



The Single Electricity Market (SEM)

Trading and Settlement Code

Version 8.0

19 November 2010

DOCUMENT HISTORY

MODIFICATIONS INCLUDED IN THIS VERSION	MODIFICATION EFFECTIVE DATE	T&S CODE SECTIONS OR AP MODIFIED	T&SC VERSION IF APPLICABLE
Mod_03_07, Appendix J – Change to Day	30-Sep-07	Appendix J – Change to Day	3.0
Mod_07_07, Calculation of DOP, MOP, DQCC & MQCC	26-Sep-07	Sections 4.133, 4.134, 4.137, 4.137	3.0
Mod_08_07, Application of Pumped Storage Ramp Rates	30-Sep-07	Section 5.121	3.0
Mod_11_07, Calculation of Ex Post Energy Limits	30-Sep-07	Section 5.101	3.0
Mod_15_07, Amendment to LOLP Table mathematical formulation	18-Sep-07	Appendix M sections M.37 and M.39	3.0
Mod_18_07, Seven Errors in the Designated TSC	30-Sep-07	Paragraphs 2.25; 2.144; 2.282; 2.295; 4.79; 6.32.2 and 6.36	3.0
Mod_24_07, Dispatch Instructions for VPMG and VPTG Units	30-Sep-07	Section 5.18A	3.0
Mod_26_07, Eligible Availability for Energy Limited Generator Unit	30-Sep-07	Section 5.108 – Point 2	3.0
Mod_27_07, Exclusion of Demand Side Units	30-Sep-07	Section 4.91 & 7.12	3.0
Mod_31_07, Technical Offer Data – Cooling Boundary Data	30-Sep-07	Appendix I.12	3.0
Mod_33_07, Referencing of Trading Day Exchange Rate	30-Sep-07	6.243	3.0
Mod_34_07, Fixed Market Operator Charge for Interconnector Units	30-Sep-07	7.20	3.0
Mod_36_07, Definition of Pumped Storage Cycle Efficiency	30-Sep-07	Glossary definition	3.0

Mod_39_07, Instruction Profiling Time Lag	30-Sep-07	Appendix O.28	3.0
Mod_04_07, Ex Ante Availability for Price Maker Units Derivation of Price Quantity Pairs	08-Oct-07	Glossary N.37 and N.47	4.0
Mod_78_07, APPENDIX A: Standard Letter of Credit Amendments	22-Oct-07	Appendix A.1	4.0
Mod_21_07, Modification to the Expiry Date provision of the Standard Letter of Credit in Appendix A of the T and SC	08-Oct-07	Section 6.192 1 b. & Appendix A section A.1 Condition 2	4.0
Mod_30_07, Premium for Under Generation Definition	08-Oct-07	Glossary definition	4.0
Mod_35_07, Commercial Offer Data for Variable Price Taker Generator Units	08-Oct-07	Appendix I.4	4.0
Mod_51_07, Release Deferral – Additional clauses in Section 7	08-Oct-07	Section 7– Additional clauses 7.33 to 7.43	4.0
Mod_23_07, Market Operator Charge Invoices	01-Nov-07	Appendix G.3, G.18, new G.3A, G18A	4.0
Mod_37_07 , Instruction Profiling: Load Up Characteristics, Ramp Up and Down Characteristics, Validation Rules	01-Nov-07	Appendix O.14, O.18, O.19, O.20, O.21, I.12 (7)	4.0
Mod_38_07 , Net Demand in Capacity Charges Settlement Statement	01-Nov-07	Section 7.44 , 7.45, Appendix G.15.5	4.0
Mod_44_07, Required strengthening of procedure to modify banking details	01-Nov-07	AP4: Various provisions	N/A
Mod_45_07, Interconnector point of connection	01-Nov-07	Section 7, AP 2 Section 2, Appendix E “Data Publication” Table E.2	4.0
Mod_56_07, Derivation of Price Quantity Pairs for Generator Units	01-Nov-07	N.47	4.0
Mod_59_07, Appendix E - Publication	01-Nov-07	Appendix E, AP 6 – Appendix 2 - Data Publications Table	4.0
Mod_60_07, Agreed Procedure 6 – Table 5.3	01-Nov-07	AP 6 – Table 5.3	N/A
Mod_61_07, Agreed Procedure 4	01-Nov-07	AP 4 - Appendix 2 Bank data	N/A
Mod_64_07, Tie-Break definition	01-Nov-07	Glossary	4.0
Mod_65_07, Section 6	01-Nov-07	Sections 6.63 and 6.64, Glossary	4.0
Mod_67_07, Balancing Cost	01-Nov-07	Section 6	4.0
Mod_69_07 CPM - Definition of Interim Ex Post Loss of Load Probability, IPh	01-Nov-07	Appendix M	4.0
Mod_70_07, Currency Cost Charge in Actual Exposure	01-Nov-07	Sections 6.136, 6.139, 6.186, 6.187	4.0

Mod_71_07 Timing of Capacity Invoice	01-Nov-07	Section 6.49; Appendix E; AP 6; AP 15	4.0
Mod_73_07 Payment Details Required for Same Day Payments	29-Oct-07	AP17	N/A
Mod_74_07 Currency cost in Calculations for the Undefined Exposure Period for a Standard Participant	01-Nov-07	Sections 6.209, 6.213, 6.220, 6.224	4.0
Mod_75_07 Changing of the Settlement Reallocation window close to 12:00 in both the TSC & AP10	01-Nov-07	Section 6.238; (no change to AP10)	4.0
Mod_76_07 Temporary Change to SRA submission rules	01-Nov-07	Section 7, additional clauses 7.46, 7.47 (no change to AP10)	4.0
Mod_77_07 Temporary manual System Operator validation of MPR Technical Offer Data used in EPUS (Agreed Procedure 4)	01-Nov-07	Section 7, additional clauses 7.48 to 7.53; AP4, Section 2.2, Table 2	4.0
Mod_79_07 Treatment of Commercial Offer Data by the MSP Software in the last six hours of the Optimisation Time Horizon	01-Nov-07	Appendix N.63 ; new N63 A	4.0
Mod_83_07 Remove Requirement to send Warning Limit Notices for Generators	20th December 2007	Section 6.181	4.1
Mod_96_07 Change to the payment period of the Variable and Fixed Market Operator Charge	20th December 2007	Section 6.146, 6.147	4.1
Mod_09_07 Administered Settlement – Meter Generation for Demand Side Units	21 st December 2007	Section 6.258	4.1
Mod_28_07 Deletion of Clause 7.29	21 st December 2007	Section 7.29 (replaced with 'intentionally blank')	4.1
Mod_63_07 Calculation of DOP for Predictable Price Takers	21 st December 2007	Section 5.30	4.1
Mod_81_07 Move spurious Glossary page in Appendix A to Section 8	21 st December 2007	Appendix A.1, Section 8 additions	4.1
Mod_89_07 Inclusion of Meter Data Provision timelines in the Settlement Calendar, and clarification to definitions in AP16	21 st December 2007	Section 6.47, Appendix L.13 , L.14 Glossary (week day definition); Agreed Procedure 16;	4.1
Mod_92_07 Emergency Communications between MDPs and Market Operator	21 st December 2007	Agreed Procedure 7	N/A

Mod_95_07 Correction of inconsistent publication timings in Appendix E and AP6	21 st December 2007	Appendix E.1; Agreed Procedure 6	4.1
Correction of calculation formatting errors from previously inserted Mod 70_07 & 74_07	n/a	Section 6.224, 6.136a, 6.139a	4.2
Mod_82_07 Eligible Availability for Energy Limited Units	01- Dec 2007.	Section 7: new clause 7.54 – 7.57	4.2
Mod_32_07 Interpretation of 1st Price Quantity Pair	09-Feb-2008	paragraph 4.15	4.2
Mod_11_08 Extension of the temporary manual System Operator validation of MPR Technical Offer Data used in the MSP Software (Agreed Procedure 4)	01-March-2008	Sections 7.48 to 7.53	4.2
Mod_58_07 Appendix K – Market Data Transactions Section 7.31 & 7.32	7 March 2008	Appendix K – Section 7.31 & 7.32	4.2
Mod_02_08 Correction of error in paragraph 4.91	26 March 2008	Paragraph 4.91	4.2
Mod_04_08 Revised Criteria for the Approval of Intermediary Applications – TSC changes required	21March 2008	Appendix C ; paragraph (II).2 ; 2.2 and 2.3	4.2
Mod_06_08 Further detail of how Availability and Minimum Stable Generation are set for Interconnector Units	21 March 2008	N38, N41	4.2
Mod_07_08 The setting of Market Scheduled Quantities for each type of Price Taker for each MSP Software Run	21 March 2008	5.22, 5.23, N.55, N.56	4.2
Mod_08_08 Exclusion of Ex-Post availability determination for Interconnector Units from 4.49	21 March 2008	4.49	4.2
MOD_18_08 Redraft of management of change to the CMS in AP11	25 April 2008	AP11 Version 3.3	4.3
Mod 21_08 AP12 Modifications Committee Operations (Working Groups, Secretariat role, etc)	17th June 2008	AP12 Version 3.3, Sections 2.178 and 2.353	4.3
Mod_09_08 Retaining Settlement Reallocation Agreements as firm on billing	21st May 2008	Section 6.245 and Section 7.25	4.3
Mod_10_08 Paragraph reference errors in the code	21st May 2008	5.71 and Glossary	4.3
Mod_14_08 Extension of cap on the maximum value of Settlement	21st May 2008	Section 7.46 and Section 7.47	4.3

Reallocation Agreements			
Mod_15_08 Treatment of Interconnector Units	26th June 2008	Clauses 2.89, 2.98A, 7.6 and 7.7	4.3
Mod_19_08 Extension of the temporary manual System Operator validation of MPR Technical Offer Data used in the MSP Software (Agreed Procedure 4)	30th April 2008	Section 7.48 to 7.53	4.3
Mod_22_08 Modification of Agreed Procedures	11th July 2008	Section 2.222 and Section 2.223	4.3
Mod_24_08 Initial Credit Cover and Revised Effective Date Timelines for New Participants	09th July 2008	Clauses 2.43, 2.47 & 2.48 (and proposed new clauses 2.43A and 2.43B) ; AP1 V4.2	4.3
Mod_25_08 Extension of certain T&SC Section 7 provisions to allow for delivery of Market System Development Plan	09th July 2008	Clauses 7.8, 7.9, 7.13, 7.14, 7.30, 7.31, 7.32, 7.46, 7.47.	4.3
Mod_26_08 Definition of Adjusted Participant	22nd July 2008	T&SC Version 4.2 Clause 6.182 AP 9 Version 3.2, sections 3.4.1 and 2.8	4.3
Mod_27_08 Format of Settlement Statements	09th July 2008	T&SC Version 4.2: Clauses 6.73 and 7.19	4.3
Mod_20_08 Nominations, Elections, Terms and Expiry of Modification Committee Members	08th Aug 2008	T&SC Version 4.3: Section 2 and Glossary	4.4
Mod_35_08 Extension of and amendment to existing provisions in relation to the application of DLAFs	23rd Oct 2008	T&SC Version 4.3: Sections 4.27, 4.40, new clause 7.9A, 7.10, 7.11.	4.4
Mod_37_08 Extension of the application of the Capacity Adjustment Factor in the calculation of Required Credit Cover until Implementation Day 1+	23rd Oct 2008	T&SC Version 4.3 Section 7	4.4
Mod_40_08 Interconnector SEM Connection point - extension of interim arrangements	23rd Oct 2008	T&SC Version 4.3 Section 7	4.4
Mod_45_08 Validation of Technical Data: Clarification of Interim Validation Process	23rd Oct 2008	T&SC Version 4.3 Section 7	4.4
Mod_50_08 Moving Interim Error Supplier Unit calculation to the enduring code	23rd Oct 2008	T&SC Version 4.3 Section 7	4.4
Mod_51_08 Extension of T&SC Clauses 7.21, 7.28, 7.44 and 7.45 until the implementation of Day 1+	23rd Oct 2008	T&SC Version 4.3 Section 7	4.4
Mod_52_08 Extension of Section 7 Clauses for calculation of Eligible Availability for Energy Limited Units	23rd Oct 2008	T&SC Version 4.3 Section 7	4.4
Mod_55_08 Single Interconnector Loss Factor for an Interconnector	23rd Oct 2008	T&SC Version 4.3 Section 7	4.4

Mod_56_08 Registration Data for Interconnectors	23rd Oct 2008	T&SC Version 4.3 Section 7 and Glossary	4.4
Mod_05_08 Inclusion of Aggregated Generating Units in the SEM as Aggregated Generator Units	25 Aug 2008	T&SC V4.3	4.5
Mod_29_08 Typo in 4.134	10 Dec 2008	T&SC V4.3 Section 4	4.5
Mod_31_08 Credit Cover Warning Notices via email and no posted copies	15 Dec 2008	T&SC V4.2 Section 2	4.5
Mod_32_08 Format of Invoices	10 Dec 2008	T&SC V4.2 Section 6	4.5
Mod_43_08 Enduring Application of DLAFs	01 Jan 2009	T&SC V4.3 Sections 2, 4, 5 and 7 Glossary, Appendices, AP1 and AP6	4.5
Mod_86_07 Publication of Shadow Price	16 Jan 2009	T&SC Appendices & AP6	4.5
Mod_87_07 Publication of aggregated loss adjusted net demand (Σ NDLF) for all suppliers in Ireland and Northern Ireland	16 Jan 2009	T&SC Appendices & AP6	4.5
Mod_66_07_V2 VAT	18 Feb 2009	T&SC Section 6 & AP15	5.0
Mod_72_07_V2 Correction of Excessive Credit Cover Requirement	16 Jan 2009	T&SC Section 6	5.0
Mod_03_08_V3 Suspension Delay Period Decision Changes	18 Feb 2009	T&SC Section 2, 6 & Glossary	5.0
Mod_13_08_V2 Calculation of MSP Production Cost for use within the MSP Software - revised from Modification 57_07	27 Feb 2009	T&SC Section 4, Appendix N.19 & Glossary	5.0
Mod_17_08 Definitions of Hot Cooling Boundary, Hot Start, Warm Cooling Boundary, Warm Start, Cold Start	30 Jan 2009	Glossary	5.0
Mod_23_08 Precision of calculations within the Central Market Systems	17 Feb 2009	T&SC Section 3 & AP5	5.0
Mod_38_08 Definition of Data Verification Period	26 Jan 2009	T&SC Section 6 & AP13	5.0
Mod_39_08 Dispute Resolution Panel & Chairperson	24 Feb 2009	T&SC Section 2	5.0
Mod_42_08 Submission and Publication of Forecast of Ex-Post Loss of Load Probability for each Trading Period in the forthcoming 31 Trading Days	16 Jan 2009	T&SC Section 7, Appendix K & AP 6	5.0
Mod_46_08 Validation of Technical Data: Clarification of Interim Validation Process	03 Mar 2009	T&SC Section 5, 7, Appendices H, I, Glossary & AP4	5.0
Mod_48_08 Additional items for Settlement Queries	26 Feb 2009	T&SC Section 6	5.0
Mod_57_08 Temporary extension to the time in which a Participant is entitled to file a Settlement Query	17 Feb 2009	T&SC Section 6 & 7	5.0

Mod_58_08 Using Excess Cash Collateral to Make Payments	11 Feb 2009	T&SC Section 6, AP9 & 17	5.0
Mod_63_08 Market Audit Process Correction	26 Feb 2009	T&SC Section 2	5.0
Mod_66_08 Long Term Consumption Adjustments	25 Mar 2009	T&SC Section 6, AP16, Appendices & Glossary	5.0
Mod_68_08 Alignment of T&SC Section 7 provisions with delivery of Market System Development Plan	10 Jan 2009	T&SC Section 7 & Glossary	5.0
Mod_02_09 Further Extension of Section 7 Clauses for calculation of Eligible Availability for Energy Limited Units	24 Feb 2009	T&SC Section 7	5.0
Mod_62_08 Publication of Daily Jurisdiction Error Supply MWh value	31 Mar 2009	T&SC Table E.6, Appendix 2 & AP6	5.0
Mod_01_09 A collection of typographic and grammatical corrections	31 Mar 2009	T&SC Section 4, 6, Appendix, AP12 & AP16	5.0
SEMO Design Baseline Documentation to V5.0	07 April 2009	V5.0	5.0
Mod_28_08_V2 Commercial Offer Data for Interconnector Units	15 April 2009	V4.4 Section 5.52, N.47	5.1
Mod_04_09 Provision of Commencement Notices to System Operators, External Data Providers	16 April 2009	2.47 3.2.1, 3.2.5, 3.6.2	5.1
Mod_05_09 Operational Readiness Confirmation for Variable Generator Units, Classification Change	28 May 2009	Code 4.5 AP1, 4.5	5.1
Mod_06_09 Data Queries by External Data Providers	18 May 2009	T&SC 4.5 AP 13 Section 3.2	5.1
Mod_07_09 SEMO Cash Pooling	27 May 2009	Section 6.17	5.1
Mod_09_09 Correction of Various Typos	18 May 2009	2.106, 2.296, 4.82, 5.61, 5.62, 6.76, 6.90, 6.127, 6.136, 6.141, 6.229, 6.230, 6.256, Glossary, Appendix D, Appendix G, Appendix H, Appendix I, Appendix N, Appendix O.	5.1
Mod_10_09 Validation of Technical Data: Extension of Interim Validation Process	29 April 2009	Section 7	5.1
Mod_13_09 Meter Data Validation Process and Unit Registration	18 May 2009	Various Provisions in Section 2, 6 and Glossary Various sections including 3.2.5	5.1
Mod_14_09 Use of Forecast Demand	06 May 2009	Appendix N.30	5.1
Mod_18_09 Error in Table O.4 when a SYNC MWOF DI > Max Gen	07 July 2009	Table O.4	5.1
Mod_22_09 Subscript Correction Appendix N	07 July 2009	N.77	5.1
SEMO Design Baseline Documentation to V6.0	30 October 2009	V6.0	6.0

Mod_15_09_v2 Modifications Committee Operations – Section 2 Changes	01 September 2009	Section 2 – 2.213, 2.230, 2.232	6.0
Mod_17_09 Interim Provisions to Correct Misaligned DLAF/CLAF/TLAF Timelines	10 July 2009	Section 4 – 4.41B, 4.42, 4.42B Section 7 – 7.61, 7.62, 7.63, 7.64, 7.65, 7.66 Appendix E, Appendix K	6.0
Mod_19_09 Change to Currency Costs Smearing Rules	10 July 2009	Section 6 – 6.136, 6.136A	6.0
Mod_20_09 Temporary Extension of Time Allowance for Submission of Formal Settlement Queries	11 September 2009	Section 6 – 6.101, 6.101A, 6.101B Section 7 – 7.59, 7.60	6.0
Mod_21_09 Credit Cover SRA Cancellation via Email	10 July 2009	Section 2 – 2.358 Glossary	6.0
Mod_23_09 Additional Extension of Section 7 Clauses for the Calculation of Eligible Availability for Energy Limited Units	01 September 2009	Section 5 – 5.104, 5.105, 5.107, 5.108	6.0
Mod_28_09 Clarification of Settlement Statement – Full Settlement Period Republished	18 August 2009	Section 6 – 6.100, 6.113, 6.115 Agreed Procedure 15	6.0
Mod_32_09 Clarification to Definition and Use of Monthly Load Forecast	21 August 2009	Section 4 – 4.32, 4.103, 4.105 Glossary, Appendix M, Agreed Procedure 6	6.0
Mod_31_09 Unit and Interconnector Forced Outage Rate Modifications	29 October 2009	Appendix M Glossary	6.0
Mod_33_09 Force Majeure	29 October 2009	Section 2 – 2.329	6.0
Mod_36_09 Extending Interim Provision for Error Supplier Unit Calculation	29 October 2009	Section 7 – 7.12	6.0
Mod_38_09 Clarification of Application of Resettlement Currency Costs	29 October 2009	Section 6 – 6.136, 6.136A, 6.139, 6.139A Glossary Appendix 15 – 3.2, Appendix 2, Glossary	6.0
Mod_39_09 Housekeeping	29 October 2009	Section 5 Appendix E – Tables E.5 and E.6 Glossary	6.0
Mod_54_08 Individual Warning Limit Above the Default Warning Limit	30 October 2009	Section 6 – 6.174, 6.181 Glossary	6.0
Mod_49_08 Aggregate Payments for Invoices	30 October 2009	Section 2 – 2.238A Section 6 – 6.50B Agreed Procedure 17	6.0
Mod_27_09 Change to Letter of Credit Template Wording for Payment of Charges	01 December 2009	Appendix A – A.1	6.1
Mod_37_09 Correction of Instruction Profiling Rules for Pumped Storage Units	12 January 2010	Appendix O – O.11, Table O.7	6.1

