informing Subcontractor about Bane NOR's instruction to allow 28 days. Subcontractor then issued VOR 127 on 22 March 2022 (FA7 p. 7326). Under this VOR, Subcontractor held that the information that Subcontractor should allow 28 days for commissioning of the tele network represented a Variation with cost- and schedule impact.

(1230) The energization with permanent power occurred from 23 March to 1 April 2022. Commissioning of the tele network system commenced on 9 May and was completed on 25 May 2022. This means that the commissioning of the tele network system did not take 28 days but 16 calendar days, including 17 May (a public holiday in Norway).

(1231) On 12 January 2023, Subcontractor issued a schedule analysis and economic assessment related to VOR 127 (FA17 p. 2765 and p. 2787). On 12 April 2023, Contractor issued VO 116 (FA7 p. 9715). Under VO 116, Contractor accepted that the increase from 14 to 28 days, as instructed by Bane NOR, constituted a Variation. However, Contractor rejected

that Subcontractor was entitled to an adjustment of the contract price or the schedule because Subcontractor had not substantiated and documented such effects.

18.2 The Parties' submissions

18.2.1 Subcontractor's claim and submissions

(1232) Subcontractor claims 40 days of EoT, EUR 877,600.31 in EoT costs, and EUR 2,957.53 in preparation cost.

(1233) Operational telecom was a prerequisite for Subcontractor's SAT performance. The delay in telecom commissioning under VO 116 affected Subcontractor's critical path by 40 days: 14 days between February and March 2022, 23 days between March and April 2022, and 3 days between April and May 2022.

(1234) Contractor's handling of VOR 127/VO 116 illustrates Contractor's disloyal behavior. Contractor received information about the extended duration on 1 March 2022, but did not share the information with Subcontractor before 21 March 2022.

(1235) VO 116 was not presented until 13 months after the VOR, which is not within reasonable time under article 16.2 of the CoC. This illustrates the misuse of the VO system. Consequently, Subcontractor's schedule analysis and economic assessment must be deemed accepted by Contractor.

(1236) Further, the rolling analysis requirement in article 13.3 of the CoC does not apply when the VO is issued too late.

(1237) The limit to impose variations under the third paragraph of article 12.1 was, in any case, exceeded when VOR 127 was presented, and hence Subcontractor must be entitled to EoT and cost compensation as claimed. The time-bar provisions in article 13.3 do not apply in this situation. Subcontractor has nevertheless informed and updated Contractor on schedule effects due to delayed Telecom in the MPRs.

(1238) Under article 2.2 of the CoC, Subcontractor is entitled to receive the benefits of Contractor's entitlement to an EoT granted by Bane NOR. This includes the whole period covered by VO 116. Contractor is, in any case, not entitled to liquidated damages when Bane NOR has not claimed liquidated damages from Contractor.

(1239) Subcontractor's claim is sufficiently documented. The documentation requirements for the final account under article 20.4 of the CoC are fulfilled. The dispute was submitted to arbitration within the deadline in article 15.3 of the Contract.

18.2.2 Contractor's submissions

(1240) Contractor rejects Subcontractor's claim for EoT. The commissioning of the Tele Network System was performed over 16 days, two days more than the 14 calendar days assumed. Subcontractor has been granted one day of EoT, but this is not a recognition that the unavailability of the tele network system caused a critical delay in the project.

(1241) Subcontractor never issued a rolling analysis as required under article 13.3 of the CoC. Consequently, the claim for EoT is time-barred. In any case, Subcontractor's schedule analysis demonstrates no causation between the Variation and the alleged 40 days of critical delays. Furthermore, Subcontractor has not taken into account overlapping delays.

(1242) Subcontractor's delay expert, Ankura, concluded that VO 116 did not cause delays. HKA's analysis, which concluded that the commissioning of the Tele Network caused a 15-day delay, does not assess whether these 15 days of delay constitute a Variation or whether Subcontractor was ready to commence SAT works in this period.

(1243) Contractor rejects Subcontractor's right to an adjustment of the contract price under VO 116. Subcontractor has not demonstrated that the claimed costs were incurred because of the commissioning of the tele network system. Commissioning of the tele network system had no impact on the contract price for which Contractor bears the risk

(1244) Subcontractor's proposal for final account does not fulfill the documentation requirements within the deadline in Art 20.4 of the CoC. Consequently, the claim is time-barred.

(1245) Contractor rejects the claim for preparation costs because the costs are not substantiated.

(1246) Contractor rejects the claim for EoT costs because Subcontractor has not substantiated the claim. The EoT cost breakdown is merely the economic assessment presented differently. The total claim for prolongation costs as calculated and presented by Kroll,

with the additional cost allegedly incurred by Subcontractor, is not calculated in accordance with the Contract or the applicable background law. HKA concludes that Subcontractor has failed to provide substantive evidence in support of its claimed sum.

18.3 The Tribunal's assessment

(1247) In section 15 regarding VOR 71, the Arbitral Tribunal concluded that Subcontractor was responsible for the energization with permanent power, which took place from 23 March to 1 April 2022: The period up to 1 April 2022 includes the 14 days of Subcontractor's claim between February and March 2022 and parts of the 23 days between March and April 2022. Hence, there was a delay overlapping with the delay of the Tele Network System.

(1248) It should also be mentioned that the commissioning of the Tele Network System took 17 days. This is less than half of Subcontractor's EoT-claim under VO 116. The latter entails that Subcontractor has not taken into account the overlapping delay in issuing the RFOC for the RTU, which was not issued until 9 June. The commissioning of the Tele Network System was performed in 16 days, including 17 May, and Subcontractor has been granted one day of EoT.

(1249) Subcontractor submits that VO 116 was not issued until 13 months after VOR 127 was issued on 22 March 2022, which represented a misuse with the effects being "as claimed". However, Subcontractor issued the Economic Assessment and the Schedule Analysis on 12 January 2023 (FA17 p.2765 and 2787). Contractor's VO 116 was issued on 12 April 2023 (FA7 p.9715). As explained under section 7.2, the Tribunal concludes that the legal effect of Contractor not complying with its obligation to respond to VOR in "reasonable time" is limited to what is set out in article 16.2, namely that Contractor is prevented from invoking preclusion. Hence, there is no basis for "as claimed" in the sense that the asserted effects set out in VOR 127 shall be deemed accepted on the basis of the argument "as claimed".

(1250) Regarding CoC Art 2.2 Subcontractor asserts that Contractor has been awarded EoT by Company for the period covered by VO 116, cf. CAD-5. On this basis, Subcontractor submits that it is entitled to receive the benefits of such entitlement. The Tribunal's understanding is that Contractor submitted VOR 175 to Bane NOR on 10 March 2022, claiming compensation for the increase in duration from 14 to 28 days. However, Bane NOR *rejected* Contractor's VOR 175 in DVO 48 of 28 March 2022 (FA7 p. 7360). In the

Hearing Contractor stated that according to Bane NOR, the increase from 14 to 28 days did not constitute a Variation. The Tribunal has not been presented evidence regarding the outcome of Contractor's VOR 175, and hence the Tribunal has no proper basis to consider whether Contractor benefitted from VOR 175. For the same reason, there is no basis to conclude that Subcontractor is entitled to a part of any such possible benefit.

18.4 Conclusion

(1251) Based on the above, the Arbitral Tribunal concludes that Subcontractor is not entitled to EoT under VO 116, except for the one day granted by Contractor. Preparation costs under VO 116 will be considered in the Final Award.

19 VOR 108 – FINAL FUNCTIONALITY TESTING – VENTILATION SYSTEM

19.1 Introduction and factual background

(1252) The contested matter under VOR 108 is whether the control, monitoring and final functionality testing ("FFT") of the ventilation system is a part of Subcontractor's scope of work.

(1253) The background for the dispute is that Contractor issued the first draft FFT procedure to Subcontractor on 15 December 2021 (FA7 p. 6643). The procedure included, *inter alia*, FFT procedures for IPS, LVS and the Ventilation System. Subcontractor responded by issuing VOR 108 on 25 January 2022, and stated (FA 7 p.6981, Tribunal's emphasis):

> "Whereas IPS and LVS falls within Subcontractor's Scope of Work, it should be noted that the Ventilation System falls outside Subcontractor's liability since it is contractually asserted as per the LVS Battery Limits enclosed in Appendix F of the Contract that "Elecnor has *not considered* the power supply, the control and the monitoring of the systems or equipment *not included under the scope* of Elecnor (i.e.: *Ventilation, HVAC*, Fire Protection, Doors and Air Locks ...)".
>
> Hence, neither the commissioning in whatever form (SIT/SAT) nor any test as part of the commissioning of the Ventilation System shall be regarded within Subcontractor's scope of Work."

(1254) Contractor issued DVO 73 21 June 2022 and stated under section 3.3 (FA 7p.7998, Tribunal's emphasis):

> "The *functionality* test procedure shall describe the process for how the functionality of all parts of the Railway System shall be tested. It is a fact that some systems powered by low voltage are provided by other parties than Subcontractor Group, e.g. ventilation. However, the SRO controls, regulates and monitors all such systems, *including* those *not* provided by Subcontractor. The information that validates that this functions correctly, is obtained by testing the SRO. E.g. the functionality of the ventilation system

is verified through the Master Programmable Logic Controller delivered by Subcontractor. This *dependency* means that it forms part of Subcontractor's Works to also verify functionality of systems not delivered by Subcontractor."

19.2 The Parties' submissions

19.2.1 Subcontractor's claim and submissions

(1255) Subcontractor's claim under VOR 108 consists of 54 days of EoT, compensation for direct costs amounting to EUR 110,881.97, EoT costs of EUR 1,112,536.54, and preparation cost of EUR 9,142.51.

(1256) Subcontractor holds that its scope of work does not include controlling and monitoring the Ventilation system. This follows from the Battery Limits description in Appendix F to the Contract. There are no contradictions between Appendix F and any other Appendices to the Contract. The only regulation in the Contract concerning the control and monitoring of the Ventilation system is Appendix F, stating that it is not part of Subcontractor's scope of work. EPE supports that the control and monitoring of the Ventilation System is not a part of Subcontractor's scope of work. Hence, programming of new functions for such control and monitoring as described in the FFT procedure and the performance of the FFT of the ventilation system is outside Subcontractor's scope of work.

(1257) Alternatively, if the Tribunal finds that controlling and monitoring of the Ventilation System is a part of Subcontractor's Scope of Work under the Contract, Subcontractor holds that the FFT procedure provided after the Contract was entered into changed the scope compared to the contractual regulations and EPE. Thus, the programming of new functions constitutes a Variation to Subcontractor's scope of work.

(1258) Furthermore, if the Tribunal finds that the new functions described in the FFT are a part of Subcontractor's scope of work, Subcontractor holds that the FFT of the Ventilation System is not a part of Subcontractor's SAT obligations, and thus outside Subcontractor's scope of work. FFT is to be considered Extended Commissioning, which is not a part of Subcontractor's SAT obligations.

(1259) Subcontractor rejects Contractor's assertion that Subcontractor was obliged to perform commissioning of all systems according to Art 1.2 of Appendix A to the Contract and that this included FFT of the Ventilation System. FFT is part of the Extended Commissioning outside Subcontractor's scope of work. The regulation referred to in

Appendix A does not define "Extended Commissioning" and must be considered general definition of commissioning. The testing of "functionality" cannot be read as an obligation to perform complete system testing where the operation of substantial amounts of systems on a coordinated basis is tested. Functionality is tested during all stages of completion activities.

(1260) Regarding Contractor's submission concerning the scope of VOR 108 and preclusion, Subcontractor holds that VOR 108 covers both i) the programming of new functions for the control and monitoring of the Ventilation system as described in the FFT procedure, and ii) the performance of the FFT of the ventilation system described in the FFT procedure. Furthermore, Contractor did not submit DVO 72 until five months after the VOR 108, which is not within a reasonable time under Art 16.2 of the CoC. In any case, due to the misuse of the VO system, the VOR 108 must be deemed a VO.

(1261) The limit to impose variations under the third paragraph of Art 12.1 of the CoC was exceeded when VOR 108 was presented. Hence, Subcontractor is entitled to what is claimed concerning cost and time effects. The rolling analysis requirement under Art 13.3 of the CoC does not apply to VORs and is thus not applicable to VOR 108.

(1262) Contractor has been awarded compensation for reaching the milestone DD. In addition, Contractor has been released from any claim for liquidated damages during the period covered by VOR 108. According to Art 2.2 of the CoC, Subcontractor is entitled to receive the benefits of such entitlements. Subcontractor is, therefore, entitled to EoT independent of any other provision that may lead to a time bar or reduction of the claim presented by Subcontractor. Contractor is, in any case, not entitled to liquidated damages because Bane NOR has not claimed liquidated damages from Contractor.

(1263) The economic claim under VOR 108 is sufficiently documented in the proposal for the Final Account on 12 January 2023.

19.2.2 Contractor's submissions

(1264) No VOR covering the alleged Variation, including the operating logic of emergency ventilation scenarios in Subcontractor's SCADA scope, has been timely submitted by Subcontractor. The latter entails that it is not necessary for the Tribunal to assess

whether the control and monitoring of the tunnel ventilation was outside Subcontractor's scope.

(1265) It should also be noted that Subcontractor chose to implement the operational logic (programming) necessary for controlling and monitoring the tunnel ventilation equipment in the Main PLC in 2021. Hence, the contested work was not based on any instruction from the Contractor's Representative under Art 16.1 of the CoC, which entails that Subcontractor performed the work at its own cost and risk. In any case, if Art 16.1 is considered applicable, the claim is time-barred under Art 16.1 of the CoC because VOR 108, as set out above, did not include the contested claim.

(1266) Provided that the claim is not precluded under CoC Art 16.1, Contractor rejects the basis of VOR 108. Performing FFT of the Ventilation-, IPS- and LVS scopes does not constitute a Variation to the Work. Contractor holds that the operating logic of the emergency ventilation scenarios was part of Subcontractor's SCADA scope. Contractor rejects that including the operating logic of the emergency ventilation scenarios was a Variation. Contractor was unaware that this was part of Subcontractor's submissions under VOR 40 before the presentation in the Hearing. Battery limit documents do not reduce Subcontractor's SCADA obligations.

(1267) Furthermore, Contractor holds that performing FFT of all systems controlled by Subcontractor's Main PLC was within the scope of Subcontractor's commissioning obligations, cf. Art 6 of Appendix A to the Contract and the document "Project Completion Requirements" in Part I Documents of Appendix E to the Contract. Technical considerations of the intention by performing the FFTs are also within Subcontractor's scope of work.

(1268) Regarding the alleged schedule impact, Contractor primarily holds that since FFT of Main PLC communication between MCC and FJEL is part of Subcontractor's Scope of Work, the works performed cannot entitle Subcontractor to any adjustment to the contract schedule.