Mod_40_09 RA Modification Proposals	21 January 2010	Section 2 – 2.192, 2.196A Glossary	6.1
Mod_41_09 Aggregated Generator Unit Capacity Change	21 January 2010	Section 5 – 5.193 Agreed Procedure 4 Section 2.2	6.1
Mod_43_09 Clarification on Invoice SRAs and Currency Costs	21 January 2010	AP10 - Section 2.3 & 2.5.3	6.1
Mod_42_09 Removal of Reference to Administered Settlement in Force Majeure Paragraphs	12 January 2010	Section 2 – 2.330	6.1
Mod_44_09 Process for Withdrawal of Modification Proposals	21 January 2010	Section 2 – 2.188A	6.1
SEMO Design Baseline Documentation to V7.0	28 May 2010	V7.0	7.0
Mod_05_10 Clarification of the Submission of SRAs by Account ID	5 February 2010	AP10	7.0
Mod_06_10 Change to Settlement Query Process to Facilitate Query of all Settlement Re-runs	18 February 2010	Section 6 – 6.101, AP13	7.0
Mod_07_10 Changes to Settlement Query Process to Increase Period Allowed to Raise Settlement Query on M+13 Statements	18 February 2010	Section 6 – 6.101, AP13	7.0
Mod_02_10 Validation of Technical Data: Further Extension of Interim Validation Process	26 February 2010	Section 7 – 7.48-7.53, Glossary	7.0
Mod_03_10 Trading Site Definition Amendment	26 February 2010	Glossary	7.0
Mod_08_10 Housekeeping 2	26 February 2010	Section 2 – 2.18, Appendix K, AP17	7.0
Mod_24_09 Definition of Tariff Year and Correction of Loss Factor Timelines	17 March 2010	Section 4 – 4.41-4.41B, Section 7 – 7.61-7.66, Appendix E, Appendix K, Glossary, AP6	7.0
Mod_09_10 AP12 Text	23 April 2010	AP12	7.0
Mod_15_10 Further Extension of Interim Provision for ESU	5 May 2010	Section 4 - 4.91 Section 7 - 7.12	7.0
Mod_14_10 Excess Cash Collateral Drawdown Requirements	21 May 2010	AP9	7.0
Mod_11_10 Removal of Proposal Notice Term	24 May 2010	Section 2 - 2.193, Glossary	7.0
Mod_12_10 Publication of the Code	24 May 2010	Section 2 - 2.342, AP12	7.0
Mod_13_10 Ex Post LOLP Determination Clarification	27 May 2010	Appendix M	7.0
Mod_17_10 Testing Tariff Update Clarification	27 May 2010	Section 5 - 5.178	7.0
Mod_25_09 Publication of two-year generation outage plans	27 May 2010	Appendices E, F, AP 6	7.0
Mod_88_07 Publication of Daily Actual	28 May 2010	Appendix E, AP6	7.0

Load Summary			
SEMO Design Baseline Documentation to V8.0	19 November 2010	V8.0	8.0
Mod_34_09 Global Settlement	07 October 2010	Section 2 – 2.58, 2.59 Section 4 – 4.82A, 4.82B, 4.91, 4.91A, 4.92B, 4.92C, 4.94, 4.100, 4.126, 4.128, 4.156 Section 5 – 5.163A Section 6 – 6.94, 6.109, 6.143, 6.151, 6.209, Appendix E, J, G Glossary AP1, AP13	8.0
Mod_10_10 Nomination of Alternate	22 July 2010	Section 2 - 2.182 AP12	8.0
Mod_22_10 Timelines for EDP Data for Ad-hoc Resettlement	09 November 2010	Section 6 – 6.92, 6.92A, 6.100, 6.100A, Appendix K AP13	8.0
Mod_16_10 Removal of Section 6.91: Data Query Timelines	02 June 2010	Section 6 - 6.87- 6.92, 6.223 AP13	8.0
Mod_20_10 Setting a De Minimus Level on Letter of Credit Drawdown	18 June 2010	Section 6 - 6.51, 6.53, 6.55, 6.233 AP15	8.0
Mod_21_10 Clarification of Management of Taxes and VAT	18 June 2010	Section 6 - 6.260 – 6.262	8.0
Mod_47_08 Validation of Technical Data: Enduring Validation Process	19 November 2010	Section 3 -3.42A – 3.42M Glossary AP4	8.0
Mod_34_08 Dual Rated Generator Amendment	19 November 2010	Section 2 - 2.34, 2.34A, 2.69 Section 4 - 4.28, 4.48, 4.49, 4.51, 4.52, 4.52A Appendix N, O, K, Glossary	8.0
Mod_19_10 Clarification of Limited Communication Failure	17 August 2010	AP5	8.0
Mod_23_10 No Requirement for RA notification of Part Registration	10 June 2010	AP1	8.0
Mod_25_10 Payment Period Currency Costs	17 August 2010	AP15	8.0
Mod_26_10 Submission of alternative proposals	17 August 2010	AP12	8.0
Mod_31_10 Interconnector SEM connection point – Further extension of interim arrangements	21 October 2010	Section 7 - 7.12A, 7.13A, 7.13B, 7.14A, 7.26A	8.0
Mod_32_10 Dual Rated Clarifications	09 November 2010	Appendix H,	8.0

TABLE OF CONTENTS

1. Introduction and Interpretation	1
Introduction	1
Code Objectives	1
Appendices and Agreed Procedures	2
Interpretation.....	2
Interpretation	2
2. Legal and Governance	5
Governing Law.....	5
Jurisdiction.....	5
Term	5
Priority	5
Parties and Accession Process.....	6
De Minimis Threshold	7
Participation and Registration of Units	8
Registration as Price Maker Generator Unit or Price Taker Generator Unit	14
Transmission Loss Adjustment Factors	14
Registration of Error Supplier Unit.....	15
Registration Of Trading Site	15
Differences between Trading Sites and Generation Sites	16
Generator Unit with Non-Firm Access	16
Registration of an Interconnector	17
Interconnector Residual Capacity Unit.....	20
Interconnector Error Unit	20
Interconnector Unit	22
Intermediaries	23
Voluntary Deregistration of Units.....	24
Market Operator.....	25
Obligations on Parties	26
Market Audit, Consultation and Information Sharing	27
Information Sharing	29
Modifications	29
Functions of the Modifications Committee	29
Constitution of the Modifications Committee and Voting Rules	30
Chairperson.....	31
Nomination of Participant Members.....	31
Nominations of Other Members.....	31
Appointment of Subsequent Members.....	32
Resignation and Removal of Members of the Modifications Committee.....	33
Alternate Members of the Modifications Committee.....	34
Meetings of the Modifications Committee	34
Costs of the Modifications Committee	34
Proposal of Modifications to the Code	35
Modification Recommendation Report Timeline.....	35
Procedure for Developing Proposals	35
Spurious Proposals	36
Urgent Modifications.....	36
Alternative Proposals.....	37
Final Modification Recommendation & Report.....	37
No Recommendation or Decision by Modifications Committee.....	38
Decision of the Regulatory Authorities	38
Modifications of Agreed Procedures	39

Information about the Modifications Process	40
Intellectual Property Issues Associated With Modification Proposals	40
No Retrospective Effect	40
Default, Suspension and Termination	41
Default	41
Default Notice	41
Suspension	41
Effect of Suspension Order	44
Termination and Deregistration	45
Effect of Termination Order	46
Voluntary Termination of a Party	46
Consequences of Termination of a Party	46
Consequences of Deregistration	47
Dispute Resolution	48
Preliminaries	48
Settlement Disputes	48
Objectives of the Dispute Resolution Process	49
Dispute Resolution Board	49
Obtaining the DRB's Decision	52
Amicable Dispute Settlement	53
Court Proceedings	53
Failure to Comply with DRB's Decision	53
Supplier of Last resort	53
Limitation of Liability	54
Force Majeure	55
Waiver	57
Severance	58
Third Party Beneficiaries	58
No Association	58
Assignment	58
Entire Agreement	59
Publication of the Code	59
Confidential Information	59
Exceptions	60
Permitted Disclosures	60
Freedom of Information Acts	61
Data Protection	61
Notices	61
Notice to Other Parties	62
Notice to the Regulatory Authorities	63
Market Operator Notices	63
3. Data and Information Systems	64
General	64
Introduction and Interpretation	64
Data Communication Channels	65
Communication Channel Types	65
Obligation of Parties to Maintain a Functional Interface to the Communication Channels	65
Obligation on Parties to Maintain IT Security	66
Specific IT Security Obligations on the Market Operator	66
Obligation on Parties during Testing and Upgrading of Isolated Market Systems and Communication Channels	66
Data categories and Data Transactions	67
Submission, Validation and Rejection of Central market system data	67

Validation Data Sets	69
Submission and Approval of Validation Data Sets	69
Validation of Data Transactions containing Validation Technical Offer Data	70
Updating Approved Validation Data Sets.....	70
CMS Data Transaction Default Offer Processes and Market Procedures.....	71
Updating and Use of Default Data	71
Market Operator Queries of Submitted Validated Data	71
System Operator Market Data Transactions, Interconnector, Administrator	
Market Data Transactions and Meter Data Transactions	72
Communication and System Failures.....	72
Limited Communication Failure	73
General Communication Failure	73
General System Failure.....	73
Reporting of General Communication Failures, General System Failures and	
MSP Failures	74
Meter Data Requirements	74
Data publication	76
Items and Data Record Publication	76
Forecast Publication Rationale	76
Updating Publications.....	76
Numerical Rounding of Calculations and Publications	76
Obligation on the Market Operator to Retain Market Data	77
Obligation on the Market Operator to Maintain Market Re-Run Facilities....	77
4. Pricing	78
Offer Structures.....	78
Commercial and Technical Offer Data.....	78
Provision of Forecast data by the System Operators	82
Net Output Function	82
Trading Boundary and treatment of losses.....	83
Availability, Minimum Stable Generation and Minimum Output	85
Actual Availability	86
Eligible Availability for Capacity Payments	87
Dispatch Quantity.....	88
Pricing algorithm	89
The MSP Software	89
Derivation of Quantities used in Settlement.....	93
Trading Sites with a Trading Site Supplier Unit.....	93
Trading Sites with an Associated Supplier Unit.....	93
Netting Generator Unit calculations	94
Actual Output for Generator Units.....	95
Error Supplier Units	96
Net Demand at Supplier Units	97
Net Demand Adjustment at Supplier Units.....	97
Settlement Net Demand at Supplier Units	98
Energy Payments and Energy Charges	98
Energy Payments for Generator Units	98
Energy Charges to Supplier Units.....	99
Capacity Payments and Capacity Charges	99
Parameters for the determination of Capacity Payments and Capacity	
Charges	99
Basis for Capacity Payments and Capacity Charges	100
Calculation of Capacity Payments	100
Capacity Payments in Respect of Generator Units	103

Capacity Charges	108
Constraint Payments.....	109
Calculation of the Market and Dispatch Offer Prices.....	109
Calculation of Constraint Payments to Generator Units	110
Make Whole Payments	112
Uninstructed Imbalances.....	113
General Rules for Uninstructed Imbalances	113
Uninstructed Imbalance Tolerances	114
Payments to Generator Units for Uninstructed Imbalance	115
Imperfections Charges	116
5. Categorisation of Units and Rules for Special Units	118
Definitions and General.....	118
Classification of Generator Units	118
Conditions applying to Generic Settlement Classes	119
Submission of Data	119
Constraint Payments and Other Payments and Charges.....	121
Interconnectors	123
Interconnector Unit	123
Available Transfer Capacity.....	123
Active Interconnector Unit Capacity Holding Data	124
Commercial and Technical Offer Data.....	124
Interconnector Unit Nominations and Modified Interconnector Unit Nominations.....	126
Technical Failures on an Interconnector	126
SO Interconnector Trades	127
Dispatch Quantities	128
Actual Availability and Minimum Output.....	128
Market Schedule Quantities.....	129
Metered Quantities	130
Interconnector Capacity Payments.....	131
Constraint Payments for Interconnector Residual Capacity Units	131
Settlement	131
Energy Limited Generator Units	132
General	132
Offering and Scheduling	132
Capacity Payments	133
Pumped Storage.....	139
General	139
Offering and Scheduling	140
Energy Settlement.....	141
Constraint Payments and Charges.....	141
Capacity Payments for Pumped Storage Units	142
Priority Dispatch.....	150
Autoproducers	150
General	150
Demand Side Units	151
Offering and Scheduling	152
Quantities	152
Compliance with Dispatch Instructions	153
Generator Units Under Test	153
Commercial Offer Data for Generator Units Under Test	153
Testing Tariffs.....	154
Charges for Generator Units Under Test	154
Settlement of Generator Units Under Test.....	155

Aggregated Generator Units.....	155
6. Financial and Settlement	158
General.....	158
Settlement Items	158
Currency.....	158
Banking Arrangements	159
Provision of Cash Collateral	161
Establishment of Trusts	163
Description of Timelines.....	166
Settlement Day	166
Billing Period	166
Capacity Period	166
Settlement Calendar.....	166
Invoices, Self Billing Invoices and Debit Notes	167
Settlement Reruns.....	173
Queries to Settlement Data.....	174
Data Verification Period	174
Data Queries	174
Settlement Queries.....	176
Settlement Disputes	177
Consequences.....	178
Daily Calculation of Payments FOR Generator Units	179
Invoice payments for energy in respect of Generator Units.....	180
Daily Calculation of Charges FOR Supplier Units.....	181
Invoice Calculations for Energy in Respect of Supplier Units.....	182
Invoice Calculations for Capacity in Respect of Generator Units	183
Invoice Calculations for Interconnector Residual Capacity Unit	183
Invoice Calculations for Capacity in Respect of Supplier Units	183
Recovery of the Billing Period Currency Cost.....	184
Recovery of the Capacity Period Currency Cost	185
Market Operator Balancing Cost	187
Market Operator Charge	188
Fixed Market Operator Charge to All Participants	189
Variable Market Operator Charge.....	189
Recovery of Unsecured Bad Energy Debt.....	190
Recovery of Unsecured Bad Capacity Debt	190
Recovery of Unpaid Market Operator Charge	191
Interest Payment.....	191
Credit cover	192
Parameters for the Determination of Required Credit Cover	195
Monitoring of Credit Cover	195
Calculations for Required Credit Cover	196
Calculations for the Actual Exposure Period in respect of Supplier Units..	196
Calculations for the Actual Exposure Period in respect of Generator Units	
.....	198
Calculations of Required Credit Cover for the Undefined Exposure Period ...	199
Calculation of the Estimated Energy Price.....	199
Calculations of the Estimated Capacity Price	201
Calculations for the Undefined Exposure Period for a New or Adjusted	
Participant in respect of its Supplier Units	203
Calculations for the Undefined Exposure Period for a New or Adjusted	
Participant in respect of its Generator Units	203
Calculations for the Undefined Exposure Period for a Standard Participant in	
respect of its Supplier Units	204

Calculations of the count of Undefined Exposure Periods in the relevant Historical Assessment Periods.....	204
Calculations in respect of Billing Period Charges.....	205
Calculations in respect of Capacity Charges	206
Total Undefined Exposure for a Standard Participant in respect of its Supplier Units	208
Calculations for the Undefined Exposure Period for a Standard Participant in respect of its Generator Units	209
Calculations in respect of Billing Period Payments	209
Calculations in respect of Capacity Payments	211
Total Undefined Exposure for a Standard Participant in respect of its Generator Units	213
Calculations of Required Credit Cover for Participants.....	213
Calling in Credit Cover	215
Settlement Reallocation	215
Implementation of Administered Settlement	217
General Principles in the Event of Administered Settlement	217
Estimation of Data in the Event of Administered Settlement	217
Administered Settlement in the Event of MSP Failure.....	217
Administered Settlement in the event of Electrical System Collapse.....	218
MANAGEMENT OF TAXES AND VAT	219
7. Interim Arrangements.....	221
General.....	221
Purpose.....	221
Interim Provisions.....	221
8. Transitional Arrangements	242
Purpose	242
General.....	242
Accession and Participation Fees	243
Accession and Registration of Initial Participants	243
Credit Cover.....	246
Market Operator Website	247
Modifications.....	247
Dispute Resolution Board	249
MSP Software	249
Uninstructed Imbalance	249
Testing Tariffs	250
Settlement Calendar	250
Annual Maintenance Schedule Data	251
Flattening Power Factor	251
Data Publication by the Market Operator	252
Data Provision by the System Operators	252
Billing Period.....	252
Capacity Period.....	252
Market Schedule Warmth State	252
Interconnector Trades	252
APPENDIX A: Standard Letter of Credit	A-1
Market Operator Euro/Sterling Irrevocable Standby Letter of Credit Template	A-1
APPENDIX B: Dispute Resolution Agreement	A-4
Form of Dispute Resolution Agreement	A-4

General Conditions of Dispute Resolution Agreement For A Dispute Resolution Board	A-5
APPENDIX C: Form of Authority	A-10
Form of Authority for Appointment of an Intermediary	A-10
APPENDIX D: List of Agreed Procedures.....	A-13
APPENDIX E: Data Publication	A-17
APPENDIX F: Other Communications	A-25
Introduction	A-25
Generator Unit Under Test Notice	A-25
Maintenance Schedules Data Transactions.....	A-25
APPENDIX G: Invoices and Settlement Statements.....	A-27
APPENDIX H: Participant and Unit Registration and Deregistration	A-32
Introduction	A-32
Participation Notice	A-32
Agreed Procedure	A-36
Currency.....	A-36
Missing Data	A-36
Communications Channels.....	A-36
Registration Withdrawal.....	A-37
APPENDIX I: Offer Data	A-38
Introduction	A-38
Commercial Offer Data	A-38
Predictable Price Taker Generator Unit Rules	A-38
Variable Price Taker Generator Unit Rules	A-38
Autonomous Generator Unit Rules	A-39
Interconnector Unit Rules	A-39
Interconnector Residual Capacity Unit Rules.....	A-39
Energy Limited Generator Unit Rules	A-39
Pumped Storage Unit Rules	A-39
Demand Side Unit Rules	A-39
Generator Units Under Test Rules.....	A-39
Technical Offer Data	A-40
Autonomous Generator Unit Rules	A-43
Interconnector Unit Rules	A-43
Interconnector Residual Capacity Unit Rules.....	A-43
Energy Limited Generator Unit Rules	A-43
Pumped Storage Unit Rules	A-44
Demand Side Unit Rules	A-44
Default Data.....	A-44
Agreed Procedure 4.....	A-44
APPENDIX J: Market Operator and System Operator Data Transactions	A-46
APPENDIX K: Market Data Transactions	A-48
Data Transactions from System Operator to Market Operator	A-48
Data Transactions from Interconnector Administrator to Market Operator	A-48
Data Transactions from Market Operator to Interconnector User.....	A-48
Data Transaction and its Data Records	A-49
System Parameters Data Transaction	A-52
Generator Unit Technical Characteristics Data Transaction.....	A-52