(1269) Contractor's secondary argument is that performing the FFTs of the emergency ventilation scenarios had no impact on the contract schedule. Subcontractor has not substantiated the alleged number of days delayed.

(1270) Subcontractor's schedule analysis does not substantiate the alleged delay. Ankura's schedule analysis concludes that VOR 108 did not cause any critical delay between 31 October 2021 and 29 May 2022 (Window 8) and makes no references to VOR 108 when assessing the critical path from 29 May 2022 to 30 October 2022. HKA considers that 58 days delay was caused by the time taken to complete the Functionality Tests. However, HKA considers all FFT tests as one event on the critical path

(1271) The FFTs initially had a planned duration of two weeks. The reason for the increase in duration was Subcontractor's unpreparedness regarding the testing. The programming of both the Main SCADA PLC and Main MCC PLC turned out to be premature. The unpreparedness led to delays and disturbances, as Laugstol, for whom Subcontractor bears full responsibility, was forced to repeat the factory testing by correcting and further developing the programming.

(1272) Contractor rejects that VOR 108 is related to works outside Subcontractor's Contract scope, but in the event the Tribunal should reach the opposite conclusion, Contractor has, based on its assessment, quantified that VOR 108 could, as a maximum result in an adjustment to the Contract Schedule of 5 days of works on the critical path.

(1273) In any case, Subcontractor's schedule claim is lost due to a lack of compliance with the deadline for rolling analysis under Art 13.3 of the CoC and the deadline for fulfilling the documentation requirements for the Final Account under Art 20.4

(1274) Regarding the alleged cost impact, Contractor holds that Subcontractor's claim is inflated and that Subcontractor has not shown a causal link between the direct costs claimed in the Claim Composition and the VOR 108 works. Furthermore, Subcontractor has not demonstrated a causal link between the EoT costs claimed and the VOR 108 works.

(1275) Subcontractor's claim for direct cost is not sufficiently documented. If VOR 108 should be considered a Variation to the Work that is not time-barred, which was SAT of ventilation scenarios, Contractor holds maximum compensation should be SAT costs under Laugstol invoice 29, NOK 500 328.

(1276) Contractor primarily holds that Subcontractor is not entitled to prolongation costs under VOR 108 because Subcontractor is not entitled to EoT for the commissioning of

emergency scenarios. In any case, the claim is inflated and not substantiated according to legal requirements.

(1277) Contractor rejects the claim for preparation costs. No records are provided, and the amount seems disproportionally high. Neither Kroll nor HKA acknowledges such a cost category.

(1278) Subcontractor's cost claim is time-barred under Art 20.4 of the CoC.

19.3 The Tribunal's assessment

19.3.1 Introduction

(1279) According to Subcontractor's presentation during the Hearing, VOR 108 covers the following work:

- Programming of a new function for controlling and monitoring the Ventilation System as described in the Final Functionality Test procedure.
- Performance of the SAT of the Ventilation System described in the SAT procedure.

(1280) The Tribunal considers the contested claim under VOR 108 to raise two key questions: a) Whether the control and monitoring of the Ventilation System is part of Subcontractor's Scope of Work under the Contract, and b) whether the contested functions described in the FFT procedure introduced after the Contract, shall be considered a Variation to Subcontractor's Scope of Work, including the SAT obligations.

19.3.2 Is the control and monitoring of the Ventilation System part of Subcontractor's Scope of Work?

(1281) The Tribunal will first assess whether control and monitoring of the Ventilation System is a part of Subcontractor's scope of work under Appendix A.

(1282) Contract Appendix A, Art 6 states that "Subcontractor, shall perform all commissioning of the Contract Object including the provision of procedures...", According to CoC article 1.9 and Appendix A Art 1.5, the Contract object includes the Railway Systems and Commissioning. SCADA is an essential part of the Railway System.

(1283) Subcontractor was the supplier of the SCADA system, including the programming. The SCADA system provides FJEL with monitoring, control and operating logic for all scenarios that should be considered for the operation of the tunnel systems. All the local PLC nodes transmit signals and communicate with the main PLC. The main PLC delivered by Subcontractor controls the entire SCADA system – receiving information from the local PLCs and enabling the control centers' remote control, monitoring and supervision of all the systems in the tunnel, *including* the Ventilation System.

(1284) For Subcontractor to deliver a "fit for purpose" SCADA system, there is a presumption that Subcontractors scope includes the control and monitoring of the Ventilation system (cf. in more detail below).

(1285) More importantly in the present context, the Tribunal has noted that the Parties, after the Contract was entered into, agreed on certain clarifications having a bearing on the present contested matter under VOR 108:

(1286) In a letter dated 19 September 2016, Contractor commented on Subcontractor's changes to Appendix F, which were not included in the main contract between the Contractor and Bane NOR. The result of the changes could be that Subcontractor "based its final contract price on rules different than other competitors and without keeping Contractor fully aware of the changed assumptions". Contractor expressed an urgent need to clarify the issue in the meeting with Subcontractor.

(1287) In an attachment to Subcontractor's letter of 10 October 2016 (FA 21 p.179), *Subcontractor* clarified that (Tribunal's emphasis):

> "ELECNOR is responsible for the *overall* Low Voltage System dimensioned for *all* the scope of the ITT v. 11, *but* the power supply (cables), the control and monitoring (additional RTU's or/and PLC's) of *each system* relies on the subcontractor that are responsible for them."

(1288) Subcontractor *confirmed* that they would fulfil the ITT v. 11, including the obligation to provide a functional SCADA. Subcontractor also stated that:

> "No economic impact expected. The cost associated to the power supply (cables), the control and the monitoring, the additional RTU's or/and PLC's of each system shall be included in the scope of the contract of each system."

(1289) When the first and second quotation are read as a whole, the Tribunal understands Subcontractor's clarification to entail that the control and monitoring of the various

systems as an *integrated* whole via SCADA was a part of Subcontractor's scope of work. See, in particular, the terms "overall" which must be reasonably understood to include, *inter alia*, a functional SCADA.

(1290) Subcontractor has also made reference to the Battery Limits in Appendix F of the Contract, where it is stated "control and the monitoring" of, *inter alia*, "Ventilation" is not included in Subcontractor's scope. The relevant provision in Appendix F provides that (FA 8 p.743, Tribunal's emphasis):

> "Subcontractor has *not considered* the power supply, the control and the monitoring of the systems or equipment not included under the scope of Subcontractor (i.e.: *Ventilation, HVAC*, Fire Protection, Doors and Air Locks, ...)".

(1291) The Tribunal agrees that the phrase "has not considered" may support Subcontractor's understanding. However, the clarifications set out above demonstrate how the Parties understood the contested matter after the Contract was entered into, which does not sit well with Subcontractor's understanding of Appendix F. Such a post-contractual clarification, which was *expressly confirmed by Subcontractor*, must prevail over Appendix F.

(1292) Based on the above, in particular the post-contractual clarifications, the Tribunal concludes that the control and monitoring of the Ventilation System must be considered to be a part of Subcontractor's scope of work.

19.3.3 Were the functions described in the FFT procedure a Variation?

(1293) In Subcontractor's opinion, the EPE reflects the planned solution when the contract was entered into, and hence the changes to the FFT procedure constitute a Variation of the Work. Subcontractor also asserts that the EPE supports that controlling and monitoring the Ventilation System is not part of Subcontractor's Scope of Work.

(1294) The SCADA Design Manual dated 3 July 2018 was part of the EPE. The technical description of the PLC-system, Section 4.1.1 Main functionality states (FA 26 p. 2114):

> "The PLC is essential for local control, monitoring and regulation of low voltage electric equipment in the tunnel. There will be a PLC installed in every cross passage. Every PLC will communicate with each other over the data network (fibre network). One or two of the PLC's must be defined as the main PLC's. This main PLC communicates with the central system for remote control.
>
> Program functions that will be controlled by the PLC:

> The PLC's must have installed all the necessary software to monitor and control required functions. In the list below, a number of systems and functions are specified."

(1295) One of these functions is "Communication with MCC_TLC's for tunnel ventilation".

(1296) Subcontractor's argument in this respect is twofold. First, the Ventilation System used to include a *separate* main ventilation PLC to control the Ventilation System, ref. section 4.1.3.1 regarding ventilation control. Hence, the main PLC LVS would communicate with the main ventilation PLC, and the operating logic of the ventilation, monitoring and control were to be integrated into the Main Ventilation PLC.

(1297) Second, the Final Functionality Test procedure of 15 December 2022, however, introduced a change: The operating logic of the ventilation system was *moved into/integrated as a part of the main PLC* delivered by Subcontractor.

(1298) The question is whether the latter change can be considered a Variation under the Contract. The relevant legal question in this respect is whether the said change is to be considered a part of a regular design development process, or whether the nature or magnitude of the change went beyond what could reasonably be expected at the time of the Contract. The latter is very much dependent on the maturity of the design at the time of contract, and the Parties' roles regarding general and detailed design. If the Contract provides functional requirements and the general design is not completed at the time of contract, a subcontractor must expect more "changes" than if the general design was frozen at the time of contract. The latter makes it difficult to provide a general formula drawing a clear distinction between, on one hand, "changes" being a regular part of the design development process and detailed engineering and, on the other hand, and Variations.

(1299) In the present case, the design/EPE was to be submitted by Contractor after the Contract was entered into. Furthermore, as concluded above in section 8.3.6, Subcontractor was to provide detailed engineering.

(1300) During the detailed engineering, the Parties should have been prepared for "changes" to the design provided in the EPE. The discussions about the operating logic of the main PLC and whether it should be included in the main PLC delivered by Subcontractor took place early in 2021. Discussions arose in meetings about the PLC signal lists instigated by Laugstol in an e-mail dated 15 January 2021 (CB2-1 p.351), which raised some important issues to be clarified. One of the issues was that each main PLC has a

limitation regarding the total number of signals. Laugstol pointed out: "If signals to FJEL are more than 1,500, we will have to add one more module to our main PLC's." Laugstol knew from the beginning that the first interface lists were wrong, "so we did not decide how many or what modules we will need to add to the PLC for the IEC60870-5-104 communication to FJEL, and will not decide it before we receive updated interface table". Laugstol also stated that:

> "We strongly recommend to use separate main PLC's for the MCC system and main PLC's for the SCADA system, according to attached topology sketch. The two main PLCs for the MCC system will be part of Laugtol's scope, both programming and hardware, and will be delivered free of charge and added to the panels during the coming cabinet changes.
>
> It will still be possible for one or two of the scada HMI's to have the "ventilation screen" for starting the ventilation according to spec. The scada HMI's will a connection to both MCC main PLC's.
>
> Benefits:
>
> A much better and more secure solution. During commissioning and for later changes, working on the scada system will not affect the MCC system, which is a very critical system. In case of any programming errors in the scada system, the MCC system will not be affected. All additional costs for adding extra modules/PLC's will be covered by Laugstol."

(1301) The above demonstrates that Laugstol, on their own initiative, proposed changes to the solutions suggested so far, including the main PLCs, the SCADA and the Ventilation System.

(1302) In the SCADA Design Manual, Technical description section 4.2.1.4, the description of the interconnection between the SCADA PLCs and the MCC-PLCs for smoke ventilation is described (FA 26 p.2121):

> "One or two main PLC's will be interconnected with MCC-PLC's in an internal network (MODBUS) on the computer network (IP/MPLS). These main PLC's will send overall command signals to the Ventilation System, which in turn will configure the individual fans to handle the emergency situation accordingly. Whether the main PLC will communicate with one or more MCC_PLC's remains to be decided."

(1303) The last sentence illustrates that the final solution was yet to be decided. Furthermore, section 4.2.1.4 did not indicate where the operating logic would be placed.

(1304) Reverting to the key legal question phrased above, the Tribunal cannot see that the nature or magnitude of the change went beyond what could reasonably be expected at the time of the Contract. It cannot be considered a major change. The aim of the change

was not to introduce something new, but to ensure a robust solution; typical features of a design development process.

(1305) Based on the above, the Tribunal concludes that the new functions described in the Final Functionality Test procedure cannot be considered a Variation.

(1306) Subcontractor cannot be heard with its submission regarding article 2.2 and "deemed VO", and it is sufficient to refer to what is set out above under section 15.3.4 regarding VOR 71, cf. section 7.10.2 and 7.2.2, which applies accordingly to VOR 108.

19.3.4 Was the Final Functionality Test described in the FFT procedure part of Subcontractor's SAT obligations?

(1307) As a consequence of the Tribunal's conclusion above, Subcontractor's commissioning scope for the SCADA system includes testing whether the programming of the emergency ventilation scenarios in the main PLC was functioning in accordance with the contractual requirements. The commissioning of the Ventilation System itself was performed by Witt & Sohn and Schneider.

(1308) The Parties disagree on whether the Final Functionality Test is part of Subcontractor's SAT obligations. Subcontractor submits that the FFT should be considered Extended Commissioning.

(1309) Based on the Tribunal's conclusion under VOR 71 and section 15.3.3 above, the Final Functionality Test and the SAT cannot be regarded as Extended Commissioning. According to the Final Functionality Test procedure section 3 PURPOSE (FA 7 p.6649), the tests "effectuated are SAT and it will be commanded from FJEL and NOS Control Center".

(1310) Section 4 states that the scope is "to verify the functionality of the whole tunnel systems (SAT)." The test includes the Ventilation System, Low Voltage System (LVS) and Medium Voltage System (IPS). Furthermore, the Ventilation System test will be organized as a Signal Test from FJEL/NOS and the interface table UFB-30-A-65748 "will be tested from FJEL/NOS to main PLC."

(1311) In the Tribunal's view, it is an essential part of the commissioning to verify the functionality of all the integrated systems, both hardware and software.

(1312) In Laugstol's offer dated 22 November 2018, Laugstol included "one complete SAT with Bane NOR" FA 25 p.1732). "One complete SAT" must be regarded as a test to verify the functionality of all tunnel systems according to the Final Functionality Test procedure section 4.

(1313) Based on the above, the Tribunal concludes that the Final Functionality Test was part of Subcontractor's SAT obligations and not Extended Commissioning.

19.3.5 Conclusion

(1314) Based on the above, the Tribunal concludes that VOR 108 is rejected.

20 VO 97 (VOR 139) – UNAVAILABILITY OF FJEL

20.1 Introduction and factual background

(1315) The dispute under VO 97 concerns to what extent Subcontractor is entitled to an adjustment of the contract price and contract schedule due to the unavailability of Bane NOR's department for remote control of electrical power, FJEL.

(1316) FJEL's servers send and receive data and signals from the Main PLC and RTUs delivered by Subcontractor. Hence, Subcontractor's SAT of the SCADA System requires FJEL's involvement.