Demand Control Data Transaction	A-53
System Characteristics Data Transaction	A-54
Energy Limited Generator Unit Technical Characteristics Data Transaction	A-55
Loss of Load Probability for the Capacity Period Data Transaction.....	A-55
Ex-Post Loss of Load Probability Table Data Transaction	A-56
Dispatch Instruction and SO Interconnector Trades Data Transaction...	A-57
SO Interconnector Trade Data Transaction.....	A-58
Annual Load Forecast Data Transaction.....	A-59
Monthly Load Forecast Data Transaction	A-60
Four Day Load Forecast Data Transaction	A-61
Wind Power Unit Forecast Data Transaction	A-62
Uninstructed Imbalance Parameter Data Transaction.....	A-63
Testing Tariffs Data Transaction.....	A-64
Interconnector Available Transfer Capacity Data Transaction	A-65
Active Interconnector Unit Capacity Holding Data Transaction	A-66
Modified Interconnector Unit Nominations Data Transaction	A-67
Forecast of Ex-Post Loss of Load Probability Transaction.....	A-68
APPENDIX L: Meter Data Transactions	A-69
APPENDIX M: Description of the Function for the Determination of Capacity Payments.....	A-72
Determination of Load Forecast data	A-72
Determination of Capacity Margins	A-73
Determination of Forced Outage Rates	A-75
Determination of the Wind Capacity Credit	A-75
Determination of the Margin	A-75
Determination of the Ex-Post Margin	A-78
Determination of the Loss of Load Probability Table	A-79
APPENDIX N: Operation of the MSP Software.....	A-85
Overview of Appendix N.....	A-85
High-level Objectives and Algorithms used within the MSP Software.....	A-85
Outputs from the MSP Software	A-85
Principles underlying the operation of the MSP Software	A-85
High-level processes associated with operation of the MSP Software.....	A-86
Operation of the MSP Software	A-87
Operation of the MSP Software	A-87
Calculation of MSP Production Cost for use within the MSP Software...	A-92
Core data inputs to MSP Software.....	A-93
Pre-processing of Data inputs for the MSP Software	A-95
Inconsistent Technical Capabilities.....	A-95
Derivation of Schedule Demand	A-96
Derivation of Single Ramp Up Rate	A-97
Derivation of Single Ramp Down Rate	A-99
Derivation of Availability	A-101
Derivation of Minimum Stable Generation	A-102
Derivation of Energy Limit	A-103
Derivation of Price Quantity Pairs.....	A-103
Derivation of initial conditions	A-105
Source of Other data Values	A-105
Data values used in Ex-Ante Indicative Market Schedule	A-105
Data values used in Ex-Post Indicative Market Schedule	A-106
Data values used in Ex-Post Indicative MSP Software Runs and Ex-Post Indicative Settlement	A-106
Use of Commercial Offer Data and Technical Offer Data	

in MSP Software.....	A-108
Calculation of Uplift	A-109
Procedure to calculate Cost Recovery values.....	A-110
Cost of running	A-113
Procedure to calculate Minimum Revenue value	A-113
Procedure to calculate final Uplift values	A-114
APPENDIX O: Instruction Profiling Calculations.....	A-115
Capture Input Data.....	A-116
Dispatch Instruction Validation	A-118
Profile operating Modes	A-121
Create Instruction Profile.....	A-122
Calculate Instructed Quantity	A-126
GLOSSARY	G-1
Definitions	G-1
List of Subscripts.....	G-55
List of Variables, Applicable Subscripts and Units	G-57

1. INTRODUCTION AND INTERPRETATION

INTRODUCTION

- 1.1 The Single Electricity Market (or “SEM”) was developed by the Commission for Energy Regulation and the Northern Ireland Authority for Utility Regulation pursuant to a Memorandum of Understanding dated 23 August 2004, the subsequent All-Island Energy Market Development Framework agreed in November 2004 between Noel Dempsey TD, then Minister for Communications, Marine and Natural Resources in Ireland and Barry Gardiner MP, then Minister with responsibility for Enterprise, Trade and Investment in Northern Ireland, and the Memorandum of Understanding between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Ireland of December 2006. This Code was developed as part of the process of establishing the SEM and constitutes the trading arrangements and Trading and Settlement Code for the SEM in Northern Ireland pursuant to section 23 of the Northern Ireland (Miscellaneous Provisions) Act 2006 and the Electricity (Single Wholesale Market) (Northern Ireland) Order 2007, and in Ireland pursuant to section 9BA(1) of the Electricity Regulation Act 1999 (Ireland) and as designated pursuant to regulations made under section 9BA(2)(a) of the Electricity Regulation Act 1999 (Ireland). The SEM incorporates the Pool for trading between participating generators and suppliers. It is a condition of the Market Operator Licences that the Market Operator shall enter into and at all times administer and maintain in force a code which:
1. sets out the terms of the trading and settlement arrangements for the sale and purchase of wholesale electricity in the Pool;
 2. is designed to facilitate the achievement of the objectives set out in paragraph 1.3 below; and
 3. contains modification procedures which provide that any modifications to the Code (but not necessarily, to the Agreed Procedures) must be subject to the prior approval of the Regulatory Authorities and which enable the Regulatory Authorities to propose modifications to the Code.
- 1.2 This Code sets out the trading and settlement rules and procedures for participation in the Pool.

Code Objectives

- 1.3 The aim of this Code is to facilitate the achievement of the following objectives:
1. to facilitate the efficient discharge by the Market Operator of the obligations imposed upon it by its Market Operator Licences;
 2. to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner;
 3. to facilitate the participation of electricity undertakings engaged in the generation, supply or sale of electricity in the trading arrangements under the Single Electricity Market;
 4. to promote competition in the single electricity wholesale market on the island of Ireland;

5. to provide transparency in the operation of the Single Electricity Market;
 6. to ensure no undue discrimination between persons who are parties to the Code; and
 7. to promote the short-term and long-term interests of consumers of electricity on the island of Ireland with respect to price, quality, reliability, and security of supply of electricity.
- 1.4 Paragraphs 1.1 to 1.3 of this Section 1 are for information only and, without prejudice to the rights, duties and obligations set out in the Licences and legislation referred to therein, are not intended of themselves and should not be construed so as to create legally binding obligations as between or impose rights and duties on the Parties, provided that the Modifications Committee shall be required to have regard to the Code Objectives in accordance with paragraph 2.149 and any Dispute Resolution Board shall be required to have regard to the Code Objectives in accordance with paragraph 2.286.

Appendices and Agreed Procedures

- 1.5 The Appendices and the Agreed Procedures, as may be amended or modified from time to time, shall be construed as and form part of this Code and shall be subject to the terms of this Code. The Agreed Procedures set out the detail of procedures to be followed by Parties in performing obligations and functions under this Code.
- 1.6 Appendix D “Scope of Agreed Procedures” describes and sets out the scope of each of the Agreed Procedures.

INTERPRETATION

Interpretation

- 1.7 In this Code, the following interpretations shall apply unless the context requires otherwise:
1. the Table of Contents, and any index and headings in this Code, are for ease of reference only and do not form part of the contents of this Code and do not and shall not affect its interpretation;
 2. words in the singular shall include the plural and vice versa and the masculine gender shall include the feminine and neuter;
 3. the word “including” and its variations are to be construed without limitation;
 4. any reference to any legislation, primary or secondary, in this Code includes any statutory interpretation, amendment, modification, re-enactment or consolidation of any such legislation and any regulations or orders made thereunder and any general reference to any legislation includes any regulations or orders made thereunder;
 5. any references to Sections, paragraphs, Appendices and Agreed Procedures are references to Sections, paragraphs, Appendices and Agreed Procedures of this Code as amended or modified from time to time in accordance with the provisions of this Code;
 6. any reference to another agreement or document, or any deed or other instrument is to be construed as a reference to that other

agreement, or document, deed or other instrument as lawfully amended, modified, supplemented, substituted, assigned or novated from time to time;

7. any reference to a day is to be construed as a reference to a calendar day except where provided otherwise, and any reference to a year is to be construed as a reference to a period of 12 months;
8. any reference to a time is to be construed as a reference to the time prevailing in Belfast;
9. where any obligation is imposed on any Party pursuant to this Code and is expressed to require performance within a specified time limit that obligation shall, where appropriate, continue to be binding and enforceable after that time limit if the Party fails to perform that obligation within that time limit (but without prejudice to all rights and remedies available against that person by reason of that person's failure to perform that obligation within the time limit);
10. zero is to be treated as a positive, whole number;
11. capitalised words and phrases, acronyms, abbreviations and subscripts have the meaning given to them in the Glossary;
12. where a specified number of days is expressed to elapse or expire from or after the giving of a notice or the issue or making available of a document before an action may be taken or by which an action is required to be taken then, unless explicitly stated otherwise, the day on which the notice is given or issued or the document is made available shall not be counted in the reckoning of the period;
13. a reference to a "person" includes any individual, partnership, firm, company, corporation (statutory or otherwise), joint venture, trust, association, organisation or other entity, whether or not having separate legal personality;
14. references to a Participant shall be construed as a reference to the relevant Party in its capacity as registrant of the relevant Units. Any obligation expressed to be on a Party shall, where appropriate, be construed as an obligation on that Party in respect of each of its Participants;
15. where this Code requires data to be published by the Market Operator, it shall be made publicly available (which, for the avoidance of doubt means available to all members of the public and not only to Parties) in a format that readily lends itself to processing by standard computer and analysis tools, through an easily accessible public interface and the terms "publish", "publication" and "published" shall be construed accordingly;
16. where this Code requires the Market Operator to publish information and no timeline is specified for such publication, it shall be required to publish such information as soon as reasonably practicable;
17. in the event of any conflict between algebraic formulae and English language text in Sections 4 to 6 inclusive, the algebraic formula shall apply, save in the case of manifest error in the algebraic formula;
18. where no timeframe for performance is specified in respect of any obligation to be performed by a Party, then such obligation shall be performed within a reasonable time;

19. each run of the MSP Software relates to a single Optimisation Time Horizon; and, where a run of the MSP Software or an Optimisation Time Horizon is associated with a Trading Day, it means the Trading Day that is entirely within the Optimisation Time Horizon; and where a Trading Day is associated with an Optimisation Time Horizon or a run of the MSP Software, it means the Optimisation Time Horizon or run of the MSP Software that starts at the same time as the start of that Trading Day; and
 20. payments or charges may be either positive or negative in accordance with their calculated value except where otherwise stated.
- 1.8 Where any provision of this Code provides that the Regulatory Authorities shall determine or approve certain values which are required for the performance of calculations under the Code and which apply for a specific period, and on expiry of such period no replacement values have been determined by the Regulatory Authorities, or the Regulatory Authorities have not communicated such determination to the Market Operator, then the values applicable immediately prior to the expiry of the relevant period shall continue to apply until the Regulatory Authorities have determined or approved new values and this has been communicated to the Market Operator in accordance with the Code.

2. LEGAL AND GOVERNANCE

GOVERNING LAW

- 2.1 This Code and any disputes arising under, out of, or in relation to the Code shall be interpreted, construed and governed in accordance with the laws of Northern Ireland.

JURISDICTION

- 2.2 Subject to the provisions relating to the Dispute Resolution Process, the Parties hereby submit to the exclusive jurisdiction of the Courts of Ireland and the Courts of Northern Ireland for all disputes arising under, out of, or in relation to the Code.

TERM

- 2.3 The Code shall commence on the Commencement Date and shall have no fixed duration.

PRIORITY

- 2.4 In the event of any conflict between any Party's obligation pursuant to any Legal Requirements and the Code, such conflict shall be resolved according to the following order of priority:
1. requirements under Applicable Laws;
 2. any applicable requirement, direction, determination, decision, instruction or rule of any Competent Authority;
 3. applicable Licence;
 4. Grid Code applicable to the relevant Unit concerned;
 5. Metering Code applicable to the relevant Unit concerned;
 6. this Code (subject to paragraph 2.8 below).
- 2.5 If and for so long as a Party complies with the relevant Legal Requirements set out in paragraph 2.4.1 to 2.4.5, it shall be relieved of its obligations under the Code to the extent that and for so long as the performance of such obligations is in conflict with any of the relevant Legal Requirements taking priority over the Code, provided that such conflict does not arise as a result of a failure of the relevant Party to procure, comply with or maintain any consent, permission, licence or Licence in accordance with paragraph 2.130.2.
- 2.6 A Party shall only be relieved of its obligations pursuant to paragraph 2.5 for so long as and to the extent that resolution of the conflict is not within the reasonable control of the relevant Party.
- 2.7 Until such time as such conflict is resolved through the Modifications Process or otherwise, the applicable obligations under the Legal Requirements set out in paragraphs 2.4.1 to 2.4.5 shall prevail over the provisions of the Code for each Party or Unit in relation to which they are in conflict.
- 2.8 It is not intended that there be any inconsistency or conflict between any provision of any of the Sections, Appendices or Agreed Procedures of the

Code. However, in the event of any inconsistency or conflict, such inconsistency or conflict shall be resolved in the following order of priority:

1. Section 8;
2. Section 7;
3. Sections 1, 2, 3, 4, 5 and 6 and the Glossary;
4. Appendices; and
5. Agreed Procedures.

- 2.9 The provisions of paragraph 2.8 shall be subject to any express provision to the contrary in the Code.

PARTIES AND ACCESSION PROCESS

- 2.10 A person may only become a Party to the Code in accordance with the terms of the Code and the Framework Agreement.
- 2.11 The original signatories to the Framework Agreement, as determined by the Regulatory Authorities, are Parties to the Code and are not required to complete the Accession Process.
- 2.12 Any person that is at the relevant time an adhering party to the Framework Agreement shall be a Party to the Code, in accordance with and subject to the Accession Process outlined below.
- 2.13 Subject to paragraph 2.11, in order to become a Party, a person (the “Applicant”) must complete and sign an application form which shall be in the form provided for in Agreed Procedure 1 “Participant and Unit Registration and Deregistration” and send it to the Market Operator. The application form specifies all conditions which the Applicant must meet to become a Party which include that the Applicant shall;
1. pay the Accession Fee; and
 2. when provided, execute the Accession Deed to adhere to the Framework Agreement and the Code.
- 2.14 The Accession Fee shall be non-refundable.
- 2.15 Where the Market Operator receives an application from an Applicant, it must within 10 Working Days of receiving the application, send a notice to the Applicant informing the Applicant of any further information or clarification which is required in relation to the application or where the application is incomplete. The Market Operator shall provide details of what clarification is required or where the application is incomplete.
- 2.16 If the Market Operator does not receive the clarification or the additional information required within 20 Working Days of the Applicant having been informed by the Market Operator of the need for such clarification, the Applicant shall be deemed to have withdrawn the application. An Applicant may request additional time to provide any clarification or additional information and the Market Operator shall not unreasonably withhold consent to any such request.
- 2.17 On receipt of a completed application form and any clarification or additional information requested by the Market Operator and provided that the Applicant fulfils the conditions for accession specified in the application form, the Market Operator shall within 10 Working Days of final receipt of all required information provide the Applicant with an Accession Deed. The

Applicant must submit an executed Accession Deed within 20 Working Days of receipt. An Applicant may request additional time to submit an executed Accession Deed and the Market Operator shall not unreasonably withhold consent to any such request, provided that the date of receipt of the executed Accession Deed shall be earlier than the effective date specified in the Accession Deed.

- 2.18 Following receipt by the Market Operator of an executed Accession Deed in accordance with paragraph 2.17, the Applicant shall become a Party on the date specified in the Accession Deed unless the Market Operator and the Applicant agree on a different date separately in writing.
- 2.19 The Market Operator shall publish the fact and date of the accession of each new Party to the Code.

DE MINIMIS THRESHOLD

- 2.20 The De Minimis Threshold for the purposes of the Code and mandatory participation in the Pool shall be a Maximum Export Capacity of 10MW.
- 2.21 A Party shall register every Generator which it owns or legally controls, which has Maximum Export Capacity greater than or equal to the De Minimis Threshold and which is covered by a single Connection Agreement, as a Generator Unit under the Code. If a Party is permitted, pursuant to the consent of the Regulatory Authorities, to appoint an Intermediary in respect of a Generator, it shall satisfy the requirements of this paragraph 2.21 for that Generator if it procures the registration of the Generator as a Generator Unit by the relevant Intermediary in accordance with the Code.
- 2.22 A Party which has been authorised by the Unit Owner, under a Form of Authority and with the consent of the Regulatory Authorities, to act as Intermediary in respect of any Generator which has Maximum Export Capacity greater than or equal to the De Minimis Threshold and which is covered by a single Connection Agreement, shall register such Generator as a Generator Unit in accordance with the Code.
- 2.23 A Party shall register every Generator which it owns or legally controls which is not covered by a Connection Agreement but which is located on a Contiguous Site, having an overall Maximum Export Capacity greater than or equal to the De Minimis Threshold, as a Generator Unit under the Code. If a Party is permitted, pursuant to the consent of the Regulatory Authorities, to appoint an Intermediary in respect of a Generator to which this paragraph applies, it shall satisfy the requirements of this paragraph 2.23 for that Generator if it procures the registration of the Generator as a Generator Unit by the relevant Intermediary in accordance with the Code.
- 2.24 A Party which has been authorised by the Unit Owner, under a Form of Authority and in accordance with the consent of the Regulatory Authorities, to act as Intermediary in respect of any Generator which is not covered by a Connection Agreement but which is located on a Contiguous Site, having an overall Maximum Export Capacity greater than or equal to the De Minimis Threshold shall register such Generator as a Generator Unit in accordance with the Code.
- 2.25 A Party may register any Generator which it owns or legally controls and which is covered by a single Connection Agreement, or is located on a Contiguous Site which does not have a Connection Agreement, which has a Maximum Export Capacity less than the De Minimis Threshold, as a Generator Unit under the Code. If a Party is permitted, pursuant to the

consent of the Regulatory Authorities, to appoint an intermediary in respect of a Generator to which this paragraph applies, it may procure registration of the Generator as a Generator Unit by the relevant Intermediary in accordance with the Code.