(1317) Following an e-mail from Contractor dated 2 May 2022, where Contractor informed that FJEL would not be available until 13 June 2022, and tentatively from 12 August due to a software update, Subcontractor submitted VOR 139 on 18 May 2022 (CB1 p. 1405).

(1318) Subcontractor submitted VOR 139 rev. 01 on 17 June 2022 (FA7 p. 8826), following Contractor's updated information on 10 and 17 June 2022, that FJEL would also be unavailable on 20 June and tentatively from 28 to 29 June and from 18 to 24 July 2022.

(1319) On 15 September 2022, Contractor issued VO 97, where they accepted that the unavailability of FJEL constituted a Variation (CB1 p. 1417). They also confirmed that Subcontractor had fulfilled its coordination obligations towards FJEL. Contractor further underpinned Subcontractor's obligation to submit an estimate of the effect on the contract price and schedule. Subcontractor submitted "Viewpoints" to VO 97 rev. 00, including an assessment of the effects on the contract price and contract schedule (FA7 p. 8837). In VO 97 rev. 01 submitted on 12 April 2023 (CB1 p. 1438), Contractor

accepted to cover the direct costs. No adjustment of the Contract Schedule was recognized.

20.2 The Parties' submissions

20.2.1 Subcontractor's claim and submissions

(1320) Under VO 97 Subcontractor claims EoT of 52 days, prolongation costs of EUR 1,091,275.69, and preparation costs of EUR 15,635.35.

(1321) FJEL's unavailability impacted the critical path, which corresponds to 52 days. This is higher than depicted in the MPRs for May, June, and July 2022 *(i.e.* 32 days). The reason is that the claim overlaps with several other claims.

(1322) Contractor's handling of VOR 139/VO 97 illustrates disloyalty from Contractor. Subcontractor proactively planned and coordinated to mitigate the unavailability of Fjel, but Contractor did not answer several of the requests from Subcontractor. Contractor did not share the information received from Subcontractor with Bane NOR. Consequently, any assertions that Subcontractor did not fulfil their coordination- and planning obligation to mitigate the unavailability of Fjel or the argument related to overlapping causes must be rejected. Contractor accepted in VO 97 that Subcontractor had fulfilled the contractual coordination obligations.

(1323) The VO 97 rev 0 and rev 01 were not presented until four months after the VOR 139 and five months after the economic assessment and schedule analysis. This is not within a reasonable time, cf. Art 16.2 of the CoC. This illustrates the misuse of the VO system. Consequently, Subcontractor's schedule analysis and economic assessment shall be considered accepted by Contractor.

(1324) The VO 97 rev. 0 was issued on 15 September 2022. Therefore, the time limit for the rolling analysis under Art 13.3 of the CoC was 14 December 2022. Subcontractor presented a Schedule Analysis on 03 November 2022, claiming 52 days of EoT. The schedule impact of VO 97 was further described in the Delay Analysis Report Rev. 01, dated 11 November 2022. These were both timely.

(1325) The limit to impose variations was nevertheless exceeded under the third paragraph of Art 12.1 of the CoC when VOR 139 and VO 97 were presented. Consequently, Subcontractor shall be entitled as claimed.

(1326) Contractor has been awarded EoT for the period covered by VO 97. Subcontractor is, according to the CoC art. 2.2, entitled to receive the benefits of such entitlements. Subcontractor is, therefore, entitled to EoT independent of any other provision that may lead to a time bar or reduction of the claim presented by Subcontractor. Contractor is, in any case, not entitled to liquidated damages for this period when Bane NOR has not claimed liquidated damages from Subcontractor.

(1327) Subcontractor has sufficiently documented the economic claim. The economic assessment related to VO 97 was presented on 3 November 2022, and the proposal for the Final Account was presented on 12 January 2023. It is further elaborated and documented in the claim composition of 5 July 2023.

(1328) The costs are sufficiently substantiated and documented and in compliance with the contractual requirements in Art 13.2, 20.2 and Appendix B.

(1329) The consequence of lack of documentation is nevertheless not full loss. The consequence must be that Subcontractor is entitled to payment based on "common price" or alternatively what Contractor "must have understood", cf. the principle used for day rate in LH-2020-131143.

(1330) The final account includes sufficient documentation of the claims covered by VO 97 in accordance with Art 20.4 of the CoC. The time-bar provision in Art 20.4 only refers to "claims" not being included, not the documentation. The provision must be interpreted based on the aim of clarifying which claims are disputed and the related amount. Documentation may be a reason to object to a claim, but not to preclude a claim that is presented and not to preclude the final account as such.

20.2.2 *Contractor's submissions*

(1331) Sporadic Fjel unavailability did not in itself constitute a Variation. Only unavailability beyond what Subcontractor could have expected and which negative impacts could not have been avoided constitute a Variation, cf. Art 11.1 of the CoC.

(1332) The unavailability of Fjel during the software update delayed the commencement of SAT for four days, between 9 and 13 June 2022. The SAT could not commence before 9 June; thus, the schedule impact of Fjel's unavailability for the commencement of SAT is four days.

(1333) Subcontractor's Schedule Analysis, which holds that the unavailability of Fjel caused 52 days of critical delays, does not demonstrate any causation between Fjel's unavailability and the 52 days of critical delays. It does not demonstrate if and how the unavailability caused a delay on the critical path and does not consider if Subcontractor could have avoided any critical. Neither does it take into account overlapping delays.

(1334) Ankura concludes that Fjel's unavailability caused 17 days of delays in the commencement of the SAT and 11 days during the first part of the SAT but did not emphasize any delay in Subcontractor's works due to Fjel's unavailability after 5 August 2022. HKA concluded that the unavailability of FJEL caused 17 days of delay in the commencement of SAT, 13 of which were concurrent with lacking RFO. HKA also stated that Fjel may have caused delays during the first part of the SAT but could not conclude based on the documentation provided by Subcontractor

(1335) Contractor has granted Subcontractor compensation for direct costs. Subcontractor's claim for EoT costs and preparation costs must be rejected. The claims are not substantiated and documented. Regarding the claim for EoT costs, Subcontractor has not demonstrated any causation between the unavailability of FJEL and the EoT costs claimed. Subcontractor has not used the rates in the Contract. The total claim for prolongation costs presented by Kroll, with the additional costs allegedly incurred by Subcontractor, is not in line with legal requirements. The HKA expert report supports Subcontractor's failure to substantiate and document the costs.

(1336) Subcontractor did not fulfil the documentation requirements for the Final Account within the deadline pursuant to Art 20.4 of the CoC. Consequently, the claim is time-barred.

20.3 The Tribunal's assessment

(1337) The Subcontractor's EoT claim covers ten different periods/days from 25 May to 20 October 2022. The first period is from 25 May to 13 June 2022.

(1338) As explained in section 17.3 and VOR 131 above, Bane NOR issued the RFOC for the RTU on 9 June 2022. FJEL's unavailability was overlapping with the lack of RFOC for the RTU until 9 June 2022. FJEL became available, and Subcontractor's SAT commenced on 13 June 2022.

(1339) Contractor has accepted that the unavailability of FJEL during the software update delayed the commencement of the SAT by four days, from 9 June to 13 June. Thus, the disputed EoT is 48 days.

(1340) During the Hearing, Contractor reviewed and commented on all the days/periods during which FJEL was unavailable from 20 June to 20 October 2022. Contractor concluded that, except for the period from 9 to 13 June, the FJEL unavailability did not cause any delay during the performance of Subcontractor's SAT works. Subcontractor did not seem to respond to Contractor's different explanations why the unavailability of FJEL did not cause a delay to the critical path.

(1341) According to Subcontractor's Schedule Analysis the unavailability of FJEL caused a critical delay during six periods/Windows from 24 April to 30 October based on the MPRs (FA5 pp. 168-172).

(1342) The dispute under VO 97 is limited to the remaining EoT time. The Arbitral Tribunal cannot conclude on this issue, as the potential additional EoT must be considered in conjunction with other EoT claims.

(1343) Regarding Subcontractor's argument that article 2.2 serves as an independent basis for the claim for EoT and a defense against the claim for liquidated damages, the Tribunal refers to its assessments of article 2.2. in above. Further, as pointed out in section 10.7 above, subsequent agreements between Bane Nor and Contractor cannot serve as a basis for a claim under Art 2.2.

21 AWARD

(1344) Based on the interpretations above in sections 6 – 8 and the reasoning developed above, and within the limited scope of the Partial Award as set out above in section 2.9, the Tribunal decides as follows concerning the Part 1 Claims set out below:

a) VOR 33 is considered a Variation under the Contract and is not precluded or time-barred. The claims for schedule and/or cost effects under VOR 33 to be considered as a part of one or more future awards;

b) The EoT-claim under VO 58, and hence EoT-costs under VO 58, is rejected. The claims for direct costs and preparation costs under VO 58 to be considered as a part of one or more future awards;

c) VOR 38 is considered a Variation under the Contract and is not precluded or time-barred. The claims for schedule and/or cost effects of VOR 38 to be considered as a part of one or more future awards;

d) VOR 40 is rejected;

e) The EoT-claim under VO 64, and hence EoT-costs under VO 64, is rejected. The claim for preparation cost under VO 64 to be considered as a part of one or more future awards;

f) VOR 80 is considered a Variation. The claims for schedule and/or cost effects under VOR 80 to be considered in the Final Award. However, Contractor carries the risk that the modifications were not discovered earlier, and the mitigation process shall not be considered delayed by Subcontractor;

g) VOR 71 is rejected;

h) The EoT-claim under VOR 74, and hence EoT-costs under VOR 74, is rejected. Direct costs and preparation costs under VOR 74 to be considered as a part of one or more future awards;

i) The EoT-claim under VOR 131, and hence EoT-costs under VOR 131, is rejected. Direct costs and preparation costs under VOR 131 to be considered as a part of one or more future awards;

j) Subcontractor is entitled to one day EoT under VO 116. The claim for preparation costs under VO 116 to be considered as a part of one or more future awards;

k) VOR 108 is rejected.

l) Decisions on all other issues and requests not decided in the current award are reserved for one or more future awards.

****

Oslo, 28 October 2024

Helge Morten Svarva

Amund Bjøranger Tørum

President

Peter Vagle

Attachment 1: PO1

Attachment 2: PO2

ATTACHMENT 1

IN THE MATTER OF AN ARBITRATION UNDER THE 2004 NORWEGIAN ARBITRATION ACT / ICC ARBITRATION RULES

- between -

Elecnor S.A. and Elecnor Servicios y Proyectos S.A.U.

(the "Claimants")

- and -

ACCIONA INFRAESTRUCURAS AND GHELLA ANS

(the "Respondent")

(and together with the Claimants, the "Parties")

FIFTH REVISION OF PROCEDURAL ORDER NO. 1

ICC CASE 26623/FS/GL

Arbitral Tribunal
Prof. Dr. Amund Bjøranger Tørum (Presiding Arbitrator)
Mr. Peter Vagle
Mr. Helge Morten Svarva

Place of arbitration: Oslo, Norway

24th May 2024

1. Parties to the Arbitration

The Claimants	Counsel for the Claimants
Claimant No. 1: Elenor S.A. c/o Marques de Mondéjar, 33 28028 Madrid Spain Reg. no: CIF-A-48027056 **Claimant No. 2:** Elecnor Servicios y Proyectos S.A.U. Same address as Claimant No. 1 Reg. no CIF-A-79486833	Sands Advokatfirma DA Attorney-in-law Vidar Johnsen Attorney-in-law Tor André Farsund Ulsted Attorney-in-law Louise Kroken Attorney-in-law Tommy Arnulf Attorney-in-law Eirik Rise Legal Assistant Jonas Botillen P.O. Box 1829 Vika, 0123 Oslo, Norway
The Respondent	**Counsel for the Respondent**
ACCIONA INFRAESTRUCURAS AND GHELLA ANS EPC TBM Follo Line Project C.J. Hambros plass 2 0164 Oslo Norway	Advokatfirmaet Haavind AS Attorney-in-law Arve Martin Hyldmo Bjørnvik Attorney-in-law Emil Litschutin Risbøl Attorney-in-law Kristine Landgraff Solli P.O. Box 359, Sentrum, 0101 Oslo, Norway

2. The Dispute and Commencement of Arbitration

2.1 A dispute has arisen between the Parties under a contract entered into between the Parties 29 February 2016 (the "**Contract**"[1]) concerning the Railway Systems for the "Follo Line Project EPC TBM".

2.2 By Request of Arbitration dated 29 October 2021 (the "**RfA**"), the Claimants commenced arbitration proceedings against the Respondent pursuant to Article 38.2 of the Contract, under which the Parties have agreed on arbitration according to the Norwegian Arbitration Act and the ICC Rules (the "**Arbitration**").

2.3 On 3 March 2022, the ICC Secretary General informed the Tribunal members of the confirmation of the Tribunal.

2.4 The Arbitral Tribunal ("**Tribunal**") consists of:

Jointly appointed by the Parties:
Prof. dr. Amund Bjøranger Tørum (Presiding Arbitrator)
University of Oslo
P.O. Box 6706 St. Olavs plass
0130 Oslo
Norway
a.b.torum@jus.uio.no

Co-arbitrator nominated by the Claimants:
Mr. Peter Vagle
Advokatfirma Glittertind AS
P.O. Box 1383
0114 Oslo
Norway
peter.vagle@glittertind.no

Co-arbitrator nominated by the Respondent:
Mr. Helge Morten Svarva
Advokatfirmaet Wiersholm AS
Dokkveien 1
0250 Oslo
hms@wiersholm.no

3. Applicable Procedural Rules and Principles

3.1 The Arbitration shall be conducted in accordance with the principles set out in the Norwegian Arbitration Act of 2004 and the principles and rules set out in the ICC Rules (in force as from 1 January 2021); including but not limited to the principles set out in the ICC Rules Art 22.

[1] Contract No. UFB-PS-S-00055, signed by Claimant No. 1 and Respondent.

4. Representation

4.1 The Parties have designated their respective representatives and counsel listed above as being authorized to act on their behalf in the Arbitration.

4.2 To the extent they have not already done so, the Parties shall confirm these designations by each providing to the others copies of the powers of attorney or letter of representation granted to its representative(s).

4.3 In the event of any change by a Party of its representatives or counsel, or of the contact details of any of its representatives or counsel, that change shall be notified promptly in writing to the opposing Party, to each member of the Tribunal. Failing such notification, communications sent to the addresses set out above shall be valid. The Tribunal further reserves the right to exclude the participation of any representatives from any hearing or other meeting where their participation has not been duly notified sufficiently in advance of that hearing or meeting. Further, when a relationship exists between a new party representative and an arbitration which in the Tribunal's view may create a conflict of interest, the Parties agree that the Tribunal may take appropriate measures to ensure the integrity of the Arbitration, including the exclusion of the new party representative from participating in all or part of the Arbitration.