- 2.26 A Party which has been authorised by the Unit Owner, under a Form of Authority and in accordance with the consent of the Regulatory Authorities, to act as Intermediary in respect of any Generator which is covered by a single Connection Agreement, or is located on a Contiguous Site which does not have a Connection Agreement, which has Maximum Export Capacity less than the De Minimis Threshold shall register such Generator as a Generator Unit in accordance with the Code.
- 2.27 Demand Side Units shall not be required to be registered under paragraph 2.21 or 2.23.
- 2.27A A Party shall register every Aggregated Generator which it owns or legally controls which has Maximum Export Capacity greater than or equal to the De Minimis Threshold as an Aggregated Generator Unit under the Code. If a Party is permitted, pursuant to the consent of the Regulatory Authorities, to appoint an Intermediary in respect of an Aggregated Generator, it shall satisfy the requirements of this paragraph 2.27A for that Aggregated Generator if it procures the registration of the Aggregated Generator as an Aggregated Generator Unit by the relevant Intermediary in accordance with the Code.
- 2.27B A Party which has been authorised by the Unit Owner, under a Form of Authority and with the consent of the Regulatory Authorities, to act as Intermediary in respect of any Aggregated Generator which has Maximum Export Capacity greater than or equal to the De Minimis Threshold, shall register such Aggregated Generator as an Aggregated Generator Unit in accordance with the Code.
- 2.27C A Party may register any Aggregated Generator which it owns or legally controls, which has a Maximum Export Capacity less than the De Minimis Threshold, as an Aggregated Generator Unit under the Code. If a Party is permitted, pursuant to the consent of the Regulatory Authorities, to appoint an Intermediary in respect of a Generator to which this paragraph applies, it may procure registration of the Aggregated Generator as an Aggregated Generator Unit by the relevant Intermediary in accordance with the Code.
- 2.27D A Party which has been authorised by the Unit Owner, under a Form of Authority and with the consent of the Regulatory Authorities, to act as Intermediary in respect of any Aggregated Generator which has Maximum Export Capacity less than to the De Minimis Threshold, shall register such Aggregated Generator as an Aggregated Generator Unit in accordance with the Code.

PARTICIPATION AND REGISTRATION OF UNITS

- 2.28 In order for a Party to participate in the Pool in respect of any Unit, a Party must register that Unit in accordance with the registration procedure provided for in paragraphs 2.30 to 2.112.
- 2.29 On or prior to its first application to register a Unit or Interconnector User, a Party (or Applicant, as applicable) shall complete and return a First Participation Information Notice.

- 2.30 An Applicant may submit an application to register Units prior to becoming a Party provided that registration of Units shall not take effect until the Applicant has become a Party.
- 2.31 In addition to the requirements set out in paragraph 2.33, a Party (or Applicant as applicable) shall complete such documentation as may be required by the Market Operator in respect of any requirement to register a charge on any SEM bank account.
- 2.32 On registration of a Unit, a Party shall become the Participant in respect of that Unit.

Participation Notices

- 2.33 A Party (or Applicant, as applicable) shall apply to register any Units by completing a Participation Notice in respect of such Units which shall include the following information:
1. whether the Unit concerned is a Generator Unit or Supplier Unit;
 2. if the Unit is a Generator Unit, details of the Trading Site to which that Unit shall be registered;
 3. the Currency Zone of the Unit;
 4. the name address and contact details (including email and fax) of the Participant to which the Unit is to be registered;
 5. the billing address of the Participant;
 6. full details of the bank account to which amounts payable by the Market Operator to that Participant shall be paid;
 7. the proposed Effective Date, being the Trading Day on which, from the start of the first Trading Period on that Trading Day, the Party intends that trading in respect of that Unit shall be effective.
 8. the Communication Channels which the Participant designates pursuant to paragraph 3.8;
 9. evidence of compliance with or details of new metering requirements as applicable;
 10. evidence that the necessary Operational Readiness Confirmation is in place and is valid and effective where the Party wishes to register a Generator Unit as
 - a Variable Price Maker Generator Unit
 - a Variable Price Taker Generator Unit
 11. evidence that all necessary Connection Agreements are in place, valid and effective;
 12. evidence that all necessary Use of System Agreements are in place, valid and effective;
 13. evidence that the Party (or on registration by an Intermediary, the appointing Generator) holds a valid Licence (including an authorisation or exemption) to generate or supply electricity in the relevant Jurisdiction(s) (as appropriate) and details of all other Licences (including authorisations or exemptions relevant to the SEM);
 14. VAT details for all relevant Jurisdictions;

15. any other participation roles which the Party (or Applicant as applicable) has or intends to have and the Effective Date from which it has or intends to have such capacity;
 16. in the case of a relevant Generator Unit, where no Trading Site Supplier Unit exists or is proposed, the identity of the Participant that it is intended shall record the Associated Supplier Unit;
 17. initial Default Data in respect of each Generator Unit, that may be used by the Market Operator in relation to that Unit;
 18. the Gate Window with which the Generator Unit is associated in the case of Interconnector Units; and
 19. such other Registration Data as is required by the Market Operator pursuant to Appendix H "Participant and Unit Registration and Deregistration" and Agreed Procedure 1 "Participant and Unit Registration and Deregistration".
- 2.34 A Party (or Applicant, as applicable) shall, on registration of a Generator Unit, specify if the Unit is:
1. a Wind Power Unit;
 2. an Energy Limited Generator Unit;
 3. a Pumped Storage Unit;
 4. a Demand Side Unit;
 5. a Netting Generator Unit;
 6. an Interconnector Unit or
 7. A Dual Rated Generator Unit, provided the Party has the approval of the Regulatory Authorities in accordance with paragraph 2.34a.
- 2.34A A Party (or Applicant, as applicable) may register a Generator Unit as a Dual Rated Generator Unit provided that the Regulatory Authorities have given their written consent for the registration of the relevant Generator Unit by the Party(or Applicant) as a Dual Rated Generator Unit.

Accession and Participation Fees

- 2.35 The Market Operator shall publish details of the Accession and Participation Fees expressed both in euro and in pounds sterling with those in pounds sterling being converted into euro using the Annual Capacity Exchange Rate.
- 2.36 A Party (or an Applicant as applicable) shall send the required Participation Fees with the Participation Notice to the Market Operator. The Market Operator shall specify the components of the Participation Fee that will apply in respect of each Participation Notice.
- 2.37 If a Participation Notice is withdrawn or rejected, the Market Operator shall refund those elements of the Participation Fee for which it has not incurred any costs.

Generator Unit Participation Fees

- 2.37A A Party (or Applicant as applicable) shall pay Participation Fees in respect of the registration of each Generator Unit (excluding Interconnector Units and Netting Generator Units).

- 2.37B A Party (or Applicant as applicable) shall pay Participation Fees in respect of the registration of the first Interconnector Unit registered by such Party (or Applicant as applicable) in respect of a given Interconnector.
- 2.37C A Party (or Applicant as applicable) shall not be required to pay Participation Fees in respect of the registration of any Netting Generator Unit.

Supplier Unit Participation Fees

- 2.37D A Party (or Applicant as applicable) shall pay Participation Fees in respect of the registration of each Supplier Unit.

Additional Rules for Participant Registration

- 2.38 Where a Party (or an Applicant, as applicable) applies to register Units in more than one Currency Zone, it shall register as a separate Participant for Units in each Currency Zone.
- 2.39 In the event that a Party (or an Applicant, as applicable) does not apply to register as a separate Participant in relation to Units where those Units are located in different Currency Zones, it shall be automatically deemed to be a separate Participant in respect of the Units located in each Currency Zone for the purposes of the Code. The Market Operator shall in such circumstances notify the Participants of the requisite Participation Fees and the Party (or Applicant, as applicable) shall, within 3 Working Days, pay the requisite Participation Fees for each deemed Participant.
- 2.40 A Party (or Applicant, as applicable) shall not register as more than one Participant save as provided for in paragraph 2.38 or as permitted with the prior written consent of the Regulatory Authorities. Any such consent must be submitted with the relevant Participation Notice.
- 2.41 Where the Market Operator receives a Participation Notice from a Party (or an Applicant, as applicable) it must, within 10 Working Days of receiving the Participation Notice, send a notice to the Party (or Applicant, as applicable) informing it of any further information or clarification which is required in relation to the Participation Notice or where the Participation Notice is incomplete. The Market Operator will provide details of what clarification is required or where the Participation Notice is incomplete.
- 2.42 If the Market Operator does not receive the clarification or the additional information required from the Party (or the Applicant, as applicable) within 20 Working Days of having been informed by the Market Operator of the need for such clarification or additional information, the Party (or the Applicant as applicable) shall be deemed to have withdrawn the Participation Notice and the Market Operator shall refund the Participation Fees. An Applicant may request additional time to submit any clarification or additional information and the Market Operator shall not unreasonably withhold consent to any such request.
- 2.43 On receipt of a Participation Notice, the Participation Fees and any additional clarification or information requested by the Market Operator from a Party (or an Applicant, as applicable) within the timelines provided for in paragraph 2.42, the Market Operator shall within 5 Working Days send a notice to the Party (or Applicant as applicable) informing the Party (or Applicant as applicable) of any conditions for registration of each Unit which was the subject of the Participation Notice from the following list as applicable:

1. the amount of Credit Cover required to be put in place by the proposed Participant prior to the Effective Date in respect of each such Unit calculated with effect from the Effective Date;
 2. any qualification requirements pursuant to Agreed Procedure 3 “Communication Channel Qualification” for the Participant’s designated Communication Channels;
 3. the requirement for the satisfactory provision of the Registration Data set out in Agreed Procedure 1 “Participant and Unit Registration and Deregistration” (if not already provided); and
 4. the requirement that the relevant facilities are Connected to the Distribution System and/or Transmission System.
- 2.43A The Market Operator, if necessary, may by notice to the relevant Participant, revise such Initial Required Credit Cover up to 8 Working Days prior to the Effective Date
- 2.43B Notwithstanding paragraph 6.238, the Initial Required Credit Cover shall not take into account any Settlement Reallocation Agreement unless this has been lodged with the Market Operator at least 9 Working Days prior to the Effective Date
- 2.44 If a Party (or Applicant as applicable) fails to satisfy any of the conditions for participation specified by the Market Operator under paragraphs 2.43.2 to 2.43.4 within 20 Working Days (or such shorter period as specified by the Market Operator) of being notified of such conditions by the Market Operator, its Participation Notice shall be deemed to be withdrawn and the Market Operator shall refund the relevant portion of the Participation Fees. A Party (or Applicant as applicable) may request additional time to satisfy any of the conditions under paragraph 2.43 and the Market Operator shall not unreasonably withhold consent to any such request.
- 2.45 The Market Operator shall share Registration Data received from a Party with the System Operators in accordance with Appendix J “Market Operator and System Operator Data Transactions” and shall be entitled to share Registration Data received from a Party with the Meter Data Providers for the purpose of processing registration and facilitating participation in respect of the relevant Units. All Parties shall co-operate with and provide such assistance as the Market Operator may reasonably request for these purposes.
- 2.45A If the Unit to be registered is a Generator Unit (excluding Interconnector Units, Interconnector Residual Capacity Units, Interconnector Error Units and Netting Generator Units), the Meter Data Provider shall undertake Meter Data validation for that Generator Unit in accordance with the relevant Metering Code, and shall notify the Market Operator of
1. the Meter Data Export Date; and
 2. the Meter Validation Date.
- 2.46 Notwithstanding any date specified by the Party (or Applicant as applicable) in its Participation Notice, registration of Units shall not become effective until such time as the Market Operator specifies in a Commencement Notice in accordance with paragraph 2.47 or such later date provided for under paragraph 2.48.
- 2.47 Where the Party (or Applicant, as applicable) concerned:

1. has supplied all information required and satisfied all such conditions as notified to the Party (or Applicant, as applicable) pursuant to paragraphs 2.43.2 to 2.43.4;
2. has paid the Participation Fees; and
3. is not otherwise in breach of the Code or the Framework Agreement;

then the Market Operator shall issue a Commencement Notice to the Participant and a copy to each System Operator and relevant External Data Provider as soon as reasonably practicable and at least 4 Working Days prior to the Unit Effective Date. The Commencement Notice shall specify the Effective Date, being the Trading Day on which, from the start of the first Trading Period on that Trading Day, registration of the Units concerned shall be effective, provided that the Required Credit Cover has been put in place 5 Working Days prior to the Effective Date.

- 2.47A For each Generator Unit where a Meter Data Export Date has been determined in accordance with paragraph 2.45A, the Market Operator shall set the Effective Date for a Generator Unit to the Meter Data Export Date, or to the nearest possible date after the Meter Data Export Date, subject to the agreement of the Party (or Applicant as applicable), the relevant System Operator and Meter Data Provider, and shall issue a Notice of Effective Date to the relevant Party (or Applicant).
- 2.48 Where a Party (or Applicant, as applicable) has not put in place the Required Credit Cover 5 Working Days before the Effective Date specified in a Commencement Notice, the Effective Date shall be deferred to commence on the first Trading Period of the first Trading Day agreed by the relevant Party (or Applicant as applicable), the Market Operator and the relevant System Operator and Meter Data Provider, to be achievable by reasonable endeavors, provided that such Trading Day is within twelve months of the initial effective date specified in the relevant Commencement Notice. Otherwise the Participation Notice shall be deemed to have been withdrawn and none of the Participation Fee shall be refunded.
- 2.49 Units shall be deemed registered for the purposes of participation in the Pool from the start of the Effective Date.
- 2.50 A Participant shall commence trading in respect of a Unit at the start of the relevant Effective Date. For that purpose, a Party (or Applicant, as applicable) may, following submission of its Participation Notice and prior to the Effective Date, submit data in respect of trading for the Effective Date and any subsequent date in accordance with the Code.
- 2.51 The Market Operator shall publish the Effective Date and the fact of the registration of each new Participant and the registration of each new Unit to a Participant. The Market Operator shall maintain and publish a current list of Parties, Participants and each of their Units.
- 2.52 Parties or Participants may apply to change registration details of Units by application to the Market Operator pursuant to Agreed Procedure 4 "Transaction Submission and Validation", provided that if a Party applies to reduce the number of Meter Point Registration Numbers registered to any of its Supplier Units, it must comply with the terms of the applicable Metering Code in respect of that Unit.

Registration as Price Maker Generator Unit or Price Taker Generator Unit

- 2.53 Save as provided in paragraphs 2.53A to 2.56 below and as otherwise set out in Section 5, a Party (or Applicant, as applicable) registering a Generator Unit shall register such Unit as a Price Maker Generator Unit.
- 2.53A A Party (or Applicant, as applicable) who wishes to register a Generator Unit as a Variable Price Taker Generator Unit or a Variable Price Maker Generator Unit, but who does not have the necessary Operational Readiness Confirmation on application, may register as an Autonomous Generator Unit until such time as the Operational Readiness Confirmation has been granted, upon which date they shall submit a change of Classification request.
- 2.54 Parties may apply for registration of Generator Units which have Priority Dispatch for their entire capacity and which are Variable or Predictable Generator Units as either:
1. A Price Maker Generator Unit; or
 2. A Price Taker Generator Unit.
- 2.55 A Party (or Applicant, as applicable) registering an Autonomous Generator Unit shall register such Unit as a Price Taker Generator Unit.
- 2.56 Parties which have registered Units that have Priority Dispatch as Variable Generator Units or Predictable Generator Units may apply to change the Classification of such Unit(s) to Price Taker Generator Units or Price Maker Generator Units by application to the Market Operator, giving at least 29 days notice pursuant to Agreed Procedure 4 "Transaction Submission and Validation".
- 2.56A Subject to paragraph 2.56, any Participant shall not apply to change the Classification of any registered Generator Unit to:
- a Variable Price Maker Generator Unit;
 - a Variable Price Taker Generator Unit;
- unless an Operational Readiness Confirmation is in place, valid and effective and evidence has been provided to the Market Operator for that Generator Unit at the date of the change of classification request.

Transmission Loss Adjustment Factors

- 2.57 On the registration of any new Generator Unit (other than a Demand Side Unit), the relevant System Operator shall provide to the Market Operator, in accordance with Appendix K "Market Data Transactions" and subject to the prior approval of the Regulatory Authorities, a set of Transmission Loss Adjustment Factors for that Generator Unit for each Trading Period from the start of the Effective Date to the end of the Year.
- 2.57A On the registration of any new Generator Unit (other than a Demand Side Unit) that is Distribution Connected, the relevant Distribution System Operator shall provide the relevant System Operator with a set of Distribution Loss Adjustment Factors for that Generator Unit for each Trading Period from the start of the Effective Date to the end of the Year.
- 2.57B On the registration of any new Generator Unit (other than a Demand Side Unit) that is Distribution Connected, the relevant System Operator shall provide the Market Operator with a set of Distribution Loss Adjustment

Factors for that Generator Unit for each Trading Period from the start of the Effective Date to the end of the Year.

- 2.57C For each Generator Unit (other than a Demand Side Unit) that is Transmission Connected, the Distribution Loss Adjustment Factor used in the calculation of the Combined Loss Adjustment Factor for each Trading Period shall be set to 1 by the relevant System Operator.
- 2.57D For each Generator Unit (other than a Demand Side Unit) that is Distribution Connected, the relevant System Operator shall set the Distribution Loss Adjustment Factor, used in the calculation of the Combined Loss Adjustment Factor equal to 1 for all Trading Periods where the Distribution System Operator provides the Metered Generation data.
- 2.57E For each Generator Unit (other than a Demand Side Unit) that is Distribution Connected, the relevant System Operator shall set the Distribution Loss Adjustment Factor used in the calculation of the Combined Loss Adjustment Factor equal to the corresponding value provided by the Distribution System Operator, for all Trading Periods where the System Operator, in its role as Meter Data Provider, provides the Metered Generation data.
- 2.57F On the registration of any new Distribution Connected Generator Unit (other than a Demand Side Unit), the relevant System Operator shall provide the Market Operator with a set of Combined Loss Adjustment Factors for that Generator Unit for each Trading Period from the start of the Effective Date to the end of the Year.
- 2.57G In the event of a change in the classification of a Generator Unit that is Distribution Connected, the relevant System Operator shall recalculate and provide the Market Operator with a revised set of Combined Loss Adjustment Factors for that Generator Unit for each Trading Period from the date at which the new Classification becomes effective to the end of the Year.

REGISTRATION OF ERROR SUPPLIER UNIT

- 2.58 Intentionally blank.
- 2.59 In each Jurisdiction, each Party that is required pursuant to its Licence to register an Error Supplier Unit shall register the Error Supplier Unit in accordance with the Code.

REGISTRATION OF TRADING SITE

- 2.60 Any Party (or Applicant, as applicable) registering a Generator Unit shall register such Generator Unit as part of a Trading Site except as expressly provided for in Section 2 or Section 5.
- 2.61 Each Trading Site shall include at least one Generator Unit and may include a single Trading Site Supplier Unit which must contain all of the Demand for the Trading Site and only the Demand within the same Trading Site. Except as provided for in paragraphs 2.65 to 2.68 inclusive, each Trading Site shall include all Generator Units on the Generator Site.
- 2.62 On registration of a Trading Site, the Market Operator, on behalf of the Participant that registers the Generator Unit(s) for the Trading Site, shall register a Netting Generator Unit for that Trading Site to the same Participant that registers the Generator Unit(s) for that Trading Site.

- 2.62A No Interconnector Residual Capacity Unit or Netting Generator Unit shall have a Maximum Export Capacity.
- 2.63 Subject to paragraph 2.64, each Unit within a registered Trading Site must be registered to the same Participant.
- 2.64 If a Party (or Applicant as applicable) registering a Trading Site does not register a Trading Site Supplier Unit to that Trading Site, then on the first registration of a Generator Unit to that Trading Site, the Party (or Applicant as applicable) registering the Generator Unit shall notify the Market Operator of the identity of the Participant who it is intended shall record an Associated Supplier Unit to the Trading Site. The Participant concerned shall record the association of its Supplier Unit with the relevant Trading Site in accordance with Agreed Procedure 1 "Participant and Unit Registration and Deregistration". The Associated Supplier Unit may be registered to a different Participant than the other Units in the Trading Site. The Associated Supplier Unit may contain Demand outside of the Trading Site. No Unit can be both (i) an Associated Supplier Unit and (ii) either a Trading Site Supplier Unit or an Error Supplier Unit.