5. Seat of Arbitration

5.1 The seat of the Arbitration is Oslo, Norway.

5.2 Meetings and hearings may take place at any other location other than the seat of Arbitration, if so decided by the Tribunal after consultations with the Parties. Individual meetings or hearings may also proceed remotely by videoconference if deemed necessary to preserve the health and safety of the participants and/or to accommodate restrictions on movement imposed from time to time, in the judgment of the Tribunal after consultation with the Parties. The Tribunal may meet at any location it considers appropriate for deliberations.

6. Language

6.1 This Arbitration shall be conducted in English.

6.2 All communication in connection with these proceedings shall take place in the English language.

7. Tribunal Secretary

7.1 Due to the magnitude of the case, the Tribunal reserves its right to appoint a Secretary to facilitate the overall cost and time efficiency of the proceedings ("**Tribunal Secretary**"). The Tribunal Secretary (if any) will only undertake specific tasks assigned by the Tribunal, limited to items that are preparatory and organizational in nature, and at all times under its direct supervision and control.

7.2 The Tribunal emphasizes that it will not delegate to the Tribunal Secretary any of the duties and obligations incumbent on the Tribunal members as arbitrators.

7.3 The Parties will pay for the Tribunal Secretary's services and expenses.

7.4 Based on the above understanding, the Parties hereby agree to allow the Tribunal to appoint a Tribunal Secretary if the Tribunal concludes so.

8. Communications and Procedural Orders

8.1 All written submissions by the Parties shall be addressed directly to each member of the Tribunal, with one copy to the other Parties' counsel.

8.2 Written submissions, notifications and communications by e-mail, including copies to other addressees, must reach their addressees prior to expiration of the relevant time limit. If a courier service is to be used (i.e. for briefs and memorials) it is sufficient to hand the submissions to the courier on the business day following the day the time limit expires, provided an electronic copy is sent or uploaded within the time limit.

8.3 The Parties shall conduct the Arbitration in accordance with applicable GDPR requirements. Sensitive documents (if any) shall not be sent by e-mail, but uploaded to the designated electronic platform.

8.4 Procedural Orders will be rendered by the Tribunal but signed by the Presiding Arbitrator alone.

8.5 The Tribunal has the power to amend Procedural Orders and Arbitrators' Communications at any time having regard to the circumstances.

9. Procedural Schedule etc.

9.1 After extensive discussions between the Parties the Spring 2023, a revised Procedural Schedule has been decided by the Tribunal for the treatment of the "**Part 1 Claims**", as defined in the revised Terms of Reference section 4. The Procedural Schedule for Part 1 Claims is attached to this Procedural Order as **Annex 1**.

9.2 A specific Procedural Schedule for the treatment of the "**Part 2 Claims**", as defined in the revised Terms of Reference section 4, is included in **Annex 2**.

9.3 After further discussions late 2023, a second revised Procedural Schedule has been agreed for the treatment of the Part 1 Claims as well as for the Part 2 Claims, included in the aforementioned Annex 1 and 2. Some of the Part 1 Claims have as a consequence been moved from Part 1 to Part 2, ref. the revised Terms of Reference section 4.

9.4 The Part 1 Claims will be decided based on the presentation of the claims in the oral hearing. The Part 2 Claims will be decided based on Written Submissions following the oral hearing.

9.5 Unless otherwise provided, all time limits in the Procedural Schedule refer to 23:59, Oslo time, on the day of the deadline.

9.6 The Parties shall comply with the time limits set for the filing of any written submissions and notifications. For any extension, a reasonable request shall be made promptly after the need for extension arises and, in any event, before the expiration of the time limit, unless when an unforeseen event prevented a Party from filing such a request within such deadline in which case the request shall be made immediately after the impediment ceases to exist. In case of urgency, extensions of any procedural time limits in the Procedural Schedule or otherwise stipulated by the Tribunal may be granted by the Presiding Arbitrator acting alone.

10. Written Submissions

10.1 The currently scheduled number of written submissions are set out in the Procedural Schedules.

10.2 On or before the due date, the submitting Party shall send its submission, together with witness statements and expert reports (if any), and the factual exhibits and legal authorities relied upon, by e-mail or the designated electronic platform file-sharing platform, simultaneously to the opposing Party, each member of the Tribunal, and the Tribunal Secretary.

10.3 The Parties shall use the following numbering and lettering of the pleadings and exhibits: Claimant's pleading No. 1 (Statement of Claims) shall be referred to as C1, while Respondent's pleading No. 1 (Statement of Defense) shall be referred to as R1. In order to facilitate cross-references, all submissions shall be divided into consecutively numbered paragraphs. The format of the evidence is set out below in section 15.

10.4 All written submissions, including witness statements and expert reports, exhibits and legal authorities shall be provided as text-searchable Adobe Portable Document Format ("**PDF**") files, preferably with a hyper-linked table of contents. The written submissions (as such, exclusive exhibits etc.) shall also be submitted in word-format. The Parties shall also send USB drives and/or hard copies of written submissions if so requested by any member of the Tribunal.

10.5 In the first and second exchange of submissions (C1/R1 and C2/R2) for the Part 1 Claims, and C2/R2 and C4/R4 for the Part 2 Claims), the Parties shall set forth all the facts and legal arguments on which they intend to rely. Allegations of fact and legal arguments shall be presented in a detailed, specified and comprehensive manner, and shall respond specifically to all allegations of fact and legal arguments made by the other Party. The substantiation may not be postponed to witness testimony or expert testimony. In the third exchange of submissions (C3/R3) for the Part 1 Claims, and) C5/R5 for the Part 2 Claims), the Parties shall limit themselves to responding to allegations of fact and legal arguments made by the other Party in the previous exchange of submissions, or discussing matters arising from evidence obtained in the document production phase unless new facts have arisen after the previous exchange of submissions.

10.6 The Parties shall submit the evidence that they rely on in their first and second submission (C1/R1 and C2/R2) for the Part 1 Claims, and C2/R2 and C4/R4 for the Part 2 Claims). If any new and material evidence comes to the knowledge of a Party after the filing of its last written submission, or any new facts or issues arise since the date of a witness or expert's last signed and dated statement, the Tribunal may, upon a reasoned written request from a Party and after receiving comments on the request from the other Party, admit such new evidence or allow a witness or expert to submit an additional witness or expert statement before the Hearing. If the Tribunal admits new evidence or additional witness or expert statements into the case, it shall grant the other Party an opportunity to submit evidence or witness or expert statements in rebuttal. The Tribunal may also, based on the same procedure, allow new evidence after the cut-off date set out in the Procedural Schedule, provided that the new evidence is material and the Party could not reasonably have introduced the new evidence earlier.

10.7 For the Part 2 Claims both parties shall endeavour to set forth all the facts and legal arguments and evidence they intend to rely on in the first and second submissions, in order to ensure that the case preparation shall be front loaded. The parties shall however be allowed to elaborate and substantiate their arguments and positions in the writs to be submitted after the oral hearing, and additional exhibits and witness statements may be presented in conjunction with these writs.

10.8 For simultaneous submissions (if any), each side shall submit all documents only to the Tribunal, who shall then distribute copies to the opposing counsel once both submissions have been received.

10.9 Each of the parties shall provide a legal abstract (in an A4-format) latest within the deadline set out in the Procedural Schedule. The legal abstract shall be made available both electronically (as text-searchable PDF-files) and by paper copies. The Tribunal may also accept submission of supplementary legal sources at a later stage, *inter alia* to address an argument or legal source presented by the other party during the course of the Hearing. Legal sources may be submitted in Norwegian, Danish, Swedish or English, to the extent the original is written in any of those languages.

10.10 There shall be no post-hearing briefs for the Part 1 Claims except if the Tribunal requests that the Parties further elaborate on specific claims or topics.

11. Document Production

11.1 Each Party may request the production of documents from the other Party. To ensure a front-loaded process, the Parties shall to the extent possible include such requests (if any) in their two first submissions, preferably in their first submission.

11.2 Requests for the production of documents shall be in writing, identifying in sufficient detail (including subject matter) particular documents or a narrow and specific category of documents that are reasonably believed to exist; and shall set forth, in respect of each document or category of documents requested, a statement as to why such materials are considered relevant to the case and material to its outcome.

11.3 Unless the requested Party objects to production, it shall produce the requested documents within the applicable time limit.

11.4 If the requested Party objects to production, the following procedure shall apply:

a. The requested Party shall submit a response stating which documents or category of documents it objects to producing. The response shall state the reasons for each objection.

b. The requesting Party shall respond to the other Party's objection, indicating, with reasons, whether it disputes the objection.

c. The Tribunal reminds the Parties of their duty to act in good faith in the taking of evidence and within the framework of the processes laid down by the Tribunal in the production of the evidence. This requires the Parties not only to formulate narrow and specific document requests in the first instance, but also to cooperate in the process of achieving such formulations with respect to each other's requests. In consequence, a Party objecting to a request on grounds of over breadth or excessive burden should indicate whether there is a narrower formulation with which it would be willing to comply. In reply, the requesting Party should likewise indicate, in addition to any comments on the other Party's objection to its original formulation, whether there is a narrower formulation that it would be willing to accept. The Parties should not shift entirely to the Tribunal the burden of identifying potential alternate formulations that avoid excessive burden while still allowing production of documents that are relevant and material to the outcome of the case.

d. The Parties shall submit all outstanding requests, objections, and responses to objections, to the Tribunal for decision in vertical tabular form pursuant to the

model appended to this Procedural Order as **Annex 3**. The Parties shall use the same format throughout their exchange of requests, objections, and responses.

e. The Tribunal shall rule on any outstanding requests, and may for this purpose be guided by the *IBA Rules on the Taking of Evidence in International Arbitration 2020*, as they may from time to time be amended.

f. Documents ordered by the Tribunal to be disclosed shall be produced within the time limit set forth in the Procedural Schedule.

11.5 Save for as provided in paragraph 11.4 (d) above, the Parties shall not copy the Tribunal on their correspondence or exchanges of documents in the course of the document production phase.

11.6 The Tribunal may also request the production of documents on its own motion.

11.7 Documents produced by the Parties in accordance with this paragraph shall be produced in their native format where available and divided into folders clearly indicating the request to which they respond.

11.8 Documents produced by the Parties in response to document production requests shall only form part of the evidentiary record if a Party subsequently submits them as exhibits to its written submissions or upon authorization of the Tribunal after the exchange of submissions.

12. Hearing, venue and inspection

12.1 The main oral hearing ("**Hearing**") will take place in Oslo and is scheduled for the period between 13 March until 16 April 2024. There will be four-five court days per week. The practical details of the schedule of the Hearing etc. shall be addressed in a pre-hearing conference latest one month prior to the Hearing.

12.2 To ensure an efficient hearing, the Tribunal will familiarize itself with the written submissions and the documents in the Core Bundle ahead of the oral hearing. The focus of the oral hearing will therefore be on the key questions of fact and law that are at dispute between the Parties. For the avoidance of doubt, the Tribunal may rely on documents included in the Core Bundles, regardless of whether the documents are specifically addressed during the hearing.

12.3 To facilitate the efficiency of the Hearing in accordance with point 12.2 above, the Parties will prepare detailed written outlines with references to evidence and arguments, for use during the oral hearing. For the avoidance of doubt, the Tribunal may make use of and rely upon the documents and legal arguments referred to in the outlines, even if not all documents or arguments therein are specifically addressed during the oral hearing.

12.4 If the Tribunal should wish to rely on a document not addressed at all during the hearing (neither orally nor in the outlines) for any of the Part 1 Claims, the Tribunal will call for a post-hearing conference where the Parties may express their views on the relevance of the document.

12.5 An optional second hearing will be scheduled in Q3/Q4 2024 for addressing questions from the Tribunal related to the Part 2 Claims.

12.6 The Parties shall within reasonable time secure a venue that is adequate for an extensive hearing, and the Tribunal shall have a separate break-out room. The hearing room should have facilities for audio recordings and interpreters.

12.7 Currently, there is not scheduled any inspection of the site (*No.* "befaring") and it is up to the Parties to agree whether there shall be any such inspection, which should preferably take place prior to the Hearing.

13. Minutes

13.1 The minutes of non-evidentiary hearings or conference calls between the Tribunal and Parties' counsel shall in principle be made as summary minutes by a member of the Tribunal.

13.2 The Hearing shall be recorded by audio recordings. The testimonies provided by Fact Witnesses and Expert Witnesses during the Hearing shall be transcribed on a daily basis by experienced transcribers and provided to the Tribunal. Recordings or transcripts of a testimony of a witness shall not be distributed to the Parties until all witnesses have testified.

14. Format of evidence and electronic platform

14.1 The Parties shall identify each exhibit submitted to the Tribunal with a distinct number. Each exhibit submitted by the Claimant shall begin with the letter "C" followed by the applicable number (*i.e.* CE-1, CE-2, etc.); each exhibit submitted by the Respondent shall begin with the letter "R" followed by the applicable number (*i.e.* RE-1, RE-2, etc.).

14.2 Statements of fact witnesses or reports of experts shall be numbered separately as "CWS-" for the Claimant's witness statements and as "CER-" for the Claimant's expert reports, and "RWS-" for the Respondent's witness statements and "RER-" for the Respondent's expert reports, followed by the applicable number and name (*i.e.* CWS-1 [Smith]).

14.3 Excel spreadsheets or other calculations performed by experts shall be provided in their native electronic format (*i.e.* in Excel format rather than PDF).

14.4 All evidence submitted to the Tribunal, including evidence submitted in the form of copies, shall be deemed to be authentic and complete, unless a Party disputes within a reasonable time its authenticity or completeness, or the Party submitting the relevant evidence indicates the respects in which any document is incomplete.

14.5 Respondent's law firm will provide an electronic platform/data room with an adequate folder structure. All submissions and evidence submitted to the Tribunal as a part of the Arbitration shall be made available for the Tribunal (and the Parties) on this platform.

15. Evidence of Fact Witnesses

15.1 If a Party wishes to adduce testimonial evidence in respect of its allegations, it shall so indicate in its written submissions and submit written witness statements.

15.2 Any person may present evidence as a witness, including a Party, a Party's officer, employee or other representative.

15.3 Each witness statement shall:

a) contain the name and address of the witness, his or her relationship to any of the Parties (past and present, if any) and a description of his or her qualifications;

b) describe the role of the witness in the present project, when the witness was employed/entered the project and when the witness left the project/company;

c) contain a full and reasonably detailed description of the facts, and the source of the witness' information as to those facts, sufficient to serve as that witness' evidence in the matter in dispute;

d) contain an affirmation of the truth of the statement;

e) be submitted in English or with a translation into English;

f) be signed by the witness and give the date and place of signature; and

g) identify with specificity any document or other material relied on and, if not already provided in the document exchange, attach a copy of the document or other material relied on.

15.4 The witness statements shall be in sufficient detail so as to stand as examination in chief of the witnesses at the Hearing.

15.5 If a Party wishes to cross-examine a witness whose statement has been filed by the other Party, it should request the presence of this witness for cross-examination at the relevant hearing. If a Party elects not to cross-examine a witness, his/her witness statement shall remain admissible but the facts contained therein shall not be deemed established simply by virtue of the fact that no cross-examination has been requested.

15.6 Each Party shall notify the other Party, in accordance with the Procedural Schedule and with the Tribunal in copy, of the names of the other Party's witnesses it wishes to cross-examine at the Hearing.

15.7 During witness examination, a Party may not produce documents that have not yet been introduced in the proceedings as Exhibits to the Written Submissions, unless the Tribunal permits such production on reasoned request of the pertinent Party, e.g. where the cross-examination of a Party's witness makes production of documents not previously produced relevant, and the Tribunal, considering its general obligation to ensure due process, therefore allows such production.

15.8 Being duly informed of the date of the Hearing, the Parties will immediately after the receipt of this Procedural Order, or at least, as quickly as possible, inform their potential witnesses of these dates to secure their presence at the Hearing and avoid any disruption of the procedural calendar.

15.9 The witnesses shall, in principle, be summoned by the Party which relies on their evidence. If so requested, the Tribunal may assist them in summoning witnesses not under their control. If witness depositions are to be used (as per the Norwegian Arbitration Act Section 30), the procedure for such depositions and the participation of the Tribunal at the depositions (if any) shall be decided by the Tribunal after consulting with the Parties.

15.10 If the witness whose cross-examination has been requested by the other Party is ultimately not able to attend the Hearing, the witness statement of such witness shall be disregarded, unless the Parties agree otherwise. If the witness does not appear for a valid reason, the Tribunal shall hear the Parties on this issue and decide after taking into

account all relevant circumstances, including the Parties' legitimate interests, what weight should be given to the testimony of said witness, if any.

15.11 Subject to the Parties' prior agreement, the Tribunal may determine to hear several witnesses at the same time ("**Witness Conferencing**") if in its opinion this would significantly facilitate the taking of evidence. The rules for the conduct of the witness conferencing (if any) shall be agreed between the Parties and the Tribunal reasonably in advance of the Hearing.

15.12 Subject to section 16.10, the admissibility, relevance, weight and materiality of the evidence offered by a witness or a Party shall be determined by the Tribunal.

15.13 The costs of a witness's appearance shall be borne by the summoning Party, without prejudice to the decision of the Tribunal as to which Party shall ultimately bear those costs and to what extent.

15.14 If a witness is dependent on a translator to provide oral testimony under the Hearing, the Party having introduced the witness shall provide an adequate and independent interpreter.

16. Evidence of Expert Witnesses

16.1 The provisions of section 16 above apply, *mutatis mutandis*, to expert witnesses. The expert shall also identify his or her area of expertise, including his or her background, qualifications, training and experience. The expert's report will contain a description of the instructions pursuant to which he or she is providing his or her opinions and conclusions; a statement of his or her independence from the Parties, their legal advisors and the Tribunal; and the expert's opinion including a description of the method, evidence and information used in arriving at the conclusions.

17. Confidentiality

17.1 Confidentiality concerning the Arbitration proceedings, Procedural Orders and the Award to be addressed in a CMC prior to the hearing.

18. Tribunal Fees etc.

18.1 ICC Rules Art 37 and Art 38 apply.

18.2 If the Hearing is cancelled more than 6 months prior to the hearing due to an amicable settlement, the Tribunal will only be reimbursed its actual hours and costs. In addition to such reimbursement, the following scheme for cancellation fee applies: If the Hearing is cancelled between 6 and 4 months prior to the Hearing, the Tribunal shall have a cancellation fee equal to 25 % of the arbitrator's fee for the time reserved for the Hearing and the estimated work with the award. If the Hearing is cancelled between 4 and 3 months prior to the Hearing, the Tribunal shall have a cancellation fee equal to 30 % of the arbitrator's fee for the time reserved for the Hearing and the estimated work with the award. If the Hearing is cancelled between 3 and 2 months prior to the Hearing, the Tribunal shall have a cancellation fee equal to 35 % of the arbitrator's fee for the time reserved for the Hearing and the estimated work with the award. If the Hearing is cancelled less than 2 months prior to the Hearing, the Tribunal shall have a cancellation fee equal to 40 % of the arbitrator's fee for the time reserved for the Hearing and the estimated work with the award.

19. Amendments

19.1 This Order may be amended or supplemented, and the procedures for the conduct of the Arbitration modified, pursuant to such further directions or Procedural Orders as the Tribunal may, from time to time, issue, after consultation of the Parties.

20. Format of Outlines and Supplemental Outlines for Part I

20.1 Due to the magnitude of the case, the number of claims, pleadings, witness statements etc., it may eventually be a challenge to track all factual, contractual and legal arguments (No. "anførsler"; hereinafter "**Submissions**") that are eventually maintained and presented under the hearing, and which are to be determined by the Tribunal in the award. Therefore, the Outlines to be used in the hearing shall be in a format that can easily be used by the Tribunal to summarize the Parties' Submissions in the award. Thus, the Outlines shall include and summarize the essence of all the Submissions to be determined by the Tribunal. The Outline(s) shall on page 1 clearly identify the claims/disputed matters addressed in the Outline, be provided in Word-format, and contain a detailed table of content.

20.2 To the extent a party wants the Tribunal to determine Submissions that were orally presented under the hearing, but which were not expressly included in the Outlines used in the hearing (if any), such Submissions must be included in updated outlines by way of a written submission ("**Supplemental Outline**") latest 10 days after completion of the hearing. For the sake of good order, Supplemental Outlines cannot be used to introduce new Submissions, and a Supplemental Outline cannot include Submissions that were not presented under the hearing. However, the Supplemental Outlines may include references to transcripts of the examination of witnesses/expert witnesses. The Supplemental Outlines may also be used to withdraw or narrow down Submissions that were made under the hearing.

20.3 The Tribunal may disregard Submissions that are neither included in the Outlines nor in the Supplemental Outlines.

20.4 A Supplemental Outline shall be provided by way of a Word-format mark-up of the Outlines used under the hearing. The additional words of each Party's Supplemental Outlines shall not cumulatively exceed 20 Pages (10.000 words). The Parties will not be allowed to comment on each other's Supplemental Outlines, because the assumption is that the arguments in the Supplemental Outline(s) were made under the hearing (and hence recorded in the transcript) and therefore could have been responded to under the hearing.

21. Separate award for Part I

21.1 The Tribunal shall render a separate award related to Part I within the scope as set out in the enclosed Annex 4. The purpose of the separate award will be to determine overriding contested matters and hence assist the parties in their efforts to explore amicable solutions concerning Part II.

21.2 The aim is to render such a separate award ultimo August, provided that ICC is available to quickly scrutinize the award. However, due to time constraints, the Tribunal will not necessarily be able to determine all the individual claims being included in Part I in the separate award.

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Place of Arbitration: Oslo, Norway

Place and date of Revised PO1: Oslo, 24th May 2024

Prof. Dr. Amund Bjøranger Tørum
(Presiding Arbitrator)

On behalf of the Tribunal

Annex 1: Procedural Schedule for Part 1 Claims

Date	Party/Tribunal	Description
3 June 2022 (as per ICC Rules Art 23 (2))	Parties and Tribunal	Terms of Reference
25 May 2022	Claimant	Statement of Claim (C1)
3 October 2022	Respondent	Statement of Defense (R1)
20 February 2023	Claimant	Statement of Reply (C2) C2 shall also include witness statements and expert statements
20 April 2023	Claimant	Written Witness Statements
5 July 2023	Claimant	Cost documentation for Part 1 Claims
Primo July 2023	Parties and Tribunal	Revised Terms of Reference defining Part 1 and Part 2 Claims
23 August 2023	Respondent	Statement of Rejoinder (R2) Part 1 Claims R2 shall also include witness statements and expert statements
20 February 2023 and 23 August 2023	Claimant and Respondent	Cut-off date for new claims and counterclaims
30 August 2023	Respondent	Factual Abstract 1
30 August 2023	Respondent	Core Bundle 1
1 October 2023	Claimant and Respondent	Deadline to agree on moving some of the Part 1 Claims to Part 2 Claims, cf. ToR section 4
13 October 2023	Claimant and Respondent	Final deadline for submitting document requests. If any requests will not be fulfilled, notice must be given within one week of receiving the request.
8 November 2023	Claimant	Reply (C3) Rebuttals to witness statements (if any) and rebuttals to expert statements (if any)
17 November 2023	Claimant and Respondent	Final deadline for fulfilling document requests
5 January 2024	Respondent	Reply (R3)

		Rebuttals to witness statements (if any) and rebuttals to expert statements (if any)
12 January 2024	Claimant and Respondent	Cut-off date for new evidence Part 1 Claims
19 January 2024	Respondent	Factual Abstract 2
19 January 2024	Respondent	Core Bundle 2
16 February 2024	Claimant and Respondent	Joint deadline for presenting Legal Abstracts
Week 11-12, 14-16 2024	Parties and Tribunal	Hearing Part 1 Claims

Annex 2: Procedural Schedule for Part 2 Claims

Date	Party/Tribunal	Description
Primo July 2023	Parties and Tribunal	Revised Terms of Reference defining Part 1 and Part 2 Claims
23 August 2023	Respondent	Reply in R2 for the following Part 2 Claims: Right of first refusal claims (telecom rooms and cabling for ventilation), VOR 06, VOR 20, VOR 41, VOR 43, VOR 138, VO 90, lack of payment of index regulations, lack of payment of the Amendment no. 02, withheld payments due to interventions, entitlements under CoC art. 2.2.
1 October 2023	Claimant and Respondent	Final deadline for moving Part 1 Claims to Part 2 Claims, cf. ToR section 4
20 October 2023	Respondent	Reply in procedural writ for the remaining Part 2 Claims
30 June 2024	Claimant	Reply (C4) for Part 2 Claims
30 September 2024	Respondent	Reply (R4) for Part 2 Claims
26 September 2024	Claimant and Respondent	Final deadline for submitting document requests for Part 2 Claims. If any requests will not be fulfilled, notice must be given within one week of receiving the request.
10 October 2024	Claimant and Respondent	Final deadline for fulfilling document requests for Part 2 Claims
21 October 2024	Claimant and Respondent	Cut-off date for new evidence Part 2 Claims
28 October 2024	Respondent	Factual Abstract 3
30 November 2024	Claimant and Respondent	Written Submissions for Part 2 Claims
TBA, 3 days Q4 2024	Parties and Tribunal	Optional Hearing Part 2 Claims

Annex 3: Model Schedule for Document Requests

Document Request No.	
A. Documents or category of documents requested (requesting Party)	
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	
C. Objections to document request (objecting Party)	
D. Response to objections and request for resolution (requesting Party)	
E. Decision of the Tribunal	

Annex 4: Scope of separate award related to Part I

1. **Disputed matters concerning the variation order system**
    a. Article 16
        i. The scope of Art 16.1
        ii. The deadlines for issuing VORs under article 16.1 and DVO/VOs under Art 16.2
        iii. Consequences of Subcontractors and Contractors non-compliance with the said deadlines in Art 16.2
        iv. The deadlines in Art 16.5, cf. Art 16.3 and consequences of non-compliance.
        v. Application of the said deadlines to the claims being a part of Part I

    b. The scope of Art 27 and its applicable deadline

    c. Third paragraph of Art 12.1
        i. Interpretation of the boundaries of Contractor's right to order variations
        ii. The legal effects of exceeding the boundaries: applicable rates and compensation models
        iii. Preliminary application: whether the claims being a part of Part I exceeded the said boundaries in the present project

    d. The applicable law and contractual principles to determine schedule effects
        i. The applicable Norwegian law and the impact of «accumulated net effect» in Art 13.3, including concurrent delays.
        ii. The contested matter of prospective vs. retrospective analysis
        iii. Methods of calculating prolongation costs and whether Norwegian law allows Subcontractors suggested modelled day rate, and, if so, how to determine such a rate in the present case
        iv. Interpretation of the «rolling analysis» mechanism in article 13.3 (3): Does it apply to VORs/DVOs, and what are the consequences of breach (if any) of the rolling analysis requirement. Application of Art 13.3 (3) to the claims being a part of Part I
        v. The scope of Art 15.3 and its applicable deadlines

    e. The applicable law and contractual requirements on substantiation and documentation of claims

    f. Elecnor's submissions that AGJV misused the VO-system
        i. Matters of interpretation: «Deemed VO» etc,
        ii. The submissions regarding legal effects of such misuse: no time-bar, relaxed requirements of documentation, «as claimed» etc.
        iii. Application to the individual claims included in Part I

2. **The disputed matters concerning the interpretation of CoC Art 2.2**

3. **Article 20.4 (Final Account)**
    a. Interpretation of the scope of the provision

    b. Interpretation of the break down and documentation obligations

    c. The time-bar effects and whether they apply to claims included in a request for arbitration prior to the Final Account

    d. Application to the claims being a part of Part I

4. **The scope of work**
    a. Interpretation: The contested matter of «detailed engineering» and the relationship between Appendix A and the «Battery Limits»

    b. Interpretation of the scope of Subcontractors planning and coordination obligations under the Contract related to civil works

    c. Interpretation of Subcontractors role regarding commissioning

5. **Assessment of claims included in Part I**
    a. Disputed Variation Order Requests: Determine whether the VORs constitute a variation, and whether any of them are precluded

    b. Variation Orders: Determine direct costs etc.

    c. The Tribunal cannot in a partial award determine the EoT (if any) to be granted under Elecnor's individual claims

    d. Hence, a partial award will mainly determine whether or not the disputed VORs constitute a variation, and not determine the cost and/or schedule impact

6. **Article 24.2 (liquidated damages) - counterclaim**
    a. Interpretation: Provided that a delay was caused by gross negligence/willful intent by Subcontractor, can Contractor claim liquidated damages above the 5% cap in Art 24.2?

ATTACHMENT 2

IN THE MATTER OF AN ARBITRATION UNDER THE 2004 NORWEGIAN ARBITRATION ACT / ICC ARBITRATION RULES

- between -

Elecnor S.A. and Elecnor Servicios y Proyectos S.A.U.