Differences between Trading Sites and Generation Sites

- 2.65 Where there is more than one Meter Point Registration Number or more than one Generator Unit at a Generation Site, such a Generation Site may be registered as more than one Trading Site, each such Trading Site having either one Trading Site Supplier Unit registered by the same Participant which registers the Generator Unit, or one Associated Supplier Unit recorded to the Trading Site.
- 2.66 Where there is more than one Meter Point Registration Number at a Generation Site, such a Generation Site may be registered as a single Trading Site which excludes one or more of the Meter Point Registration Numbers from that Trading Site's Trading Site Supplier Unit or recorded Associated Supplier Unit as appropriate, so long as those excluded Meter Point Registration Numbers do not represent Export Points and the excluded Meter Point Registration Numbers are included in another Supplier Unit or Supplier Units.
- 2.67 Where there is only one Meter Point Registration Number and more than one Generator Unit at a Generation Site, and the Generation Site is, as permitted under paragraph 2.65, registered as more than one Trading Site, the Meter Point Registration Number will be attributable to only one such Trading Site, by the Trading Site Supplier Unit or the Associated Supplier Unit for that Trading Site and including the Demand related to the Generation Site Meter Point Registration Number. Each other Trading Site Supplier Unit and Associated Supplier Unit registered or recorded to a Trading Site within the same Generation Site shall contain no Demand related to that Trading Site.
- 2.68 Where there is more than one Meter Point Registration Number or more than one Generator Unit at a Generation Site, and such Generation Site is registered as more than one Trading Site, each such Trading Site will have a separate registered Netting Generator Unit.

Generator Unit with Non-Firm Access

- 2.69 A Generator Unit has Non-Firm Access where it operates under a Connection Agreement which provides for a Firm Access Quantity which is

less than the Maximum Export Capacity of the relevant site. As part of the registration process for such Generator Units, the Firm Access Quantity of Trading Sites for each Trading Day t (FAQS $_t$) shall be recorded in accordance with Appendix H "Participant and Unit Registration and Deregistration". No Netting Generator Unit, Demand Side Unit or Dual Rated Generator Unit shall be deemed to have Non-Firm Access.

- 2.70 Where a Generation Site is, as permitted under paragraph 2.65, registered as more than one Trading site, and the Generation Site under the Connection Agreement has Non-Firm Access, the relevant Participant shall record a value of Firm Access Quantity for each such Trading Site in such a way that the Firm Access Quantities recorded for all such Trading Sites together sum to the Firm Access Quantity set out in the Connection Agreement of the Generation Site.

REGISTRATION OF AN INTERCONNECTOR

- 2.71 A Party (or an Applicant, as applicable), being the relevant Interconnector Owner, may register an Interconnector in accordance with the procedure for registration of Units (as if references to Units were references to an Interconnector) subject to paragraphs 2.37A and 2.37B and the additional requirements set out in paragraphs 2.72 to 2.84. The Party registering the Interconnector shall be treated as the Interconnector Owner for the purposes of the Code.
- 2.72 For each Interconnector, the Interconnector Administrator may be the Interconnector Owner or another Party.
- 2.73 On registration of an Interconnector, the Interconnector Owner shall procure that the person nominated in the Interconnector Registration Data to act as the Interconnector Administrator in respect of the relevant Interconnector, shall register as Interconnector Administrator in accordance with the procedure for the registration of Units (as if references to Units were references to the Interconnector) subject to paragraph 2.77.
- 2.74 The Interconnector Owner applying to register an Interconnector shall provide the Interconnector Registration Data in its Participation Notice.
- 2.75 Notwithstanding paragraph 2.33, the Interconnector Registration Data for an Interconnector shall comprise:
1. the Aggregate Import Capacity;
 2. the Aggregate Export Capacity;
 3. the Aggregate Interconnector Ramp Rate, which must be a number greater than zero;
 4. the Minimum Interconnector Import Level;
 5. the Minimum Interconnector Export Level;
 6. the identity of the person nominated to register as Interconnector Administrator;
 7. the identity of the person nominated to register as Participant in respect of the Interconnector Error Unit;
 8. the name address and contact details (including email and fax) of the Party (or Applicant, as applicable) to which the Interconnector is to be registered;

9. the proposed date from which it is intended that the Interconnector be registered, which date shall be no earlier than 20 Working Days from the date the Participation Notice is sent to the Market Operator;
 10. evidence of compliance with metering requirements;
 11. evidence that all necessary Connection Agreements are in place, valid and effective;
 12. evidence that all necessary Use of System Agreements are in place, valid and effective;
 13. evidence that the Party holds a valid Licence as applicable (including an authorisation or exemption) for the activities that it is proposing to undertake in respect of the Interconnector;
 14. the identity of any other Party which is an Affiliate of that Party;
 15. such other Registration Data as are required by the Market Operator pursuant to Appendix H "Participant and Unit Registration and Deregistration" and Agreed Procedure 1 "Participant and Unit Registration and Deregistration"; and
 16. whether or not the Interconnector is capable of being dispatched at zero and this shall be submitted only through a Type 1 Communication Channel.
- 2.76 After initial registration by the Interconnector Owner, the Interconnector Owner shall be responsible for maintaining the Interconnector Registration Data. The Interconnector Owner may in addition procure that the Interconnector Administrator may maintain those elements of Interconnector Registration Data which are defined as Interconnector Technical Data, and the Market Operator shall facilitate this.
- 2.77 A Party (or an Applicant, as applicable) who is nominated to register as Interconnector Administrator as part of the Interconnector Registration Data may register as Interconnector Administrator in accordance with the procedure for registration of Units (as if references to Units were references to the Interconnector Administrator), subject to the requirements set out in this paragraph 2.77. Notwithstanding anything in paragraph 2.33, the information to be provided by a Party (or an Applicant, as applicable) applying to register as Interconnector Administrator shall comprise:
1. the Interconnector to which the Participation Notice relates;
 2. the name, address and contact details (including email and fax) of the Party (or Applicant, as applicable);
 3. the proposed date on which the Party (or Applicant, as applicable) intends to commence acting as Interconnector Administrator, which date shall be no earlier than 20 Working Days from the date the Participation Notice is sent to the Market Operator;
 4. the Communication Channels which the Participant designates pursuant to paragraph 3.8 for use in respect of the Interconnector; and
 5. such other Registration Data as are required by the Market Operator pursuant to Appendix H "Participant and Unit Registration and Deregistration" and Agreed Procedure 1 "Participant and Unit Registration and Deregistration".

- 2.78 No Party shall use an Interconnector to import energy to the Pool or export energy from the Pool unless and until the Market Operator has published a notification, in accordance with Appendix E “Data Publication”, that:
1. the Interconnector is registered;
 2. an Interconnector Administrator is registered in respect of the relevant Interconnector; and
 3. the Participant in respect of the Interconnector Error Unit is registered in respect of the relevant Interconnector.
- 2.79 No Party, other than the relevant Interconnector Owner, shall be entitled to voluntarily deregister an Interconnector.
- 2.80 In relation to any Interconnector, the Interconnector Owner shall provide the Market Operator with notice of its intention to withdraw or terminate the appointment of the Interconnector Administrator and such withdrawal or termination shall not take effect unless and until another Party has been appointed by the Interconnector Owner to register as Interconnector Administrator and has so registered pursuant to paragraph 2.82, or the Interconnector Owner has Deregistered the Interconnector in accordance with the Code.
- 2.81 Notwithstanding paragraph 2.115, in relation to any Interconnector, the Interconnector Administrator shall be required to give the Market Operator 60 days notice of its intention to Deregister as Interconnector Administrator and such Deregistration shall not take effect unless and until another Party has been appointed by the Interconnector Owner to register as Interconnector Administrator and has so registered in accordance with paragraph 2.82, or the Interconnector Owner has Deregistered the Interconnector in accordance with the Code.
- 2.82 Once the Market Operator has received a notice from an Interconnector Owner or an Interconnector Administrator in accordance with paragraph 2.80 or 2.81, the Market Operator shall accept a Participation Notice from a Party (or Applicant, as applicable) which has been authorised by the Market Operator to act as the new Interconnector Administrator and Deregistration of the existing Interconnector Administrator shall not take effect until registration of the new Interconnector Administrator is complete and effective in accordance with paragraphs 2.30 to 2.52 subject to paragraph 2.77.
- 2.83 Where the Interconnector Administrator is, in relation to the Interconnector, Suspended or Terminated under the Code or otherwise ceases to participate in respect of the Interconnector and the Interconnector Administrator is not the System Operator for the Jurisdiction in which the Interconnector is connected, then the System Operator for the Jurisdiction in which the relevant Interconnector is connected shall temporarily assume the responsibilities of the Interconnector Administrator under the Code for a maximum of 2 months from the date of such Suspension, Termination or cessation (“the Interconnector Administrator Grace Period”) or such longer period agreed by the System Operator and the previous Interconnector Administrator shall co-operate with the System Operator’s requirements in this regard.
- 2.84 If the Interconnector Administrator has not resumed participating in accordance with the Code and a new Interconnector Administrator is not registered during the Interconnector Administrator Grace Period (if any), the

Market Operator shall Suspend the Interconnector from the expiry of the Interconnector Administrator Grace Period or if none, from the date of such Suspension, Deregistration, Termination or cessation of the Interconnector Administrator and shall issue an appropriate Suspension Order. No Party shall use the Interconnector to import energy to the Pool, or export energy from the Pool until such time as a new Interconnector Administrator is registered.

Interconnector Residual Capacity Unit

- 2.85 For each Interconnector, there shall be an Interconnector Residual Capacity Unit.
- 2.86 For each Interconnector, the System Operator for the Jurisdiction in which the Interconnector is connected shall register the Interconnector Residual Capacity Unit in accordance with the procedure for registration of Units set out in paragraphs 2.30 to 2.52, subject to paragraph 2.87 and 2.88.
- 2.87 Notwithstanding anything in paragraph 2.33, the information to be provided in a Participation Notice by a Party (or Applicant, as applicable) applying to register the Interconnector Residual Capacity Unit shall comprise:
1. the Interconnector to which the Participation Notice relates;
 2. the Currency Zone of the Unit;
 3. the name address and contact details (including email and fax) of the Participant to which the Unit is to be registered;
 4. the billing address of the Participant;
 5. full details of the bank account to which amounts payable by the Market Operator to that Participant shall be paid;
 6. the proposed date on which the Party (or Applicant, as applicable) intends to commence acting as Participant in respect of the Interconnector Residual Capacity Unit, which date shall be no earlier than 20 Working Days from the date the Participation Notice is sent to the Market Operator;
 7. the Communication Channels which the Participant designates pursuant to paragraph 3.8;
 8. VAT details for all relevant Jurisdictions; and
 9. such other Registration Data as are required by the Market Operator pursuant to Appendix H "Participant and Unit Registration and Deregistration" and Agreed Procedure 1 "Participant and Unit Registration and Deregistration".
- 2.88 An Interconnector Residual Capacity Unit may not form part of any Trading Site and shall not be classified either as a Price Maker or as a Price Taker.
- 2.88A No Interconnector Residual Capacity Unit shall have a Maximum Export Capacity.

Interconnector Error Unit

- 2.89 For each Interconnector, there shall be an Interconnector Error Unit. The Interconnector Owner through submission of appropriate Interconnector Registration Data, shall procure that the Interconnector Error Unit is registered to the relevant Interconnector Administrator in accordance with

the procedure for registration of Units set out in paragraphs 2.30 to 2.52, subject to the requirements in paragraphs 2.90 and 2.94.

- 2.90 Notwithstanding anything in paragraph 2.33, the information to be provided in a Participation Notice by a Party (or Applicant, as applicable) applying to register an Interconnector Error Unit shall comprise:
1. the Interconnector to which the Participation Notice relates;
 2. the Currency Zone of the Unit;
 3. the name address and contact details (including email and fax) of the Participant to which the Unit is to be registered;
 4. the billing address of the Participant;
 5. full details of the bank account to which amounts payable by the Market Operator to that Participant shall be paid;
 6. the proposed date on which the Party (or Applicant, as applicable) intends to commence acting as Participant in respect of the Interconnector Error Unit, which date shall be no earlier than 20 Working Days from the date the Participation Notice is sent to the Market Operator;
 7. the Communication Channels which the Participant designates pursuant to paragraph 3.8;
 8. VAT details for all relevant Jurisdictions; and
 9. such other Registration Data as are required by the Market Operator pursuant to Appendix H "Participant and Unit Registration and Deregistration" and Agreed Procedure 1 "Participant and Unit Registration and Deregistration".
- 2.91 In relation to any Interconnector, the Interconnector Owner shall provide the Market Operator with notice of its intention to withdraw or terminate the appointment of the Participant in respect of the Interconnector Error Unit and such withdrawal or termination shall not take effect unless and until another Party has been appointed by the Interconnector Owner to register the Interconnector Error Unit and has so registered in accordance with paragraphs 2.89 and 2.93, or the Interconnector Owner has Deregistered the Interconnector in accordance with the Code.
- 2.92 Notwithstanding paragraph 2.113, in relation to any Interconnector, the Participant in respect of the Interconnector Error Unit shall be required to give the Market Operator 60 days notice of its intention to Deregister the Interconnector Error Unit and such Deregistration shall not take effect unless and until another Party has been appointed by the Interconnector Owner to register the Interconnector Error Unit and has so registered pursuant to paragraphs 2.89 and 2.93, or the Interconnector Owner has Deregistered the Interconnector in accordance with the Code.
- 2.93 Once the Market Operator has received notice from an Interconnector Owner or an Interconnector Administrator in accordance with paragraph 2.91 or 2.92, the Market Operator shall accept a Participation Notice from a Party (or Applicant, as applicable) who has been authorised by the Market Operator to act as the new Participant in respect of the Interconnector Error Unit and Deregistration of the Interconnector Error Unit from the existing Participant shall not take effect until registration of the Interconnector Error Unit to the new Participant is complete and effective in accordance with paragraphs 2.30 to 2.52 subject to paragraphs 2.90 and 2.94

- 2.94 An Interconnector Error Unit may not form part of any Trading Site.
- 2.94A No Interconnector Error Unit shall have a Maximum Export Capacity.
- 2.95 Where the Participant in respect of an Interconnector Error Unit is Suspended or Deregistered (in relation to the Interconnector Error Unit) or Terminated under the Code or otherwise ceases to participate in respect of the Interconnector Error Unit and the Participant in respect of the Interconnector Error Unit is not the System Operator for the Jurisdiction in which the relevant Interconnector is located, then the System Operator for the Currency Zone in which that Unit is registered shall temporarily assume the responsibilities of the Participant in respect of the Interconnector Error Unit for a maximum of 2 months from the date of such Suspension, Deregistration, Termination or cessation (the "Interconnector Error Unit Grace Period") and the previous Participant in respect of the Interconnector Error Unit shall co-operate with the System Operator's requirements in this regard.
- 2.96 If the Participant in respect of the Interconnector Error Unit has not resumed participating in accordance with the Code and a new Participant in respect of the Interconnector Error Unit is not registered during the Interconnector Error Unit Grace Period (if any) and the Interconnector Administrator declines or is unable to be the Participant in respect of the Interconnector Error Unit, the Market Operator shall Suspend the Interconnector as and from the expiry of the Interconnector Error Unit Grace Period, or if none, from the date of such suspension, Deregistration, Termination or cessation of the Participant in respect of the Interconnector Error Unit, and shall issue an appropriate Suspension Order. No Party shall use the Interconnector to import energy to the Pool, or export energy from the Pool until such time as a new Participant is registered in respect of the Interconnector Error Unit.

REGISTRATION OF INTERCONNECTOR UNITS

- 2.97 A Party (or Applicant, as applicable), being an Interconnector User, may apply for registration of Interconnector Units in relation to the relevant Interconnector in accordance with paragraphs 2.30 to 2.52 and subject to paragraphs 2.98 and 2.99. As part of the registration process, pursuant to Appendix H "Participant and Unit Registration and Deregistration" and Agreed Procedure 1 "Participant and Unit Registration and Deregistration", the Interconnector Administrator shall verify to the Market Operator whether or not the Party (or Applicant, as applicable) is an Interconnector User.
- 2.98 Notwithstanding anything in paragraph 2.33, the information to be provided in a Participation Notice by a Party (or Applicant, as applicable) applying to register an Interconnector Unit shall comprise:
1. the Interconnector to which the Participation Notice relates;
 2. the Currency Zone of the Unit;
 3. the name address and contact details (including email and fax) of the Participant to which the Unit is to be registered;
 4. the billing address of the Participant;
 5. full details of the bank account to which amounts payable by the Market Operator to that Participant shall be paid;
 6. the proposed date on which the Party intends that trading by that Unit in the Pool is to commence, which date shall be no earlier than

- 20 Working Days from the date the Participation Notice is sent to the Market Operator;
7. the Communication Channels which the Participant designates pursuant to paragraph 3.8;
 8. VAT details for all relevant Jurisdictions;
 9. the participation capacities which the Party (or Applicant, as applicable) has or intends to have and the effective date from which it has or intends to have such capacity; and
 10. such other Registration Data as are required by the Market Operator pursuant to Appendix H "Participant and Unit Registration and Deregistration" and Agreed Procedure 1 "Participant and Unit Registration and Deregistration".
- 2.98A Each Participant registering as an Interconnector User must register one and only one Interconnector Unit for each Gate Window on an Interconnector.
- 2.99 Interconnector Units may not form part of any Trading Site.
- 2.100 If an Interconnector is Suspended under paragraphs 2.84 or 2.96 or otherwise, the Market Operator shall ensure that for each Party's Interconnector Units registered on that Interconnector the following shall apply until such time as the suspension is lifted:
1. Where an Interconnector Unit has Active Capacity Holdings, the Active Interconnector Unit Import Capacity Holding and Active Interconnector Unit Export Capacity Holding values shall be set to zero in each Ex-Ante One MSP Software Run.
 2. In each Ex-Ante Two MSP Software Run, the Higher Operating Limit and Lower Operating Limit shall be set to zero.
 3. In each Within Day One MSP Software Run, the Higher Operating Limit and Lower Operating Limit shall be set to zero.
- 2.101 The Interconnector Administrator shall notify the Market Operator at least 10 Working Days prior to the expiry or termination of an Interconnector User's authority to act as an Interconnector User. The Market Operator shall Deregister the Interconnector User as and from the date of such expiry or termination and shall set the relevant Active Interconnector Unit Import Capacity Holding and Active Interconnector Unit Export Capacity Holding values for that Interconnector Unit to zero.

INTERMEDIARIES

- 2.102 A Party (or an Applicant, as applicable) may, as an Intermediary, register a Generator, other than an Interconnector Residual Capacity Unit, which is owned or controlled by a third party (the Unit Owner), as a Generator Unit under the Code in accordance with paragraphs 2.103 to 2.107.
- 2.103 The Intermediary must be a Party to the Code provided that an Applicant may submit an application to register Units as an Intermediary prior to becoming a Party except that registration of Generator Units shall not take effect until the Applicant has become a Party. For the purposes of the appointment of an Intermediary under the Code, the person appointing the Intermediary is not required to be a Party to the Code.