(the "Claimants")

- and -

ACCIONA INFRAESTRUCURAS AND GHELLA ANS

(the "Respondent")

(and together with the Claimants, the "Parties")

PROCEDURAL ORDER *NO. 2*: DOCUMENT PRODUCTION

ICC CASE 26623/FS/GL

Arbitral Tribunal
Prof. Dr. Amund Bjøranger Tørum (Presiding Arbitrator)
Mr. Peter Vagle
Mr. Helge Morten Svarva

Place of arbitration: Oslo, Norway

2th February 2024

Document Request No.	CRD-5 (2)
A. Documents or category of documents requested (requesting Party)	Elecnor requests: a. The document "AUDIT ACTION PLAN Design changes.pdf" (Step 1. Completed), commented by Bane NOR. b. The final version of the document "AUDIT ACTION PLAN Design changes.pdf" Step 1 and Step 2, completed and approved by Bane NOR. c. All communications with Bane NOR regarding this Audit related to Design changes. Based on the documentation previously provided, Elecnor notes that in the email "VO 186 proposed topics for meeting no 6 thursday 14.01.21" certain questions and requests for presentations are addressed to AGJV. Elecnor has not received any of the replies or follow-ups to this email. Elecnor therefore specifically requests to be provided with any replies or subsequent correspondence of any kind to this email by AGJV.
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Reply (C3) paragraphs 84-110. (2) The requested documents are relevant for the understanding of the engineering responsibilities in the Contract. Specifically, that it was AGJV and AI who were responsible for the detailed engineering.
C. Objections to document request (objecting Party)	AGJV has presented numerous documents under CRD-5 (2) including all available communications with Bane NOR. As explained to Elecnor multiple times, AGJV has not found additional documents. AGJV has gone through all of its data servers in an attempt to find remaining / additional documents covered by the request. However, no additional documents are to be found. As previously stated, it is assumed that the remaining documents requested either do not exist or have become lost. Thus, the request must be considered to be fulfilled. AGJV additionally informs that the email specified by Elecnor in the writ of 23 January 2024 from BN was not replied to by AGJV. AGJV points out that it throughout the more than ten years of the project execution has accumulated a very great number of documents related to the Follo Line project, which encompasses far more than the Railway Systems scope, stored in

	various data servers with limited searching capabilities. AGJV has further limited project resources available. AGJV informs that it has allocated as many resources as is defensible searching for the numerous documents requested by Elecnor. AGJV further highlights that it has answered almost all of Elecnor's requests, even requests for very extensive document collections which have been very time consuming to collate. These remaining documents that are requested by Elecnor under CRD-5 (2) are not part of any document collections saved in specific locations, which complicates the search, and have not been found through searches in the servers where they were likely to be found. Consequently, AGJV believes it is possible that the documents do not exist. When taking into account these document's limited (if any) relevance for the case, AGJV highlights that it would be disproportionate to obligate AGJV to conduct further searches for documents that are not possible to find. As a general point relevant to all the requests below, AGJV would again emphasize that it has made all reasonable efforts to obtain documents requested by Elecnor in accordance with the agreed schedule for presenting document requests, and makes reference to AGJV's great willingness in providing an extensive number of documents to Elecnor, even though most of them lack the needed relevance for the dispute.
D. Response to objections and request for resolution (requesting Party)	Elecnor rejects that the request must be considered fulfilled. The requested documents are of material interest to a fundamental topic forming part of the dispute. Elecnor has continuously found missing links in the documentation provided under CRD-5 (2), as in several of the submitted documentation reference is made to correspondence or other relevant documents which falls within the request, but that has not been submitted by AGJV. Elecnor has therefore maintained the requests as Elecnor believes there is still documentation not provided. AGJV has repeatedly responded that they are searching for further documentation but that they assumed further documents do not exist or have been lost. However, each time Elecnor has pointed out documents which are referred to but not submitted, AGJV has found more documents which clearly indicated that AGJV has not performed a diligent search for the requested documents but has submitted only parts of the relevant documents. In AGJV's email of 22 December 2023, AGJV have further stated they have not been able to find the requested documents most likely due to the personnel of AGJV not following the company's routines. This means that documents known to exist, and which are clearly relevant under the requests may actually be in AGJV's possession but not submitted or may have been deleted.

	Despite continuously maintaining the assumption that further documents do not exist, AGJV finally in an email of 17 January 2024 responded to CRD-5 (2) that "*AGJV has diligently searched for additional correspondence related to this topic and has uploaded three more emails and four presentations to the server. AGJV has identified references to various meetings within the uploaded emails. It is worth noting that a meeting series consisting of eight meetings was conducted concerning VO 186, with participation from AGJV, Bane NOR, and COWI. There are no MoMs available from these meetings, excepting the presentations shared, which formed the basis for the discussions in the meetings.*" AGJV were in fact able to locate further documentation after all. Documentation that would not have been made available to Elecnor if the request had not been maintained. Elecnor observes that there still are missing links in the documentation provided by AGJV, and therefore finds it likely that there is further documentation available to AGJV that has not been submitted. Regarding CRD-5 (2) a. and b, Elecnor has even specified their request down to documents name, hence, the documents are known to exist. It should not be difficult for AGJV to search for specific documents in their systems. Elecnor therefore does not agree that AGJV has made all reasonable efforts to obtain documents requested by Elecnor, and finds it necessary to maintain the request yet again. Furthermore, Elecnor does not agree that the requested documents lack the needed relevance for the dispute. The requested documentation is very relevant for the understanding of the engineering responsibilities in the Contract, specifically that it was AGJV and AI who were responsible for the detailed engineering. Consequently, Elecnor upholds the request as referred to in A. above. Elecnor requests the Tribunal to order AGJV to keep searching for the requested documents and to allocate sufficient project resources to locate them, as AGJV has not performed a diligent search.
E. Decision of the Tribunal	Regarding the document request described in Item A, letter a and b, the Tribunal finds that these specific documents can be relevant to the case and material to its outcome, cf. Revised PO no. 1, item 11.2, item 11.4 c. and e., and IBA Rules on the Taking of Evidence in International Arbitration 2020 ("IBA Rules") item 3.7 (i). Further, the Tribunal finds that the non-existence or loss or destruction of these documents has not been shown with reasonable likelihood to have occurred, cf. IBA rules item 9 no. 2 (d), and that an obligation for the Respondent to keep searching for the documents is not an unreasonable burden.

	Regarding the document request described in item A, letter c, the Tribunal finds that this document request is too broad, and not a "description in sufficient detail of a narrow and specific requested category of documents", cf. IBA Rules item 3.3 (a) (ii). Regarding the request for any replies to e-mail "VO 186 proposed topics for meeting no 6 Thursday 14.01.21", the Tribunal notes that the Respondent has informed that AGJV did not reply to this e-mail. Hence, the Tribunal finds that such replies do not exist. On this basis, the Tribunal renders the following unanimous decision: a. The Respondent shall until 9th February 2024 keep searching for and submit any findings of the document "AUDIT ACTION PLAN Design changes.pdf" (Step 1. Completed), commented by Bane NOR", b. The Respondent shall until 9th February 2024 keep searching for and submit any findings of the final version of the document "AUDIT ACTION PLAN Design changes.pdf" Step 1 and Step 2, completed and approved by Bane NOR. c. The Claimant's document request for all communications with Bane NOR regarding the Audit related to Design changes is dismissed. d. The Claimant's document request for replies to the email "VO 186 proposed topics for meeting no 6 Thursday 14.01.21" is dismissed.

Document Request No.	**CRD-5 (4)**
A. Documents or category of documents requested (requesting Party)	In the letter "201906970-720" it is stated that "Company further notes level of detailed engineering is also subject to discussion in a separate forum and this non-conformity may be closed as a result of those discussions at a later date." Thus, AGJV is requested to provide all correspondence with Bane NOR and/or MoM between AGJV and Bane NOR related to the level of detailed engineering. Based on the documentation previously provided, Elecnor notes that in the document "Minutes of meeting - Task force team BN_AGJV - Documentation - Week 43" it is stated "*This was the last planned task force meeting. BN and AGJV have now gone through and discussed documentation regarding IPS, LVS and SCADA in the series of task force*

	meetings. All comments from BN and AGJV can be found in the MDP_DFO that has been used as a tool in these meetings." and *"Since the task force meetings have come to an end, there will now be a new series of meeting between COWI, AGJV and BN. COWI will conduct an independent review of the comments from AGJV and BN. The DFO_MDP will still be used as a tool."* Elecnor therefore specifically requests AGJV to deliver this DFO_MDP exchanged between AGJV and Bane NOR, with the comments of both parties.
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Reply (C3) paragraphs 84-110. (2) The requested documents are relevant for the understanding of the engineering responsibilities in the Contract. Specifically, that it was AGJV and AI who were responsible for the detailed engineering.
C. Objections to document request (objecting Party)	AGJV reiterates that it has not been able to find the minutes of meetings referred to in the letter 201906970-939. AGJV has presented numerous documents under CRD-5. As explained to Elecnor several times, AGJV has gone through various data servers where further relevant documents could potentially be stored in an attempt to find any additional documents. AGJV maintains that despite thorough searches, no additional documents regarding the level of detailed engineering have been found. Thus, the request for "all correspondence between Bane NOR and/or MoM between AGJV and Bane NOR related to the level of detailed engineering" must be considered to be fulfilled. Further reference is made to AGJV's objections above under CRD-5 (2). Further, Elecnor's request for the document "DFO_MDP" is a new request and not a follow-up to any of Elecnor's previous requests. Through CRD-5, Elecnor has requested AGJV to submit Audits conducted by Bane NOR and AGJV, an index of all audits conducted by Bane NOR and by AGJV", and in the last round of document requests in CRD4, a list of specified documents, including "all correspondence with Bane NOR and/or all MoM between AGJV and Bane NOR related to the level of detailed engineering". None of Elecnor's requests submitted before the deadline on 13 October 2023 includes the requested "DFO_MDP" document. This document is not covered by the requests for "correspondence" or "MoM" and is thus a new request and not a follow-up of Elecnor's previous requests.

D. Response to objections and request for resolution (requesting Party)	Elecnor rejects that the request for "*all correspondence with Bane NOR and/or MoM between AGJV and Bane NOR related to the level of detailed engineering*" (ref. letter "201906970-720") must be considered fulfilled. Such documents are of material interest to a fundamental topic forming part of the dispute. Elecnor has continuously found missing links in the documentation provided under CRD-5 (4), as in several of the submitted documentation reference is made to correspondence or other relevant documents which falls within the request, but that has not been submitted by AGJV. Elecnor has therefore maintained the requests as Elecnor believes there is still documentation not provided. AGJV has repeatedly responded that they are searching for further documentation but that they assumed further documents did not exist or have been lost. However, each time Elecnor has pointed out documents which are referred to but not submitted, AGJV has found more documents which clearly indicated that AGJV has not performed a diligent search for the requested documents but has submitted only parts of the relevant documents. Further reference is made to CRD-5 (2) item D above where Elecnor has elaborated on this. Despite continuously maintaining the assumption that further documents did not exist, AGJV finally in an email of 17 January 2024 responded to CRD-5 (4) that "*AGJV has come across and uploaded MoMs from a meeting series with Bane NOR, where AI also participated, titled "Task Force meetings" to the server. As these MoMs were part of an independent meeting series and had a different title, these MoMs were not uncovered in the initial search for communications with Bane NOR related to the level of detailed engineering. AGJV apologizes for the delay in sharing these MoMs.*" AGJV were in fact able to locate further documentation after all. Documentation that would not have been made available to Elecnor if the request had not been maintained. Elecnor observes that there still are missing links in the documentation provided by AGJV, and therefore finds it likely that there is further documentation available to AGJV that has not been submitted. Specifically, as stated under item A above, Elecnor notes the DFO_MDP exchanged between AGJV and Bane NOR which has not been submitted to Elecnor. Elecnor rejects that the document "DFO_MDP" is a new request. Elecnor reiterates what was stated in the Task Force meeting from week 43: "*BN and AGJV have now gone through and discussed documentation regarding IPS, LVS and SCADA in the series of task force meetings. All comments from BN and AGJV can be found in the MDP_DFO that has been used as a tool in these meetings.*" AGJV cannot be heard with the assertion that since the document "DFO_MDP" is not specifically addressed in the previous request it is a new request. First, the document "DFO_MDF" is inseparably linked to the Task Force meeting series, as the scope of the document includes "*all comments from BN AGJV (…) that has been used as a tool in these*

	meetings". Second, Elecnor was unaware of the existence of this document before being provided with the Task Force meetings. Provided that the nature of the "DFO_MDF" document is a fundamental document concerning the whole Task Force meeting series, ref. that it includes all comments on central topics such as IPS, LVS and SCADA that has been discussed in the Task Force meetings, such document (including comments of both parties) should have been submitted by AGJV unsolicited. Consequently, Elecnor upholds the request as referred to in A. above. Elecnor requests the Tribunal to order AGJV to keep searching for the requested documents and to allocate sufficient project resources to locate them. Elecnor specifically request the Tribunal to order AGJV to deliver this DFO_MDP exchanged between AGJV and Bane NOR, with the comments of both parties.
E. Decision of the Tribunal	Regarding the Claimant's document request for "all correspondence with Bane NOR and/or MoM between AGJV and Bane NOR related to the level of detailed engineering", the Tribunal finds that the scope of this request is too broad, and not a "description in sufficient detail of a narrow and specific requested category of documents", cf. IBA Rules item 3.3 (a) (ii). However, the Tribunal considers that the request for "*MoM* between AGJV and Bane NOR related to the level of detailed engineering" is acceptable. Further, the Tribunal finds that the non-existence or loss or destruction of such MoMs has not been shown with reasonable likelihood to have occurred, cf. IBA rules item 9 no. 2 (d), and that an obligation for the Respondent to keep searching for such documents is not an unreasonable burden. The Tribunal also finds that these documents can be relevant to the case and material to its outcome, cf. Revised PO no. 1, item 11.2, item 11.4 c. and IBA Rules item 3.7 (i). Regarding the Claimant's document request for the "DFO_MDP exchanged between AGJV and Bane NOR, with the comments of both parties", the Tribunal finds that this document can be relevant to the case and material to its outcome, cf. Revised PO no. 1, item 11.2, item 11.4 c. and IBA Rules item 3.7 (i). The Tribunal regards this as a follow up of CRD-5, and not a new request. On this basis, the Tribunal renders the following unanimous decision: a. The Respondent shall until 9th February 2024 keep searching for and submit any findings of further MoMs between AGJV and Bane NOR related to the level of detailed engineering.

	b. The Respondent shall within 9th February 2024 submit the "DFO_MDP" exchanged between AGJV and Bane NOR, with the comments of both parties, as referred to in the document "Minutes of meeting - Task force team BN_AGJV - Documentation - Week 43".