- 2.104 An Intermediary may register any Generator Units in accordance with the participation procedure in paragraphs 2.30 – 2.52 provided that:
1. the Regulatory Authorities have consented to the registration of the relevant Generator Units by the Intermediary; and
 2. the Intermediary has submitted a Form of Authority to the Market Operator, executed by the Intermediary and the Unit Owner.
- 2.105 Intentionally blank.
- 2.106 Intentionally blank.
- 2.107 The Intermediary shall, for the purposes of the Code, be the Participant for any Generator Units registered to the Intermediary in accordance with the Code unless and until its authority under the Form of Authority has expired or been revoked.
- 2.108 The Form of Authority shall specify a time period for which the Intermediary may participate in respect of the relevant Generator Units. Such a time period shall not exceed the time period given in the Regulatory Authorities' consent pursuant to 2.104.1.
- 2.109 The Market Operator shall Deregister any Generator Units registered to an Intermediary automatically on expiry of the Intermediary's authority under the Form of Authority.
- 2.110 An Intermediary shall, in respect of any Generator Units registered to it as Intermediary, notify the Market Operator as soon as reasonably practicable on receipt of notice from the Unit Owner of its intention to revoke the Intermediary's authority, that its authority is being revoked and the effective date or proposed effective date of such revocation.
- 2.111 If the Market Operator receives notice from the Intermediary that the Intermediary's authority to act in respect of any Unit has been or will be revoked in accordance with applicable Legal Requirements, or otherwise, on a particular date, the Market Operator shall Deregister the relevant Units on the date of revocation of the Intermediary's authority, or where notice is received following any such revocation, shall immediately on receipt of such notice, Deregister the relevant Generator Units with effect from the next Trading Day.
- 2.112 During the 60 day period immediately prior to the expiry of an Intermediary's authority in respect of any Unit under the Form of Authority, or, where the Market Operator has been notified in advance of the proposed revocation of an Intermediary's authority in respect of any Generator Unit in accordance with paragraph 2.111, then at any time following such notification, the Market Operator shall accept a Participation Notice for the registration of the relevant Unit to a new Participant prior to Deregistration of the Units from the Intermediary, provided that any new registration shall be subject to the provisions of paragraphs 2.28 to 2.56 and shall not have an Effective Date prior to the Deregistration of the Units from the Intermediary.

VOLUNTARY DEREGISTRATION OF UNITS

- 2.113 A Party may apply at any time to Deregister any Units registered in its name pursuant to paragraphs 2.114 to 2.116 and Agreed Procedure 1 "Participant and Unit Registration and Deregistration". A Party shall notify the Market Operator and the Regulatory Authorities of its intention to deregister any Units at least 60 days in advance of its intended date of Deregistration,

using the appropriate form for Deregistration set out in Agreed Procedure 1 “Participant and Unit Registration and Deregistration”.

- 2.114 Where the Party applying for Deregistration complies with the procedures set out in Agreed Procedure 1 “Participant and Unit Registration and Deregistration”, the Market Operator shall issue a Deregistration Consent Order, permitting the Deregistration of the relevant Units provided that:
1. all amounts due and payable by the relevant Party pursuant to the Code in respect of the relevant Unit(s) and participation in the Pool up to and including the date of termination shall have been paid in full; and
 2. in the case of Deregistration of Supplier Unit(s), the provisions of the applicable Metering Code have been complied with; and
 3. in the case of Deregistration of Generator Unit(s), any relevant provisions of the applicable Grid Code have been complied with.
- 2.115 The Market Operator shall specify in each Deregistration Consent Order the Credit Cover which the relevant Party is required, in accordance with paragraphs 6.171.5 and 6.171.6, to maintain in respect of any Units being Deregistered pursuant to the Deregistration Consent Order.
- 2.116 Where the Market Operator has received a notice that a Participant wishes to Deregister a Unit in accordance with paragraph 2.113, the Market Operator shall, during the notice period provided for in paragraph 2.113, accept a Participation Notice from a Party (or Applicant, as applicable) to become the new Participant in respect of that Unit and any such new registration shall be subject to the requirements of paragraphs 2.28 to 2.70, provided that for the purposes of paragraph 2.33.12, it shall suffice that the Party (or Applicant, as applicable) applying to re-register the Unit complies with paragraph 2.33.12 prior to the proposed effective date specified in the Participation Notice.

MARKET OPERATOR

- 2.117 The Market Operator shall not unduly discriminate between any Parties in any capacity under the Code in exercising its rights and powers and performing its functions and obligations.
- 2.118 Save as provided for by law or under this Code, no undertaking(s) licensed to be the Market Operator may participate in the Pool as a Participant (including as an Intermediary) and the Market Operator shall not be the counterparty or act as principal in any sale and purchase of electricity in the Pool.
- 2.119 The Market Operator may not assign any of its obligations, functions or powers under this Code to any person. The Market Operator may not, without the prior written consent of the Regulatory Authorities, enter into any agreement to subcontract or delegate any of its obligations, functions or powers under this Code where either:
1. the relevant agreement, if it relates to the supply of goods or services, has a cumulative or aggregate value equal to or exceeding the then current threshold under Article 16 of the Utilities Directive applicable to contracts for supplies and services; or
 2. the relevant agreement, if it relates to the performance of works, has a cumulative or aggregate value equal to or exceeding the then

current threshold under Article 16 of the Utilities Directive applicable to contracts for works; or

3. where the obligations, functions or powers in question are of material relevance to the role of the Market Operator and/or the proper functioning of the Pool.
- 2.120 The Regulatory Authorities shall be entitled to direct a Modification to the Code to change the definition of Market Operator at any time and no other person shall be entitled to request such a Modification. The definition of Market Operator under this Code may not be amended save in accordance with this paragraph.
 - 2.121 The Market Operator shall be responsible for carrying out all the runs of the MSP Software required under the Code.
 - 2.122 If at any time there is more than one person licensed to act as Market Operator, each of the persons licensed to act as Market Operator shall be jointly and severally liable in performing the role of licensed Market Operator under this Code.
 - 2.123 Without prejudice to the obligations of Parties to comply with the Code, if at any time there is more than one person licensed to act as Market Operator then where any other Party owes an obligation or liability to the Market Operator, if that Party discharges that obligation or liability to either person comprising the Market Operator, then the Party shall be deemed to have discharged the obligation or liability to all persons comprising the Market Operator.
 - 2.124 The Market Operator is authorised by all Parties to exercise and perform the rights, obligations and functions granted to it under the Code to the extent required under, and in accordance with, the Code.
 - 2.125 The Market Operator shall make available to the Regulatory Authorities details of its disaster recovery plan to the extent that it relates to its functions and obligations under the Code and it shall, to that extent, maintain and develop such disaster recovery plan.

OBLIGATIONS ON PARTIES

- 2.126 Each Party shall comply with the Code and the Framework Agreement in exercising its rights and powers and performing its functions and obligations under the Code.
- 2.127 Without prejudice to the generality of paragraph 2.126, no Party shall, either directly or indirectly, on its own or in conjunction with any other Party or person, obstruct the proper functioning of the Pool in accordance with the Code.
- 2.128 Each Party agrees that the Market Operator shall have the right, as agent and trustee for and on behalf of each Party, to sue any other Party to recover any Shortfall or Unsecured Bad Debt under the Code.
- 2.129 Where the performance of any obligation arising under or in relation to this Code requires the prior approval or action by the Regulatory Authorities, such obligation shall be subject to such prior approval or action by the Regulatory Authorities.
- 2.130 Without prejudice to any other provision of the Code or the Framework Agreement, each Party:

1. shall perform all its rights, functions and obligations under the Code with the degree of care and to the standard expected of a Prudent Industry Operator and in accordance with Prudent Electric Utility Practice;
2. shall at all times comply with and maintain, and shall at all times procure compliance with and maintenance of, all consents, permissions, licences and Licences (and the conditions attaching to any exemptions) required to be obtained and maintained to participate in the SEM or to be a Party to the Code for each capacity in which it acts as a Party or Participant under the Code;
3. shall pay all fees, levies, charges and other payments arising under the Code as they become due;
4. shall ensure that, save as expressly permitted otherwise, any information or data it is required to submit to the Market Operator, Market Auditor or any other person, or to maintain, as required by virtue of being a Party or Participant, shall, to the best of its knowledge and belief, be true, valid, correct, complete and accurate at the time it is given and, save as expressly provided otherwise, while it is maintained and, where appropriate, it shall keep the Market Operator informed of any mistakes or omissions in, and corrections or updates to any information or data which it has submitted to the Market Operator, the Market Auditor or any other person under the Code;
5. shall ensure that any information or data it is required to submit to the Market Operator, Market Auditor or any person as required by virtue of being a Party or Participant will be submitted in a timely manner to enable the Market Operator, Market Auditor or such other person to perform their obligations and functions arising pursuant to the Code; and
6. shall co-operate with and provide all reasonable assistance to the Market Operator on request for the purposes of the Market Operator performing its functions and obligations under the Code.

MARKET AUDIT, CONSULTATION AND INFORMATION SHARING

- 2.131 The Regulatory Authorities will appoint a person or firm as Market Auditor every three years for a three year term, such appointment to take effect from the date specified by the Regulatory Authorities.
- 2.132 Where the appointment is terminated or the Market Auditor resigns before the expiry of the three year term, the Regulatory Authorities may appoint a person or firm to fulfil the role of Market Auditor on a temporary basis pending the appointment by the Regulatory Authorities of a person or firm as Market Auditor for a three year term. The three year term of the person or firm next so appointed as Market Auditor shall commence from their date of appointment.
- 2.133 The Market Auditor shall conduct an audit of the Code, its operation and implementation and the operations, trading arrangements, procedures and processes under the Code at least once a Year.
- 2.134 The annual period covered by the audit shall be 1 January to 31 December unless the terms of reference specify a different period.

- 2.135 The Regulatory Authorities shall consult with Parties on the terms of reference for the audit following the publication of the Audit Report for the previous year or audit period.
- 2.136 The Regulatory Authorities shall specify annually the precise terms of reference for the audit following the consultation process set out in paragraph 2.135 and in sufficient time to enable the Market Auditor to complete the work in a timely manner and shall publish the terms of reference before the commencement of the audit activities.
- 2.137 The Market Auditor shall be of good repute with the appropriate experience to enable it to carry out the audit with the appropriate level of expertise, care, skill and diligence.
- 2.138 The Market Auditor, pursuant to these provisions and such terms of reference as the Regulatory Authorities shall specify, shall:
1. report to the Regulatory Authorities at such reasonable intervals as the Regulatory Authorities shall specify in the terms of reference during the course of the audit;
 2. deliver its Audit Report to the Regulatory Authorities in draft form prior to it being finalised;
 3. deliver its Audit Report in final form to the Regulatory Authorities within 4 weeks of delivering its draft audit;
 4. meet with the Regulatory Authorities at the request of the Regulatory Authorities at any time during the Market Auditor's engagement. The Regulatory Authorities will, in any event, require the Market Auditor to attend a meeting with it within 6 weeks of its delivery of the Audit Report in final form. Nominated representatives of the Market Operator and the Modifications Committee shall be entitled to attend such meeting.
- 2.139 Each Party shall provide without charge to the Market Auditor in a timely manner such information as is reasonably required by the Market Auditor to enable the Market Auditor to comply with its functions and obligations and terms of reference for the purposes of conducting the audit and preparing and finalising the Audit Report. This is subject to any obligations of confidentiality which the relevant Party claims are owed to any third parties which prevent disclosure of the information required. In such circumstances, the relevant Party shall be obliged to explain the nature of the obligations of confidentiality, the information to which they apply and to demonstrate to the satisfaction of the Regulatory Authorities that it has used its best endeavours to obtain a clearance from the third party to whom the obligation of confidentiality is owed to release the information required to the Market Auditor.
- 2.140 The Market Auditor shall be entitled to make recommendations in its Audit Report. The Regulatory Authorities may direct implementation of any recommendation of the Market Auditor and shall consult with the Market Operator and the Modifications Committee before so doing. Any recommendation which the Regulatory Authorities direct to implement by way of an amendment of the Code shall be deemed to be an approved Modification Proposal and shall be published accordingly by the Market Operator.
- 2.141 The Market Operator shall arrange for the publication of the Audit Report in final form in accordance with the provisions of the Code upon its delivery in

accordance with paragraph 2.138.3 subject to any confidentiality obligations under paragraphs 2.344 to 2.349.

- 2.142 Each Party shall keep complete, accurate and up to date records whilst a Party to the Code and, where applicable, of its participation in the Pool for a minimum period of 3 years from the date of creation of such records.
- 2.143 The fees and costs of the Market Auditor shall be paid by the Market Operator.

Information Sharing

- 2.144 The Market Operator shall report to the Regulatory Authorities in writing on a monthly basis or at such other intervals as the Regulatory Authorities may reasonably request and in such manner and to such an extent as reasonably specified by the Regulatory Authorities. The Market Operator shall publish such reports. The reports shall set out in reasonable detail information about
1. the performance by the Market Operator of its rights, powers, functions and obligations under the Code;
 2. factual information relating to the exercise of rights and the carrying out of functions by Parties under the Code.
- 2.145 Subject to Applicable Laws, each Party shall allow the Regulatory Authorities, on reasonable notice and at reasonable times, access to inspect and copy any records relating to the Party's obligations and functions under the Code and, where applicable, its participation in the Single Electricity Market.
- 2.146 Subject to any confidentiality provisions under paragraphs 2.344 to 2.349, where information is provided by any Party to the Market Auditor or the Market Operator pursuant to the Code, the Market Auditor and the Market Operator shall have the right, without charge, to use, make available, copy, adapt and deal with such data or other information for the purposes of exercising their rights and performing their powers, functions and obligations under the Code (and, in the case of the Market Auditor, its terms of reference) but for no other reason.

MODIFICATIONS

- 2.147 Modifications shall be processed in accordance with paragraphs 2.148 to 2.236 and Agreed Procedure 12 "Modifications Committee Operation".
- 2.148 The objective of the Modifications Committee is to progress Modification Proposals with a view to better facilitating the achievement by the Code of the Code Objectives.

Functions of the Modifications Committee

- 2.149 The functions of the Modifications Committee are to facilitate the Modifications Process by:
1. co-ordinating the resources of Parties to facilitate the development and processing of a Modification Proposal;
 2. assessing Modification Proposals and the impact of any Modification Proposals for the Pool having regard to the Code Objectives;

3. further developing Modification Proposals which are not rejected as being spurious;
4. working up the detail of Modification Proposals;
5. consulting on Modification Proposals as required;
6. compiling reports and making recommendations on Modification Proposals to the Regulatory Authorities; and
7. making any appropriate changes to Agreed Procedures.

Constitution of the Modifications Committee and Voting Rules

- 2.150 The Modifications Committee shall consist of:
1. one member appointed by the Commission and one member appointed by NIAUR;
 2. at least nine (9) and no more than fifteen (15) further members appointed as follows, such persons to include at all times:
 - (a) at least three (3) members nominated by or elected in respect of Generation Participants;
 - (b) at least three (3) members nominated by or elected in respect of Supply Participants;
 - (c) one member appointed by the Market Operator;
 - (d) one member appointed by each of the System Operators; and
 - (e) one member appointed by each of the Meter Data Providers (to the extent not already represented).
- 2.151 A member elected or appointed to represent a particular type of party shall represent the interests of the type of party it is elected or appointed to represent.
- 2.152 Unless directed otherwise by the Regulatory Authorities and subject to paragraphs 2.154 and 2.155, there shall at all times be an equal number of persons nominated by or elected in respect of Generation Participants and persons nominated by or elected in respect of Supply Participants on the Modifications Committee.
- 2.153 If the Regulatory Authorities determine at any time that any particular type of party is not adequately represented on the Modifications Committee, the Regulatory Authorities may seek nominations from relevant persons and appoint a person from such nominations, or otherwise to represent that type of person. Such a person shall be a voting member of the Modifications Committee and shall be appointed for an initial term of two years. A member appointed in accordance with this paragraph 2.153 shall not be deemed to be a representative of Generation Participants or Supply Participants for the purposes of paragraph 2.150 or 2.154.
- 2.154 The Regulatory Authorities may from time to time stipulate the minimum or maximum representation for Supply Participants and Generation Participants.
- 2.155 The total number of members of the Modifications Committee shall be not less than eleven (11) persons and not more than seventeen (17) persons.

- 2.156 Save as expressly provided otherwise, only members appointed or elected to represent Nominating Participants shall be entitled to vote at any Meeting and those members shall have one vote each. Save as expressly provided otherwise, those members who are appointed by, and to represent, the Commission, NIAUR, System Operators, Meter Data Providers and the Market Operator shall not have any vote.
- 2.157 The Market Operator shall make available to the Modifications Committee a fulltime Secretariat. None of the Secretariat's personnel shall be a member of the Modifications Committee.
- 2.158 The Market Operator shall be responsible for the performance by the Secretariat of its functions necessary for the proper functioning of the Modifications Process under the Code.
- 2.159 Agreed Procedure 12 "Modifications Committee Operation" sets out the rules for the Quorum of the Modifications Committee and the voting rules. No decision or recommendation of the Modifications Committee can be reached without a Quorum. Voting will be by simple majority, with the chairperson casting the deciding vote in the event of a tied vote.

Chairperson

- 2.160 The Modifications Committee shall have a chairperson and vice-chairperson who shall be elected from the voting members of the Modifications Committee by the voting members of the Modifications Committee. In the event of a tie for the election of the chairperson or vice-chairperson, a subsequent ballot or ballots shall take place until a chairperson and vice-chairperson are elected.
- 2.161 The term of appointment for the chairperson and the vice-chairperson shall be one year.
- 2.162 In the event that the chairperson cannot attend a meeting or chair a meeting for its entirety for any reason, the vice-chairperson shall take his or her place as the chairperson of the meeting.
- 2.163 In the event that the chairperson retires, resigns or is removed from the Modifications Committee, or otherwise becomes unavailable to act as chairperson of the Modifications Committee, the vice-chairperson shall take his or her place for the remainder of the term for which that person was appointed chairperson and a new vice-chairperson shall be elected from the voting members of the Modifications Committee by the voting members of the Modifications Committee.
- 2.164 The chairperson will chair meetings of the Modifications Committee and seek to ensure the efficient organisation and conduct of the functions of the Modifications Committee pursuant to the Code.

Nomination of Participant Members

- 2.165 Each Nominating Participant may put forward one nominee and an alternate for that nominee for appointment to the Modifications Committee at such times as may be notified by the then existing Modifications Committee.

Nominations of Other Members

- 2.166 The Commission, the NIAUR, the Market Operator, each of the System Operators and each of the Meter Data Providers shall each nominate one member and one alternate member for appointment to the Modifications

Committee at such times as the then existing Modifications Committee may notify.

Appointment of Subsequent Members

- 2.167 On the termination of the appointment or the removal of any member of the Modifications Committee who is a nominee of any of the Market Operator, either System Operator or any Meter Data Provider, that person shall be replaced by a nominee of the relevant Party, who shall be automatically appointed to the Modifications Committee.
- 2.168 The Commission and the NIAUR shall be entitled to replace any member nominated by the Commission or the NIAUR (as representatives of the Commission and the NIAUR) at any time by giving notice to the Secretariat and with effect from the date specified in such notice.
- 2.169 At least 8 weeks prior to the expiry of any person's membership of the Modifications Committee, the existing Modifications Committee shall:
1. where that person is a member appointed by the Commission, NIAUR, Market Operator, a System Operator or a Meter Data Provider, notify the relevant party that is required to appoint a new member and new alternate member;
 2. where that person is a member appointed in respect of Generation Participants or Supply Participants, request the Secretariat to arrange an election in accordance with paragraph 2.170;
 3. where that person is a member appointed by the Regulatory Authorities in accordance with paragraph 2.153, inform the Regulatory Authorities of the pending expiry of the member's term.
- 2.170 Prior to the expiry of membership of any Nominating Participant member, or where a member is removed, resigns or retires from the Modifications Committee and the Modification Committee agrees that an election is required, the Secretariat shall arrange a Nominating Participant Election to fill that vacancy in accordance with such of the following steps as are necessary:
1. Relevant Nominating Participants shall be requested to propose new nominees and alternates for election;
 2. each Nominating Participant shall be entitled to vote to elect members from the Participant nominees in accordance with paragraphs 2.171 to 2.176;
 3. Nominating Supply Participants shall be entitled to vote to elect a member from the persons nominated by them;
 4. Nominating Generation Participants shall be entitled to vote to elect a member from the persons nominated by them;
 5. the number of nominees with the most votes from Supply Participants but not exceeding three nominees in number, shall be appointed to the Modifications Committee to replace any retiring, terminated or removed Supply Participant member;
 6. the number of nominees with the most votes from Generation Participants, but not exceeding three nominees in number, shall be appointed to replace any retiring, terminated or removed Generation Participant; and

7. the constitution of the Modifications Committee shall, unless agreed otherwise by the Regulatory Authorities, continue to comply with paragraphs 2.150 to 2.155.
 8. Initial members of the Modification Committee shall be appointed for terms in accordance with paragraph 8.51. Thereafter each member shall be appointed for a maximum term of two years, subject to the exception contained in Section 2.170 (9).
 9. Where an ad-hoc election has taken place to fill a vacancy, whereby a member has been removed, resigned or retired from the committee, the newly elected member shall be appointed in principle for a maximum term of two years, and this term will expire in accordance with the annual election date which is closest to the term expiry date.
- 2.171 Nominating Participant Elections shall take place, where practicable, not later than 4 weeks prior to the date of expiry of the membership of any one or more of the elected nominee(s) to replace such persons on the Modifications Committee.
 - 2.172 In the event that a nominee of any Nominating Participant is elected, the person put forward as an alternate to that nominee shall automatically be deemed to be that person's alternate member.
 - 2.173 The Modifications Committee may at any time stipulate that an outgoing member who is a nominee of Generation Participants or Supply Participants must be replaced in any election with a nominee of Generation Participants or Supply Participants respectively in order to preserve the requisite constitution of the Modifications Committee in accordance with paragraph 2.150 or as may be stipulated from time to time by the Regulatory Authorities pursuant to paragraph 2.152 or 2.154.
 - 2.174 Members who have previously served on the Modifications Committee may be re-appointed or re-elected to the Modifications Committee provided that they have not at any time been removed from the Modifications Committee or otherwise ceased to be eligible in accordance with paragraph 2.177.
 - 2.175 If for any reason the procedures set out in paragraphs 2.165 to 2.173 do not result in a sufficient number of Nominating Participant members, the Regulatory Authorities may appoint additional members.
 - 2.176 Without prejudice to paragraph 2.175, membership of the Modifications Committee shall automatically terminate at the end of a member's term unless such termination would leave the Modifications Committee with less than 11 members, in which case the term of membership may be extended until a replacement member is appointed or elected to the Modifications Committee.

Resignation and Removal of Members of the Modifications Committee

- 2.177 Any member may be removed during his or her term by the majority decision of the Modifications Committee (subject to veto by the Regulatory Authorities) if that person:
 1. ceases to be in a position to represent those Supply Participants or Generation Participants from which the member was nominated;
 2. is or becomes of unsound mind or is, or otherwise becomes incapable of performing the functions of a member of the Modifications Committee;

3. has been, or is, in the reasonable opinion of the majority of the other members of the Modifications Committee, engaged in conduct which is inconsistent with or detrimental to being a member of the Modifications Committee; or
 4. fails to discharge the obligations of a member of the Modifications Committee.
- 2.178 A member may resign by giving at least 2 weeks notice, prior to the next scheduled Modifications Committee meeting, in writing to the Secretariat which shall convey the notice to the Modifications Committee.

Alternate Members of the Modifications Committee

- 2.179 An alternate member shall be appointed to the Modifications Committee only as provided for in the Code.
- 2.180 Should a member be removed, resign or retire from the Modifications Committee, the Modifications Committee may initiate relevant nominations and elections to replace the member in accordance with paragraphs 2.170 to 2.176. Meanwhile, the alternate member shall take the place of that member on the Modifications Committee for no longer than the remainder of that member's term.
- 2.181 In the circumstances set out in paragraph 2.180, a new alternate member shall be appointed by the person who nominated the removed, resigning or retiring member.
- 2.182 If any member is unable to attend a Meeting of the Modifications Committee, the alternate member shall be entitled to take the place of that member in that meeting and to vote at that Meeting. Any change of alternate members shall be notified in writing to the Secretariat and to the Committee at least three Working Days in advance of the Meeting. Such notification shall be issued by the relevant member.

Meetings of the Modifications Committee

- 2.183 The Modifications Committee shall have a Meeting at least once every 2 months.
- 2.184 The Modifications Committee acting through the Secretariat, shall set the date of each Meeting and, where possible, shall publish such date at least two weeks in advance.
- 2.185 Any person may attend Meetings of the Modifications Committee in an observatory capacity where that person has informed the Secretariat to the Modifications Committee in advance and the Secretariat has confirmed that person's attendance in accordance with Agreed Procedure 12 "Modifications Committee Operation". Where space is limited, and with the agreement of the chairperson of the Modifications Committee, attendance of non-members may be limited on a first come first served basis.

Costs of the Modifications Committee

- 2.186 The costs of the Secretariat, Meetings and all other costs of the Modifications Committee shall be included as costs and expenses of the Market Operator for the purposes of the Code.
- 2.187 Members of the Modifications Committee shall not be entitled to remuneration or expenses.

Proposal of Modifications to the Code

- 2.188 Modification Proposals to the Code can be proposed by any person including the Market Operator and the Regulatory Authorities. Any Modification Proposal shall be submitted to the Secretariat.
- 2.188A The person who submitted a Modification Proposal, or the Secretariat acting on behalf of the person who submitted a Modification Proposal may, upon the agreement of the Modifications Committee, withdraw a Modification Proposal at any stage prior to the Modification Proposal receiving a Final Modification Recommendation by vote of the Modifications Committee.
- 2.189 Any person raising a Modification Proposal shall ensure that their proposal is clear and substantiated with appropriate detail, including how it furthers the Code Objectives, to enable it to be considered by the Modifications Committee.
- 2.190 Each Modification Proposal shall include draft text of the relevant provision of the Code as amended by the Modification Proposal.

Modification Recommendation Report Timeline

- 2.191 Save as expressly provided otherwise, the Modifications Committee shall produce a Modification Recommendation Report in respect of each Modification Proposal.
- 2.192 The Modification Recommendation Report shall be submitted to the Regulatory Authorities within 8 months of receipt of a Modification Proposal, or 6 months in the case of an RA Modification Proposal, unless such period is extended with the consent of the Regulatory Authorities.

Procedure for Developing Proposals

- 2.193 The Secretariat shall, as soon as practicable after receipt of a Modification Proposal, publish the relevant Modification Proposal .
- 2.194 A Modification Proposal shall be considered by the Modifications Committee at the next appropriate Meeting in accordance with Agreed Procedure 12 “Modifications Committee Operation”.
- 2.195 The person making a Modification Proposal or its representative shall be entitled to present the Modification Proposal at the Meeting at which it is to be initially considered.
- 2.196 At the Meeting where it first considers a Modification Proposal, the Modifications Committee shall first determine whether the Modification Proposal is spurious in accordance with paragraph 2.203.
- 2.196A At the meeting where it first considers a Modification Proposal, the Modifications Committee may decide that the secretariat should prepare the procedure and timetable to be followed in making a recommendation in respect of such Modification Proposals.
- 2.197 The Modifications Committee may decide to modify or combine Modification Proposals. Modified or combined Modification Proposals shall reference the original Modification Proposals.
- 2.198 The Modifications Committee may specifically invite appropriate persons, such as Participants, the Market Operator, the System Operators, industry groups, customer representatives or other persons to express their opinions on any Modification Proposal, including providing an impact analysis, in the

manner provided for in Agreed Procedure 12 “Modifications Committee Operation”.

- 2.199 Parties invited to assist the Modifications Committee under paragraph 2.198 will make available reasonable resources to respond to such request by the Modifications Committee.
- 2.200 The Modifications Committee may hold a public consultation in relation to a Modification Proposal. Where there is a public consultation, a minimum consultation period of 10 Working Days from the date of publication of the relevant consultation paper shall be provided.
- 2.201 In working up the detail of a Modification Proposal, the Modifications Committee shall have due regard to comments and submissions received during the consultation process.
- 2.202 The Modifications Committee may contract consultants, experts or advisers at reasonable cost to advise the Modifications Committee regarding any Modification Proposal, including the preparation of an impact analysis report. Any reasonable costs incurred by the Modifications Committee in connection with this shall form part of the costs of the Secretariat.

Spurious Proposals

- 2.203 A Modification Proposal shall be deemed to be spurious if, inter alia, it is clearly contrary to the Code Objectives or does not further the Code Objectives. If the Modifications Committee reasonably considers a Modification Proposal to be spurious, it shall reject such Modification Proposal.
- 2.204 Any decision of the Modifications Committee under paragraph 2.203 to reject a Modification Proposal must set out the reasons for the decision in writing and provide them to the person making the Modification Proposal and the Regulatory Authorities.
- 2.205 The Regulatory Authorities reserve the right to veto any decision of the Modifications Committee that a proposal is spurious and in such event, the relevant Modification Proposal must be processed by the Modifications Committee in accordance with the Code.

Urgent Modifications

- 2.206 Any person submitting a Modification Proposal may mark it as “Urgent”. A person submitting a Modification Proposal marked “Urgent” shall submit the Modification Proposal to the Secretariat and to the Regulatory Authorities.
- 2.207 The Secretariat shall, as soon as possible on receipt of a Modification Proposal which is marked “Urgent”, contact the Regulatory Authorities which shall determine whether or not it shall be treated as Urgent.
- 2.208 A Modification Proposal shall be determined to be Urgent by the Regulatory Authorities where, if not made, it can reasonably be anticipated that the event or circumstance with which the Modification Proposal is concerned would imminently:
 - 1. threaten or prejudice safety, security or reliability of supply of electricity; or
 - 2. unduly interfere with, disrupt or threaten the operation of the Single Electricity Market;

or if a Modification is required to correct an obviously material error or inconsistency in the Code.

- 2.209 If the Regulatory Authorities determine that a Modification Proposal is Urgent under paragraph 2.208, the Modifications Committee shall convene an Emergency Meeting.
- 2.210 If the Secretariat or the Modifications Committee considers that any of the criteria in paragraph 2.208 apply in respect of any Modification Proposal that has not been marked “Urgent” by the person submitting the Modification Proposal, the Secretariat shall promptly submit the Modification Proposal to the Regulatory Authorities for consideration in accordance with paragraph 2.207 and 2.208.
- 2.211 In the event that a Modification Proposal is deemed to be Urgent, the Modifications Committee shall propose the procedure and timetable to be followed in making a recommendation in respect of the Urgent Modification which may fast-track the normal processes provided for in this Code. The Regulatory Authorities shall have the right to veto or direct amendments to the procedure and timetable proposed by the Modifications Committee within 2 Working Days of any such proposal by the Modifications Committee.

Alternative Proposals

- 2.212 If any person does not agree with a Modification Proposal to the Code, it may propose an alternative Modification Proposal, which if received in sufficient time to be considered within the Modifications Committee’s plans for progressing the initial original Modification Proposal may be considered in conjunction with, or in substitution for, the initial Modification Proposal.

Final Modification Recommendation & Report

- 2.213 The Modifications Committee shall make the determination for the Final Modification Recommendation by majority vote of voting members of the Modifications Committee. The Modifications Committee shall send the Final Modification Recommendation as part of the Modification Recommendation Report in relation to the Modification Proposal to the Regulatory Authorities as soon as practicable after the determination but no later than the next scheduled Ordinary Meeting of the Modifications Committee.
- 2.214 The Modifications Committee shall recommend to the Regulatory Authorities the adoption of such Modification Proposals as it concludes will better facilitate achievement of the Code Objectives.
- 2.215 The Final Modification Recommendation of the Modifications Committee shall be part of the Modification Recommendation Report which shall include:
1. the determination of the Modifications Committee on whether or not the Modification Proposal should be adopted;
 2. the reasons for such determination;
 3. where the Modifications Committee is in favour of the proposal, a draft of the text of the proposed Modification;
 4. the original draft of the Modification Proposal;
 5. any dissenting opinions of members of the Modifications Committee;

6. a copy the Market Operator's opinion and each System Operator's opinion on the Modification;
7. the views of any respondents submitted during the consultation process (including any views of persons invited to give opinions or consultants, experts or advisors contracted to provide advice pursuant to paragraphs 2.198 and 2.202 respectively;
8. an assessment of the impact of the Modification Proposal including in relation to the Code, any Legal Requirements, any other codes relating to the operation of the SEM (including the Grid Codes and the Metering Codes) or any other relevant matter;
9. an assessment, where the Modifications Committee deems appropriate, of any alternative Modification Proposal proposed by any person;
10. a draft of the specific changes that it is proposed would be necessary to make to the Code if the Modification Proposal would be accepted;
11. proposed timescales for implementation; and
12. a cost/resource requirements assessment.

No Recommendation or Decision by Modifications Committee

- 2.216 In the event that the Modifications Committee is unable to make a determination in respect of a Modification Proposal within the timeframes set out in paragraph 2.192 the matter shall be referred to the Regulatory Authorities. This referral shall detail the proposal and the information referred to in paragraphs 2.215 (with the exception of sub-paragraphs 2.215.1 to 2.215.2 and 2.215.11 to 2.215.12). In such event, the Regulatory Authorities shall either make a binding decision in accordance with paragraph 2.220, or shall extend the applicable time-limit for the Modifications Committee under paragraph 2.192.
- 2.217 In the event that the Modifications Committee does not issue a determination in respect of a Modification Proposal within the timeframes set out in paragraph 2.192 and does not refer the matter to the Regulatory Authorities under paragraph 2.216, the Regulatory Authorities shall either make a binding decision in accordance with paragraph 2.220, or shall extend the applicable time-limit for the Modifications Committee under paragraph 2.192.

Decision of the Regulatory Authorities

- 2.218 Following receipt of a Modification Recommendation Report created by the Modifications Committee, the Regulatory Authorities shall decide whether to:
1. direct a Modification in accordance or otherwise with the Final Modification Recommendation of the Modifications Committee;
 2. reject the Final Modification Recommendation of the Modifications Committee; or
 3. direct the Modifications Committee that further work is required in respect of the Modification Proposal concerned in the Final Modification Recommendation, extending the 8 month timeline if necessary.

- 2.219 The Regulatory Authorities shall make their decision under paragraph 2.218 in relation to a Modification Proposal as soon as reasonably practicable following receipt of the Final Modification Recommendation or for the purposes of paragraphs 2.216 and 2.217.
- 2.220 If approved by the Regulatory Authorities, the Modification shall become effective 2 Working Days after the date of the decision of the Regulatory Authorities or such other date as may be specified by the Regulatory Authorities in its decision.
- 2.221 Once any Modification has been made, the Market Operator will be required to implement the change, including making the necessary changes to systems and processes with effect from the date provided for pursuant to paragraph 2.220. The Market Operator shall publish the decision of the Regulatory Authorities promptly on its receipt.

Modifications of Agreed Procedures

- 2.222 If at a Meeting at which any Agreed Procedure Modification Proposal is considered, a unanimous determination is made by the Modifications Committee, which, for the purposes of this paragraph, shall be required to be by the vote of all members except the Regulatory Authorities' representatives, in respect of the Agreed Procedure Modification Proposal including, where the decision is to adopt the Agreed Procedure Modification Proposal, the text of the relevant Agreed Procedure Modification, the decision of the Modifications Committee shall be final and binding, provided that the Regulatory Authorities shall have a right to veto any such decision within 2 Working Days of the decision being made. The date of the Modifications Committee decision shall be deemed to be the date of the publication of the relevant notification to the Regulatory Authorities as set out in paragraph 2.223.
- 2.223 In the event that the Modifications Committee makes a determination to modify an Agreed Procedure in accordance with paragraph 2.222, the Modification shall be made to the relevant Agreed Procedure in the form determined by the Modifications Committee. The Modifications Committee shall notify the Regulatory Authorities of this and shall publish such notification and the Agreed Procedure Modification shall become effective on a date specified by the Modifications Committee which date may not be earlier than the date 3 Working Days after the publication of the notification to the Regulatory Authorities.
- 2.224 If the Modifications Committee does not make a determination in relation to an Agreed Procedure Modification Proposal in accordance with paragraph 2.222 at the relevant Meeting, the Secretariat shall send the Agreed Procedure Modification Proposal to the Regulatory Authorities for determination and the Regulatory Authorities shall:
1. direct a Modification in accordance or otherwise with the Agreed Procedure Modification Proposal; or
 2. reject the Agreed Procedure Modification Proposal; or
 3. direct the Modifications Committee that further work is required in respect of the Agreed Procedure Modification Proposal.
- 2.225 The Regulatory Authorities shall make a decision in relation to an Agreed Procedure Modification Proposal as soon as reasonably practicable after receipt.

- 2.226 Any Modification of Agreed Procedures shall be published by the Market Operator within 2 Working Days after approval by the Modifications Committee or the Regulatory Authorities as the case may be.
- 2.227 Any proposal to introduce a new Agreed Procedure, or a modification to an existing Agreed Procedure which has the object or effect of changing the scope of that Agreed Procedure from that set out in Appendix D "Scope of Agreed Procedures" shall not be an Agreed Procedure Modification Proposal but shall constitute a Modification Proposal and be dealt with accordingly pursuant to paragraphs 2.194 to 2.221.

Information about the Modifications Process

- 2.228 The Market Operator shall publish information relating to the Modifications Process and the status of each Modification Proposal and Agreed Procedure Modification Proposal subject to the confidentiality provisions set out in paragraphs 2.344 to 2.349.
- 2.229 The Market Operator shall provide for a website location or other similar means of publication to be available to the Secretariat and the Modifications Committee for the Modifications Process.
- 2.230 The Market Operator shall publish notices submitted to it by the Modifications Committee as soon as practicable after receipt of such notices and in any event within 5 Working Days after receipt of such notices.
- 2.231 The Modifications Committee shall submit a quarterly report to the Regulatory Authorities including the progress and status of Modification Proposals. These reports shall be published by the Market Operator as soon as reasonably practicable after receipt.
- 2.232 The Market Operator shall publish the determination of the Regulatory Authorities in relation to a Modification Proposal within 2 Working Days after such decision has been made and submitted to the Market Operator and, where a Modification Proposal has been accepted, such publication shall include the text of the Modification.

Intellectual Property Issues Associated With Modification Proposals

- 2.233 Each Party submitting a Modification Proposal shall be deemed to have irrevocably licensed any Intellectual Property Rights or other rights to, and to have waived any moral rights in, the content, form or other aspect of the Modification Proposal and such licence and waiver shall be a precondition to the valid submission of a Modification Proposal.
- 2.234 Each person who is not a Party and submits a Modification Proposal shall be required to irrevocably licence any Intellectual Property Rights or other rights to and waive any moral rights in the content, form or other aspect of the Modification Proposal and such licence and waiver shall be a precondition to the acceptance of a Modification Proposal.
- 2.235 A form for Modification Proposals shall be made available on the website provided for the Modifications Committee and such form shall include a licence of Intellectual Property Rights, and waiver of moral rights in respect of the content, format or other aspects of the proposal.