Document Request No.	**CRD-5 (5)**
A. Documents or category of documents requested (requesting Party)	Elecnor requests the minutes of meetings referred to in the letter "201906970-939".
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Reply (C3) paragraphs 84-110. (2) The requested documents are relevant for the understanding of the engineering responsibilities in the Contract. Specifically, that it was AGJV and AI who were responsible for the detailed engineering.
C. Objections to document request (objecting Party)	AGJV reiterates that it has not been able to find the minutes of meetings referred to in the letter 201906970-939. As explained to Elecnor several times, AGJV has gone through various data servers where relevant documents could potentially be stored in an attempt to find the requested documents. AGJV maintains that despite thorough searches, the document is not found. Thus, the request must be considered to be fulfilled. Further reference is made to AGJV's objection above under CRD-5 (2).
D. Response to objections and request for resolution (requesting Party)	Elecnor rejects that the request for the MoM referred to in letter "201906970-939" must be considered fulfilled. Such documents are of material interest to a fundamental topic forming part of the dispute. AGJV has not provided the minutes of meetings as they state they have not been able to locate this. AGJV has however in an email of 14 December 2023 stated that: "*As indicated in the letter "UFB-AD-B-01872," the minutes have been reported to be shared at a discipline level, which suggests their existence. However, AGJV has been unable to locate them on the various servers where they could potentially be stored.*" Elecnor questions the fact that AGJV has not been able to locate the requested minutes of meetings as their existence is clearly indicated in the letter

	"UFB-AD-B-01872", which AGJV itself agrees with. In the abovementioned letter "201906970-939" Bane Nor also confirm receipt of the requested minutes of meeting. Furthermore, Elecnor believes that some of the witnesses proposed by AGJV in the current case have in fact attended such meetings, and that the documents therefore shall be accessible to AGJV. Consequently, Elecnor upholds the request as referred to in A. above. Elecnor requests the Tribunal to order AGJV to keep searching for the requested minutes of meetings referred to in the letter "201906970-939" and to allocate sufficient project resources to locate them.
E. Decision of the Tribunal	The Tribunal finds that the minutes of meetings referred to in the letter "201906970-939" can be relevant to the case and material to its outcome, cf. Revised PO no. 1, item 11.2, item 11.4 c. and IBA Rules item 3.7 (i). Further, the Tribunal finds that the non-existence or loss or destruction of this document has not been shown with reasonable likelihood to have occurred, cf. IBA rules item 9 no. 2 (d), and that an obligation for the Respondent to keep searching for this document is not an unreasonable burden. On this basis, the Tribunal renders the following unanimous decision: a. The Respondent shall until 9th February 2024 keep searching for and submit any findings of the minutes of meetings referred to in the letter "201906970-939".

Document Request No.	**CRD-10 (2)**
A. Documents or category of documents requested (requesting Party)	Elecnor requests the estimate dated 17.06.2022 referred to in VO 232 viewpoints.
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions**	(1) Statement of Reply (C3) paragraphs 222-238, 315-333 and 725-735. Statement of Reply (C2) paragraphs 157-165 and 1460-1469.

(2) comments	(2) In the viewpoints to VO 232 it is stated that "*Company is therefore requested to revise the compensation set in VO no. 232 to allow for the compensation set out in Contractor's estimate dated 17.06.2022.*" The VO 232 from Bane NOR to AGJV is equivalent to VO 80 from AGJV to Elecnor (limited to procurement, construction and commissioning work), which belongs to part 1 claims. According to CoC art. 2.2 Elecnor shall receive all benefits of AGJVs entitlements. This estimate dated 17.06.2022 is therefore relevant to consider Elecnor's rights under CoC Art. 2.2.
C. Objections to document request (objecting Party)	AGJV rejects Elecnor's document request under CRD-10 (2) and holds that the request is a new request submitted long after the deadline for presenting new requests. In CRD10, Elecnor initially requested AGJV to "present a matrix of all VOs received from Bane NOR and to inform of any benefit of entitlements which the Contractor has been or will be granted under the Main Contract and which is related to the Work or any of the Subcontractor's rights under the Contract." Subsequently, this request has been specified to apply to specific VOs named by Elecnor, excluding VO 232. The viewpoints for VO 232 were first requested in CRD4 on 13 October 2023, and the estimate for VO 232 was first requested in an email sent 6 December 2023, which AGJV considers a new request, not submitted within the deadline of 13 October 2023, and not a follow-up request to CRD-10. AGJV contends that AGJV's own estimate for VO 232 falls outside of the phrase "benefit of entitlements" granted under the Main Contract. AGJV maintains that the estimate does not inform of any benefits of entitlements which AGJV has been or will be granted under the Main Contract. This is evident from the viewpoints, wherein it is stated that Bane NOR has set the final compensation in VO 232 to "EUR 0 and NOK 0", a figure that has not been revised by Bane NOR. AGJV would also like to clarify that the assertion made by Elecnor, stating that VO 232 from Bane NOR to AGJV is equivalent to VO 80 from AGJV to Elecnor, is not correct. The equivalent VO from Bane NOR is VO 225, as explicitly mentioned in Statement of Defence (R1) para. 983, Statement of Rejoinder (R2) para. 915 and Reply (R3) para. 577. Consequently, AGJV questions the relevance of the estimate for VO 232, as it does not seem to be related to any Part 1 claims. Additionally, AGJV would like to emphasize that Elecnor has issued numerous document requests after the deadline for presenting new requests. Following CRD4 and the deadline for new requests on 13 October 2023, Elecnor has requested documents three additional times through email correspondence. AGJV has consistently made significant efforts to respond to all of Elecnor's requests, providing the available documents. However, after the expiration of the deadline for submitting new requests, AGJV has redirected more of its resources towards preparing the dispute and no

	longer has the same capacity to dedicate resources to searching for additional and new requested documents. This highlights the importance of having a deadline for new document request in place.
D. Response to objections and request for resolution (requesting Party)	Elecnor does not agree that the "estimate dated 17.06.2022 referred to in VO 232 viewpoints" is a new request. In the viewpoints to VO 232 it is stated that "Company is therefore requested to revise the compensation set in VO no. 232 to allow for the compensation set out in Contractor's estimate dated 17.06.2022." This estimate dated 17.06.2022 is covered by Elecnor's requests for information of benefits of entitlements. Elecnor does not agree that this estimate does not inform of any benefit of entitlements which the Contractor has been or will be granted under the Main Contract and which is related to the Work or any of the Subcontractor's rights under the Contract. Furthermore, Elecnor does not agree in the allegation that Elecnor has issued numerous document requests after the deadline for presenting new requests. Elecnor has only made follow-up requests to the original document requests submitted within the deadline for new requests on 13 October 2023. These follow-up requests have been necessitated by AGJVs unfulfillment of the CRDs, as it is evident from the documents submitted by AGJV that there are several documents still not submitted. Elecnor would like to highlight the fact that AGJV has presented a large number of documents in response to these follow-up requests, which should have been provided on the 17 November 2023. Elecnor is not the one to blame for AGJV not answering the document requests within the agreed deadline. The fact that Elecnor has had to request documents three additional times through email correspondence is a result of AGJV's repeated incomplete responses to the document request, and evidence how AGJV has undiligent handled Elecnor's document requests. Following AGJVs clarification that the equivalent VO from Bane NOR is VO 225, Elecnor will however not maintain the request for the estimate dated 17.06.2022 as Elecnor agrees that this estimate is most relevant for the part 2 claims. Elecnor therefore does not make any request for resolution towards the Tribunal.
E. Decision of the Tribunal	NA

Document Request No.	**CRD-12**
A. Documents or category of documents requested (requesting Party)	Elecnor requests all the revisions of the SWECO report, including the revision referred to in "210505 CatchUP AI" item 192, as well as AI's comments to that report, minutes, notes and the like from the referred meeting scheduled on 05/05 with SWECO.
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Reply (C3) paragraphs 50-71, 98-110, and 481-522. (2) The requested documents are relevant for the engineering and selectivity topics. These documents are relevant to observe how the engineering was handled by AI and AGJV. Sweco has assisted AGJV with assessing selectivity in the period 01.03.2021 to 31.03.2023. The requested documentation is relevant to demonstrate that selectivity was AGJV and its designers responsibility, and proves that the 2018 design was erroneous and lacked selectivity for circuit breakers.
C. Objections to document request (objecting Party)	AGJV contends that part of the request is a new request not presented within the agreed deadline for document requests, and not a follow-up to any of Elecnor's previous document requests. In CRD4, submitted 13 October 2023, Elecnor requested AGJV to provide "all reports, notes and the like, and emails related to or covering any meetings held between AGJV and AI, on which topics of the Railway Systems were discussed." Hence, Elecnor requested communication between AGJV and AI in relation to meetings held between the parties. After AGJV, in response to the request, submitted notes from a meeting series conducted between AGJV and AI entitled "CatchUP AI", Elecnor has issued a new request. On 6 December 2023, Elecnor requested AGJV to "submit the SWECO report referred to in "210505 CatchUP AI" item 192". This is a new request and not a follow-up to any of Elecnor's previous requests. To cooperate and to avoid further misunderstandings, AGJV informed that the requested SWECO report has indeed been shared with Elecnor, as is it the same report as the SWECO report that already has been submitted under CRD-18 no. 3, in response to one of Elecnor's other requests.

	Only in Elecnor's latest request, issued 19 January 2024 has Elecnor asked for "all revisions of the SWECO report" as well as "AI's comments to the report". This is a new request and not a follow-up to any of Elecnor's previous requests. The deadline for presenting new requests was 13 October 2023. Elecnor have also requested AGJV to present "minutes, notes and the like from the referred meeting scheduled on 05/05 with SWECO". As previously informed in the responses to the document requests, this part of Elecnor's request cannot be fulfilled as AGJV maintains that it has not been able to find minutes from this meeting. As mentioned, AGJV has gone through various data servers where relevant documents could potentially be stored in an attempt to find the requested documents. AGJV maintains that despite thorough searches no minutes from this meeting have been located. Thus, the request must be considered to be fulfilled. Further reference is made to AGJV's objection above under CRD-5 (2).
D. Response to objections and request for resolution (requesting Party)	Elecnor rejects that the request is partly a new request. AGJV is wrong in their perception of the request being only related to communications or reports being a direct part of the meetings between AGJV and AI, as AGJV seems to grasp the request. A report about selectivity mentioned in the meetings covered by the request is undoubtedly "*related*" to the meetings mentioned in the request. Elecnor also notes that the Sweco report covers a central issue of the dispute, namely selectivity. Nonetheless, the version of the Sweco report dated 31.03.2023 was submitted by AGJV under CRD-18 no. 3, and the earlier version referred to in AGJV and AI's "Catch UP" meetings also fall within the ambit of CRD-18. Further, Elecnor rejects that the Sweco report forming part of the request is the same report that already have been submitted under CRD-18. In that report, dated 31.03.2023, Sweco states in section 1 "*this updated report*" – making it clear that there indeed have been previous versions of this report. Reference is also made to section 3, where Sweco state they have been involved in the selectivity issues on Follobanen "*in the period 01.03.2021 to 31.03.2023*". As AGJV/AI have referred to the Sweco report and a meeting to be held with Sweco in the meeting series dated 05.05.2021, it is undoubtedly the case that a report and further communications and correspondence from that point in time must exist. Consequently, Elecnor rejects that the report of 31.03.2023 is the only report existing, or that there exist no other minutes or correspondence about the selectivity work performed by Sweco, which work commenced in March 2021.

	On this background, the request as stated above in A. is upheld. Elecnor requests the Tribunal to order AGJV to deliver all the revisions of the SWECO report, including but not limited to, the revision referred to in "210505 CatchUP AI" item 192, as well as AI's comments to that report, minutes, notes and the like from the referred meeting scheduled on 05/05 with SWECO.
E. Decision of the Tribunal	The Tribunal finds that the revision of the SWECO report referred to in "210505 CatchUP AI" item 192, can be relevant to the case and material to its outcome, cf. Revised PO no. 1, item 11.2, item 11.4 c. and IBA Rules item 3.7 (i). The Tribunal finds that the document request for this version is a follow up of CRD-18 and not a new request. However, the Tribunal finds that the general request for AI's comments to that report, minutes, notes and the like from the referred meeting scheduled on 05/05 with SWECO, as well as the general document request for other versions of the SWECO report, are new requests submitted after the deadline. On this basis, the Tribunal renders the following unanimous decision: a. The Respondent shall within 9th February 2024 submit the revision of the SWECO report referred to in "210505 CatchUP AI" item 192. b. The Claimant's document request for AI's comments to that report, minutes, notes and the like from the referred meeting scheduled on 05/05 with SWECO is dismissed. c. The Claimant's document request for other versions of the SWECO report is dismissed.

Document Request No.	**CRD-18 (2)**
A. Documents or category of documents requested (requesting Party)	In relation to AGJV's DoC submitted in April 2020, Elecnor requests all documentation used as a basis for assessing that the facility was in accordance with the requirements of the regulations and conditions once submitting the DoC, specifically for the assessment of the selectivity protection and associated risk evaluation for the solutions implemented in the design. Based on AGJVs response that "*the engineering documents submitted in Engineering Package E forms the basis for the designer's assessment that the design complied with the relevant Norwegian regulations when signing the DoC in April 2020*", AGJV is in the alternative requested to provide a list including all referred documents and its revisions from Engineering Package E.

B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Reply (C3) paragraphs 483-484 and 506-517. (2) All documentation used as a basis for assessing that the facility was in accordance with the requirements of the regulations and conditions once submitting the DoC, is of interest to the dispute regarding the engineering topic to illustrate AGJV and AI's responsibility to perform detailed engineering and ensure that its engineering deliverables fulfilled such purpose and was compliant with the applicable requirements.
C. Objections to document request (objecting Party)	As mentioned in AGJV's previous answers, the assessment conducted by Acciona Ingenieria and COWI when signing the DoC for the design was based on the general design submitted in Engineering Package E to Elecnor. Acciona Ingenieria, in signing the DoC, affirmed that the design complied with the relevant regulations. Contrary to Elecnor's request, the premise that AGJV should submit "specific documents used as a basis for assessing that the facility was in accordance with the requirements of the regulations and conditions once submitting the DoC" is inaccurate. Acciona Ingenieria's DoC pertained to the design, not the installation. The specific documents/standards used by Acciona Ingenieria as a basis for issuing the DoC are the applicable standards listed in the DoC. Regarding the request "AGJV is in the alternative requested to provide a list including all referred documents and its revisions from Engineering Package E," AGJV asserts that this is a new request and not a follow-up to CRD-18. Additionally, AGJV notes that Elecnor already possesses the documents from Engineering Package E.
D. Response to objections and request for resolution (requesting Party)	Elecnor notes that AGJV does not fulfil the request, which is to provide: "*all documentation used as a basis for assessing that the facility was in accordance with the requirements of the regulations and conditions once submitting the DoC, specifically for the assessment of the selectivity protection and associated risk evaluation for the solutions implemented in the design*". In its response in C. above, AGJV refers to general statements about the signing of the DoC by AI. The request is not at all inaccurate, as AGJV claims. It clearly refers to documents that formed the basis for the assessment that the plant fulfilled the applicable requirements of the regulations and conditions.

	Elecnor highlights that it in Forskrift om elektriske forsyningsanlegg section 3.1 is stated that "*Enhver som er ansvarlig for prosjektering, utførelse eller endring av anlegg skal utstede en erklæring om at anlegget er i samsvar med kravene i denne forskriften. Som underlag for en slik erklæring skal det være utarbeidet en oversikt over anvendte normer, publikasjoner og spesifikasjoner og annen dokumentasjon som gjør det mulig å vurdere om anlegget er i samsvar med forskriftens krav. Det skal foreligge en detaljert beskrivelse av løsninger som er valgt for å oppfylle forskriftens krav når normer ikke er anvendt.*". Elecnor thus upholds the request as referred to in A. above. Elecnor rejects that the alternative request mentioned in A. above is a new request. If AGJV is unable to provide the documentation as mentioned in the first para. in A. above, the alternative request must be complied with and does not form part of a new request. Elecnor requests the Tribunal to order AGJV to deliver all documentation used as a basis for assessing that the facility was in accordance with the requirements of the regulations and conditions once submitting the DoC or in the alternative provide a list including all referred documents and its revisions from Engineering Package E.
E. Decision of the Tribunal	The Tribunal finds that the Claimant's document requests as described in item A above, including the alternative request, are too broad, and not a "description in sufficient detail of a narrow and specific requested category of documents", cf. IBA Rules item 3.3 (a) (ii). On this basis, the Tribunal renders the following unanimous decision: a. The Claimant's document request for all documentation used as a basis for assessing that the facility was in accordance with the requirements of the regulations and conditions once submitting the DoC, specifically for the assessment of the selectivity protection and associated risk evaluation for the solutions implemented in the design, is dismissed. b. The Claimant's alternative document request for a list including all referred documents and its revisions from Engineering Package E, is dismissed.

Document Request No.	**CRD-18 (4)**

A. Documents or category of documents requested (requesting Party)	Elecnor requests the MoM of the discipline meetings between AGJV and Bane NOR where the selectivity topic was discussed.
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Reply (C3) paragraphs 50-71, 98-110, and 481-534. (2) These documents are relevant to the dispute regarding the changes in the LVS panelboards.
C. Objections to document request (objecting Party)	AGJV replies that the request is a new request not submitted within the deadline for presenting document requests. In CRD2 submitted 7 March 2023, Elecnor requested AGJV "to present all exchanges of communications between AGJV and Bane NOR, including VORs and VOs, if any, regarding the selectivity issue". The initial request was later followed up in CRD4, where Elecnor requested "all the communication between AGJV and AI regarding the redesign made on the LVS due to selectivity issues and other changes performed in the LVS". In AGJV's latest response 17 January 2024 to Elecnor's follow-up request, AGJV informed that the selectivity issue had been discussed between AGJV and Bane NOR in discipline meetings before the correspondence exchange with AI, submitted under CRD-18. AGJV also clarified that this was not a subject for correspondence between AGJV and AI. In the writ submitted on 19 January 2024, Elecnor, for the first time, requested AGJV to provide MoMs from the discipline meetings between AGJV and Bane NOR, referred to by AGJV in its reply. AGJV asserts that the MoMs were not covered by Elecnor's previous request for all "exchanges of communications" between AGJV and Bane NOR on the selectivity issue. Minutes from meetings held between AGJV and Bane NOR should have been explicitly requested before the deadline for new requests expired on 13 October 2023.
D. Response to objections and request for resolution (requesting Party)	Elecnor rejects that the request is a new request. AGJV has during document production submitted extensive documentation regarding the selectivity topic, as a response to numerous follow-up requests from Elecnor, mainly between AGJV and AI, and also some with Bane Nor. Such correspondence was unknown to Elecnor until received during document production.

	Elecnor recall that in the CRD-18 requested in CRD-2 of 7 March 2023 (as referred to by AGJV in C. above), Elecnor requested AGJV to "*present all exchanges of communications between AGJV and Bane Nor, including VORs and VO, if any, regarding the selectivity issues*". As a response, AGJV submitted on 19 June 2013 eight letters between AGJV and AI from the period 2021-2022. However, AGJV did not mention anything about what they now say, that "*the selectivity issue had been discussed between AGJV and Bane Nor in discipline meetings before the correspondence exchange with AI, submitted under CRD-18*". Such information is clearly covered by the request under CRD-18 from 7 March 2023 (ref. "*all exchanges of communications between AGJV and Bane Nor* (…) *regarding the selectivity issues*") but was carelessly omitted by AGJV in their response. Elecnor has until now been unaware of the correspondence that clearly has been taken place between AGJV and Bane Nor about selectivity (as well as with AI). Reference is also made to RWS-16 submitted with R3, in which it is stated by Mr. Solvik in para. 15 that "*This was a hot topic during 2019/2020, the selectivity on the LVS*". Elecnor rejects that the MoMs from the discipline meetings are not covered by the request. Indeed they fall within the ambit of the request, cf. "*all exchange of communication between AGJV and Bane Nor*". AGJV cannot hide behind that the MoMs from the discipline meetings were not mentioned before, as Elecnor was unaware of this and AGJV negligently has withheld such information which just recently has been revealed. Consequently, the request is not at all a new request and undoubtedly falls within Elecnor's request. Elecnor uphold the request as referenced in A. above. Furthermore, given the newly revealed information about the selectivity discussions between AGJV and Bane Nor, that selectivity was discussed prior to AGJV's deep concern for lack of selectivity in September 2019 and that it was "*a hot topic*" between AGJV and Bane Nor in 2019/2020, AGJV is requested and urged to diligently comply with the original request under CRD-18: "*Present all exchanges of communications between AGJV and Bane Nor, including VORs and VO, if any, regarding the selectivity issues*". Elecnor requests the Tribunal to order AGJV to deliver all exchanges of communications between AGJV and Bane Nor, including VORs and VOs, if any, regarding the selectivity issue. Elecnor specifically requests the Tribunal to order AGJV to deliver the MoM of the discipline meetings between AGJV and Bane NOR where the selectivity topic was discussed.

E. Decision of the Tribunal	The Tribunal finds that the document request as described in item A above, was not covered by the request in CRD-2 for "all exchanges in communications" on the selectivity issue. Hence, this document request is regarded as a new request submitted after the deadline. On this basis, the Tribunal renders the following unanimous decision: a. The Claimant's document request for MoM of the discipline meetings between AGJV and Bane NOR where the selectivity topic was discussed, is dismissed.

Document Request No.	**CRD-33**
A. Documents or category of documents requested (requesting Party)	Elecnor requests AGJV to provide all correspondence with Bane NOR regarding the request of the VKL-inspection, and all correspondence with Bane NOR on which the missing DoC of the OCL impeding the performance of such VKL-inspection was discussed.
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Rejoinder (R2) paragraphs 819-820. Statement of Reply (C3) paragraphs 680-688. (2) The requested correspondence is relevant for the VOR 154 part 1 claim. AGJV has in R2 paragraphs 819-820 stated that the main issue with the delay of the VKL inspection was the delay of the submission of the relevant DoC and the solution of A-punches. As stated in C3 paragraphs 680-688 Elecnor does not agree, as the DoC needed to be submitted before the VKL, not before the request for the VKL. The requested correspondence is relevant to consider how AGJV has argued/communicated on these topics towards Bane NOR.

C. Objections to document request (objecting Party)	AGJV has presented numerous documents in response to CRD-33. AGJV maintains that it has not been able to find further documents regarding this topic. As explained to Elecnor numerous times, AGJV has gone through various data servers where relevant additional documents could potentially be stored in an attempt to find the requested documents. AGJV maintains that despite thorough searches no additional documents beyond the email submitted in R3 have been located. Thus, the request must be considered to be fulfilled. Further reference is made to AGJV's objection above under CRD-5 (2).
D. Response to objections and request for resolution (requesting Party)	In CRD4 of 13 October 2023 Elecnor requested "*AGJV to provide Elecnor with all correspondence with Bane NOR regarding the request of the VKL-inspection, and all correspondence with Bane NOR on which the missing DoC of the OCL impeding the performance of such VKL-inspection was discussed.*" This request was later maintained as it was only partially answered by AGJV. AGJV however stated that it submitted the correspondence which it deems relevant for the request, and later maintained that it had not been able to find further documents on the various servers where they could potentially be stored and consequently assumed that further documents did not exist. In the R3, AGJV however provided the document "RE-448 2022-08-01 Mail correspondence regarding VKL and RFCC" which was not submitted previously in response to this CRD-33. Thus, Elecnor finds it very likely that there is additional correspondence with Bane NOR regarding the request of the VKL inspection. Reference is made to Elecnor's general remarks in the response under CRD-5 (2) item D above, and how AGJV, despite stating that they are unable to locate further documents, in fact continuously find relevant documents covered by Elecnor's requests after all. The fact that AGJV has found and submitted the email in R3, clearly indicates that AGJV has not performed a diligent search for the requested documents but has submitted only parts of the relevant documents. On this background, the request as stated above in A. is upheld. Elecnor requests the Tribunal to order AGJV to keep searching for all correspondence with Bane NOR regarding the request of the VKL-inspection, and all correspondence with Bane NOR on which the missing DoC of the OCL impeding the performance of such VKL-inspection was discussed, and to allocate sufficient project resources to locate the requested documents.

E. Decision of the Tribunal	The Tribunal finds that the Claimant's document request as described in item A above, can be relevant to the case and material to its outcome, cf. Revised PO no. 1, item 11.2, item 11.4 c. and e., and IBA Rules item 3.7 (i). Further, the Tribunal finds that the non-existence or loss or destruction of *further* documents than the ones already submitted by the Respondent, has not been shown with reasonable likelihood to have occurred, cf. IBA rules item 9 (d). The Tribunal also finds that an obligation for the Respondent to keep searching for further documents is not an unreasonable burden. On this basis, the Tribunal renders the following unanimous decision: a. The Respondent shall until 9th February 2024 keep searching for and submit any findings of further correspondence with Bane NOR regarding the request of the VKL-inspection, and all correspondence with Bane NOR on which the missing DoC of the OCL impeding the performance of such VKL-inspection was discussed.

Document Request No.	**CRD-38**
A. Documents or category of documents requested (requesting Party)	Elecnor requests all correspondence, presentations, notes and the like exchanged between AGJV and Bane NOR related to the planning and CSB preparations/submissions in the period from April 2019 to November 2022 (inclusive).
B. Relevance and materiality (requesting Party) **(1) para. ref. to submissions** **(2) comments**	(1) Statement of Reply (C3) paragraphs 334-341. (2) This documentation is relevant to consider the overall progress and delays in the project.

C. Objections to document request (objecting Party)	AGJV maintains that the request is a new request presented after the deadline and not a follow-up to any of Elecnor's previous requests. Elecnor initially requested AGJV under CRD-38 in CRD4 to provide Elecnor with "all MoM for the general and specific planning meetings between AGJV and Bane NOR in the period from April 2019 to November 2022, "including" specific meeting carried out for the CSB preparations/submissions, considering their interest to the overall progress in the Project." In AGJV's response it was confirmed that there are no such MoMs (Minutes of meetings) from general or specific meetings carried out for the CSB preparations/submissions. AGJV has thus complied with the document request and cannot see how "all correspondence, presentations, notes and the like exchanged between AGJV and Bane NOR related to the planning and CSB preparations/submissions" could be considered as covered by the previous document request. The request is in any case too vague and has not been sufficiently specified. Nor has its relevance been properly explained. Hence, AGJV maintains that Elecnor's request is a new request and is presented after the deadline. In any case, the request is excessive and disproportionate to request so late in the proceedings.
D. Response to objections and request for resolution (requesting Party)	Elecnor rejects that this is a new request. Elecnor has requested all MoM for the general and specific planning meetings between AGJV and Bane NOR, in the period from April 2019 to November 2022 (inclusive), including specific meetings carried out for the CSB preparations/submissions. Elecnor considers the above to only be a specification/follow up of the initial request. If there are no documents explicitly categorized as MoMs from the general or specific planning meetings between AGJV and Bane NOR, the request must be understood to cover documentation following such meetings which provide a written record of the meeting - encapsulating discussions, decisions, task assignments, deadlines, etc - as the request naturally was not limited to documents explicitly titled or referred to as MoM. Elecnor also rejects that the request is too vague and not sufficiently specified, nor excessive and disproportionate so late in the proceedings. The request is limited to the correspondence, presentations, notes and the like between AGJV and Bane NOR and regarding a specific and limited topic. The request is further limited to a specified time period. Also, the topic is of great importance to the dispute, making the evidential value of the requested documents high. Elecnor also notes that if AGJV had fulfilled the request when first presented, AGJV would not be in a situation of having to fulfil a document request at this stage in the proceedings. Reference is made to CRD-10 (2) item D. above,

	where Elecnor has substantiated its view on the allegation that Elecnor has issued numerous document requests after the deadline for presenting new requests. Furthermore, Elecnor does not agree that the relevance of the request has not been properly explained. The requested documentation is clearly relevant to consider the overall progress and delays in the project. On this background, the request as stated above in A. is upheld. Elecnor requests the Tribunal to order AGJV to deliver all correspondence, presentations, notes and the like exchanged between AGJV and Bane NOR related to the planning and CSB preparations/submissions in the period from April 2019 to November 2022 (inclusive).
E. Decision of the Tribunal	The Tribunal finds that the Claimant's document request as described in item A above, is too broad, and not a "description in sufficient detail of a narrow and specific requested category of documents", cf. IBA Rules item 3.3 (a) (ii). Further, the Tribunal finds that this comprehensive document request must be regarded as a new request, submitted after the agreed deadline, and not only a follow up of the initial request. The Tribunal also finds that it would be unreasonable burdensome for the Respondent to produce the requested documents at this stage, cf. IBA Rules item 9 no. 2 c). On this basis, the Tribunal renders the following unanimous decision: a. The Claimant's document request for all correspondence, presentations, notes and the like exchanged between AGJV and Bane NOR related to the planning and CSB preparations/submissions in the period from April 2019 to November 2022 (inclusive), is dismissed.

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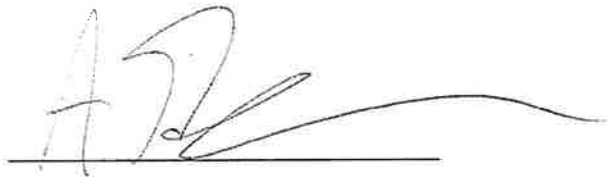

Prof. Dr. Amund Bjøranger Tørum
(Presiding Arbitrator)

On behalf of the Tribunal