No Retrospective Effect

- 2.236 For the avoidance of doubt, a Modification shall have effect as and from the date specified by the Regulatory Authorities or, where applicable, the

Modifications Committee and in no event shall that date be earlier than the date on which the Modification is approved by the Regulatory Authorities, or, where applicable, the Modifications Committee. Under no circumstances shall Modifications have retrospective effect.

DEFAULT, SUSPENSION AND TERMINATION

Default

- 2.237 The following sections on default, suspension and termination shall apply in respect of Default by any Party other than the Market Operator.
- 2.238 A Party shall be in Default where it is in material breach of any provision of the Code or the Framework Agreement.
- 2.238A Where the Default relates to underpayment by a Participant for multiple Invoices with the same due date and the same Invoice type, namely each of the Trading Charges, Capacity Charges or Market Operator Charge Invoice types, then all such underpayments will be classed as one Default.
- 2.239 A Party shall notify the Market Operator as soon as reasonably practicable upon becoming aware of any circumstance that will give rise to a Default or of any of the events listed in paragraph 2.246, and upon the occurrence of a Default.

Default Notice

- 2.240 On becoming aware of a Default in relation to a Party, the Market Operator shall issue to the Defaulting Party a Default Notice specifying the Default.
- 2.241 The Market Operator shall specify in a Default Notice:
1. the nature of the Default;
 2. if the Default is capable of remedy, the time from the date of the Default Notice within which the Defaulting Party is required to remedy the Default;
 3. any other action which the Market Operator may reasonably require the Defaulting Party to take in respect of the Default.
- 2.242 The Defaulting Party must comply with the Default Notice.

Suspension

- 2.243 In the event that:
1. a Credit Call is made and a Participant's Credit Cover Provider fails to meet such demand within the timeframe as provided for in paragraphs 6.54 and 6.55; or
 2. a Participant fails at any time to provide the Required Credit Cover as specified under this Code and in accordance with the timeframe as provided for in Section 6 and Agreed Procedure 9 "Management of Credit Cover and Credit Default";
- then, notwithstanding paragraph 2.246 and subject to paragraphs 2.244 and 2.245, the Market Operator shall at the same time as or following the issue of the Default Notice to the Defaulting Party in respect of such Default, issue a Suspension Order in respect of all of the relevant Participant's Units. A Suspension Order issued under this paragraph 2.243 shall have immediate effect, save as expressly provided under paragraph 2.244. In the

circumstances where the Market Operator has already issued a Suspension Order in respect of any of a Participant's Units, no further Suspension Order shall be issued in respect of such Units until the previously issued Suspension Order is withdrawn or has lapsed.

- 2.243A In the event that the Market Operator issues a Suspension Order in accordance with paragraph 2.243 to a Participant in respect of its Supplier Units in the Northern Ireland Currency Zone, the Market Operator shall, at the same time as issuing the Suspension Order, issue a Statutory Demand to the Participant in respect of the amount by which the Participant's Credit Cover Provider failed to meet the Credit Call or the amount by which the Participant's Posted Credit Cover falls short of the Required Credit Cover as set out in paragraph 2.243.2, or the sum of the two amounts, as appropriate.
- 2.243B In the circumstances set out in paragraph 2.243.2, the Participant's failure to provide the Required Credit Cover shall be treated as indebtedness for the purposes of the Insolvency (Northern Ireland) Order 1989 and the Market Operator is authorised to issue a Statutory Demand to the relevant Participant on behalf of all Parties concerned. A Statutory Demand issued in accordance with paragraph 2.243A for a failure of a Participant to provide the Required Credit Cover in accordance with paragraph 2.243.2 shall be satisfied upon the relevant Participant putting in place the Required Credit Cover.
- 2.244 A Suspension Order issued under paragraph 2.243 or 2.246 shall be expressed to take effect no earlier than the date of the expiry of the Supplier Suspension Delay Period in respect of any Supplier Unit included in the Suspension Order and no earlier than the expiry of the Generator Suspension Delay Period in respect of any Generator Unit included in the Suspension Order. In respect of each Supplier Unit, the Suspension Order shall not take effect (i) until the Supplier Suspension Delay Period has expired and (ii) unless and until the relevant Regulatory Authority has directed that all demand represented by that Supplier Unit shall be met by a Supplier of Last Resort or until all relevant Meter Point Registration Numbers represented by the Supplier Unit to be suspended have been moved to other Supplier Units so that the Supplier Unit to be suspended no longer represents any Demand. During the period before the Suspension Order comes into effect in respect of a particular Unit, the Regulatory Authorities may instruct the Market Operator to issue a notice or notices amending or lifting the Suspension Order in respect of that Unit or any or all of the Units concerned.
- 2.245 A Suspension Order shall not be issued under paragraph 2.243 solely by reason of the failure of the Participant to have its Credit Cover in place under paragraph 2.243.2 during the 2 Working Days permitted for replenishment of Credit Cover under paragraph 6.170 or during the 10 Working Days permitted to acquire a new Credit Cover Provider under paragraph 6.165.
- 2.246 The Market Operator may, with the prior written approval of the Regulatory Authorities, issue a Suspension Order in respect of all or any of a Party's Units where:
1. it becomes unlawful for a Party to comply with any of its obligations under the Code;
 2. it becomes unlawful for a Party's Credit Cover Provider to comply with any of its Credit Cover obligations;

3. a Legal Requirement necessary to enable a Party or its Credit Cover Provider to fulfil its obligations and functions under the Code is amended or revoked in whole or in part so as to prevent a Party or its Credit Cover Provider from fulfilling its obligations and functions under the Code;
4. a Party or its Credit Cover Provider suspends or ceases to carry on its business, or any part of its business which is relevant to its activities under the Code;
5. a Party's Credit Cover Provider ceases to be eligible for the purposes of the Code to be able to provide the Credit Cover and the Party has not acquired a new Credit Cover Provider within 10 Working Days as required under paragraph 6.165;
6. a Party enters into or takes any action to enter into an arrangement or composition with its creditors (except in the case of a solvent and bona fide reconstruction or amalgamation);
7. a Party's Credit Cover Provider enters into or takes any action to enter into an arrangement or composition with its creditors (except in the case of a solvent and bona fide reconstruction or amalgamation);
8. a receiver, manager, receiver and manager, administrative receiver, examiner or administrator is appointed in respect of a Party or its Credit Cover Provider or any of their respective assets, or a petition is presented for the appointment of an examiner or administrator, or a petition is presented or an order is made or a resolution is passed for the dissolution of, winding up of or appointment of a liquidator to a Party or its Credit Cover Provider, or a liquidator, trustee in bankruptcy or other similar person is appointed in respect of a Party or its Credit Cover Provider, or any steps are taken to do any of the foregoing or any event analogous to any of the foregoing happens in any jurisdiction;
9. a Party or its Credit Cover Provider is dissolved or struck off;
10. a Party or its Credit Cover Provider is unable to pay its debts for the purposes of section 214 of the Companies Act, 1963 (Ireland), Article 103 (1) or (2) of the Insolvency Order (Northern Ireland) 1989, or Section 123 (1) or (2) of the Insolvency Act 1986 (Great Britain) (as applicable) or if any voluntary arrangement is proposed in relation under Article 14 of the Insolvency Order (Northern Ireland) 1989, or section 1 of the Insolvency Act 1986 (Great Britain)(as applicable), or for the purpose of any similar or analogous legislation under the laws of any jurisdiction. For the purposes of this paragraph 2.246.10, Section 213 of the Companies Act, 1963 shall have effect as if for "£60,000" there was substituted "€100,000" and Article 103 of the Insolvency Order (Northern Ireland) and section 123 of the Insolvency Act, 1986 (Great Britain) shall have effect as if for "£750" there was substituted "£60,000" or such higher figure as the Market Operator may specify from time to time;
11. a Party which is required to be licensed in respect of any or all of its roles under the Code has its Licence revoked in whole or in part or amended, so as to prevent the Party from fulfilling its obligations and functions under the Code;

12. a Party has committed 3 Defaults within a period of 20 Working Days; or
 13. a Party has committed a Default and has failed for a period of 20 consecutive days, or such longer period as may be set out in the relevant Default Notice, to comply with the terms of such Default Notice.
- 2.247 Where the Market Operator issues a Suspension Order, the Market Operator shall at the same time send a copy of the Suspension Order to the Regulatory Authorities, the System Operators (in accordance with Appendix J “Market Operator and System Operator Data Transactions”) and the relevant Distribution System Operators and publish the Suspension Order.
- 2.247A Where the Market Operator has issued a Suspension Order to a Participant in respect of its Units pursuant to paragraph 2.243, then the Market Operator shall not be required to issue a further Suspension Order in respect of any subsequent Default by that Participant under paragraph 2.243.1 or 2.243.2 arising during the currency of that Suspension Order. Notwithstanding the foregoing, the Market Operator shall not lift the Suspension Order under paragraph 2.255 unless and until each Default by the Participant under paragraphs 2.243.1 and 2.243.2 has been remedied.

Effect of Suspension Order

- 2.248 Where the Market Operator issues a Suspension Order, the Suspension Order shall specify the Units to which the Suspension Order shall apply, the date and time from which the suspension will take effect and the terms of the suspension. For the avoidance of doubt, a Participant shall remain liable for all debts and obligations accrued while a Suspension Order is in place.
- 2.249 The Supplier Suspension Delay Period and the Generator Suspension Delay Period shall be determined from time to time by the Regulatory Authorities and notified to the Market Operator. A determination by the Regulatory Authorities in relation to the duration of the Generator Suspension Delay Period or the Supplier Suspension Delay Period, which amends an existing determination in this regard, shall not have effect until the expiry of a period of 10 Working Days following the amending determination, or such longer period as may be specified by the Regulatory Authorities, and, in any event, shall not affect any then current Generator Suspension Delay Period or Generator Suspension Delay Period.
- 2.250 On receipt of any determination by Regulatory Authorities pursuant to paragraph 2.249, the Market Operator shall publish such determination indicating the date from which it shall take effect.
- 2.251 When a Suspension Order takes effect, the Units to which the Suspension Order applies shall be suspended from participation in the Pool until such time as the Market Operator publishes a notice stating that:
1. the Suspension Order has either been lifted or will be lifted (specifying the date and time); or
 2. the participation of the relevant Party in the Pool has been Terminated, or the relevant Units have been Deregistered, in each case in accordance with the Code.
- 2.252 The Participation of Suspended Units in the Pool may resume but only in accordance with such restrictions as specified in the Suspension Order.

- 2.253 A Suspension Order shall not affect the continuing obligation of any Party whose Units have been suspended to maintain the Required Credit Cover in respect of all of its Units.
- 2.254 Without prejudice to the generality of paragraphs 2.251 to 2.252, a Suspension Order may suspend or restrict any or all of a Party's Units. The Market Operator shall, while a Suspension Order is in place, be entitled to do any act, matter or thing to give effect to the Suspension Order including, without limitation:
1. rejecting any Commercial Offer Data submitted by the relevant Party;
 2. making a Credit Call;
 3. setting-off any amount owed by the relevant Participant against the payment of any amounts otherwise due to that Participant under the Code;
 4. cancelling any Settlement Reallocation Agreement, or rejecting any Settlement Reallocation Request, to which the relevant Participant is a party; or
 5. requesting the Regulatory Authorities and System Operators or any other Party to take such measures as the Market Operator, acting reasonably, decides are appropriate to give effect to the Suspension Order.
- 2.255 The Market Operator shall remove the Suspension Order if the relevant Party remedies the matter or matters giving rise to the Suspension Order, or the circumstances giving rise to the Suspension Order no longer apply.
- 2.256 Where any Suspension Order is removed by the Market Operator, the Market Operator shall notify this to the Regulatory Authorities, the System Operators (in accordance with Appendix J "Market Operator and System Operator Data Transactions") and the relevant Distribution System Operators where appropriate and shall publish a notice that the Suspension Order has been lifted.
- 2.257 The Participant that has registered the Units to which a Suspension Order applies must comply with the Suspension Order.

Termination and Deregistration

- 2.258 The Market Operator may with the prior written approval of the Regulatory Authorities issue a Termination Order where a Party is in breach of a Suspension Order, or has not remedied a Default or taken such action as required by the Market Operator within the timeframe specified in the Suspension Order. A Termination Order may direct the Deregistration of any or all of a Party's Units or the Termination of a Party as a party to the Code. Termination of a Party as a party to the Code shall have the effect of Deregistration of all of the Party's Units.
- 2.259 The Market Operator shall specify in each Termination Order the Credit Cover which the relevant Party is required, in accordance with paragraphs 6.141.5 and 6.141.6, to maintain in respect of any Units being Deregistered pursuant to the Termination Order.

Effect of Termination Order

- 2.260 Where the Market Operator issues a Termination Order, the Termination Order shall specify the time and date from which the Termination or Deregistration will take effect and the terms of the Termination or Deregistration.
- 2.261 Where the Market Operator issues a Termination Order, the Market Operator shall at the same time send a copy of the Termination Order to the Regulatory Authorities, the System Operators (in accordance with Appendix J “Market Operator and System Operator Data Transactions”) and the relevant Distribution System Operators and shall publish the Termination Order.

Voluntary Termination of a Party

- 2.262 Subject to paragraph 2.263 below, a Party may apply at any time to cease to be a Party.
- 2.263 A Party shall give at least 90 Working Days notice in writing to the Market Operator (with a copy to the System Operators and the Regulatory Authorities) of its intention to cease being a Party and shall specify the time and date upon which it wishes the Termination to take effect. Voluntary Termination shall have the effect of Deregistration of all of a Party’s Units.
- 2.264 Following receipt of a request for Voluntary Termination, the Market Operator shall issue a Voluntary Termination Consent Order if the relevant Party has complied with the following conditions:
1. all amounts due and payable by the relevant Party pursuant to the Code have been paid in full;
 2. any outstanding Default by the relevant Party of the Code which is capable of remedy has been remedied;
 3. the written consent of the Regulatory Authorities has been obtained; and
 4. if the Party has registered Supplier Units, the terms of any applicable Metering Code have been complied with in relation to the Deregistration or transfer of those Supplier Units.
- 2.265 The Market Operator shall specify in each Termination Consent Order the Credit Cover which the relevant Party is required, in accordance with paragraphs 6.171.5 and 6.171.6, to maintain in respect of any Units being Deregistered pursuant to the Termination Consent Order.
- 2.266 The Voluntary Termination shall take effect at the end of the last Trading Period of the Trading Day specified by the Market Operator in the Voluntary Termination Consent Order so long as, at that time, the relevant Party remains in compliance with the conditions set out in paragraph 2.264.
- 2.267 The Market Operator, the System Operators, the Transmission Asset Owners, the Distribution System Operators, the System Operators and the Meter Data Providers shall not be permitted to terminate their being a party to the Code except where so required by the Regulatory Authorities.

Consequences of Termination of a Party

- 2.268 When a Party is Terminated, then:
1. the Market Operator shall Deregister all of that Party’s Units;

2. the Party must stop all trading in the Pool in respect of all of its Units at the time and date specified in the Termination Order or the Termination Consent Order; and
 3. the Party must maintain the Credit Cover for each of its Units in the amounts and for the duration provided for in paragraphs 6.171.5 and 6.171.6 (as specified in the Termination Order or Termination Consent Order as applicable).
- 2.269 Intentionally blank.
- 2.270 Any Termination of a Party will not affect the accrued rights or obligations of any Party which arose out of or which relate to any act or omission prior to the date of such Termination and including:
1. payment of any amount which was or becomes payable under the Code in respect of any period before the date of the Termination of the Party (including in relation to any Dispute regarding an event before the Termination of the Party even if the Notice of Dispute is given after the date of Termination of the Party); and
 2. any outstanding breach by it of the Code or Framework Agreement.
- 2.271 A Party shall continue to be liable after its Termination in respect of any obligation under the Code for a period of 6 years or any longer period specified under any Applicable Law.
- 2.272 Any provisions of this Code which expressly, or by implication are intended to, commence or continue in effect on or after Termination of a Party shall continue to bind a Terminated Party.
- 2.273 For the avoidance of doubt, a Terminated Party shall continue to be bound by the Dispute Resolution Process in respect of any Disputes arising following its Termination.

Consequences of Deregistration

- 2.274 Where any of a Participant's Units are Deregistered in accordance with the provisions of this Code, whether voluntarily or otherwise:
1. the Participant must stop all trading in the Pool in respect of the relevant Units at the time and date specified in the Termination Order or the date specified in the Deregistration Consent Order; and
 2. the Participant must maintain the Credit Cover in respect of each of the relevant Units in the amounts and for the duration provided for in paragraphs 6.171.5 and 6.171.6 (as specified in the Termination Order or Deregistration Consent Order as applicable).
- 2.275 Where the Market Operator, in the circumstances provided for under the Code, accepts a new Participation Notice from a Party or Applicant to register a Unit which is at that time registered to another Participant, prior to the Deregistration of that Unit from the existing Participant, then the acceptance of the new Participation Notice shall, unless expressly provided otherwise, be without prejudice to the process for Deregistration of the Unit from the existing Participant in accordance with the timelines set out in the Code and the new registration of that Unit shall not take effect until such process has been completed.

DISPUTE RESOLUTION

Preliminaries

- 2.276 A “Dispute” means any claim, dispute or difference of whatever nature between any of the Parties howsoever arising under, out of or in relation to the Code or the Framework Agreement (including the existence or validity of the same) in respect of which (i) one Party has served a Notice of Dispute, or (ii) a Notice of Dispute is deemed to have been served under paragraph 2.282. A Dispute includes any Settlement Dispute.
- 2.277 A Notice of Dispute may be served on any number of Parties. Where the Market Operator reasonably determines that the resolution of a Disputed Event will impact a third Party who has not been served a Notice of Dispute, the Market Operator will inform that third Party of the existence, nature and progress of the Dispute, while maintaining the confidentiality of the Disputing Parties.
- 2.278 Subject to the rules concerning the commencement of certain Settlement Disputes set out in paragraph 2.282, a Dispute is deemed to exist when one Party notifies another Party or Parties in writing of the Dispute by way of a Notice of Dispute within 28 days of that Party having become aware of the Disputed Event and in any event within 2 years of the Disputed Event having occurred.
- 2.279 The Notice of Dispute shall briefly set out the nature of the Dispute (including the Disputed Event(s)) and the issues involved. A copy of the Notice of Dispute shall be sent to the Market Operator and, where the Market Operator is a party to the Dispute, to the Regulatory Authorities.
- 2.280 The provisions set out in this Dispute Resolution Process shall not prejudice or restrict any Party’s entitlement to seek interim or interlocutory relief directly from the appropriate Court or Courts with jurisdiction pursuant to paragraph 2.2.
- 2.281 The obligations of the Parties under the Code (including payment of any invoice amounts by the Invoice Due Date) shall not be affected by reason of the existence of a Dispute, save as provided for in any determination of the Dispute Resolution Board or a Court.

Settlement Disputes

- 2.282 In the event that the Market Operator does not resolve a Settlement Query within the timeframes set out in paragraph 6.102, or does not resolve a Data Query within the timeframes set out in paragraph 6.81, the Settlement Query or Data Query, as appropriate, shall automatically become a Settlement Dispute and the Notice of Dispute shall be deemed to have been issued on the date on which the Market Operator was required to issue its determination in respect of the Settlement Query or Data Query.
- 2.283 Without prejudice to the jurisdiction of a Court to award costs pursuant to its jurisdiction in that regard where applicable, the Market Operator shall be liable for all costs in connection with a Settlement Dispute arising by operation of paragraph 2.282.
- 2.284 In the event that a Party is dissatisfied with the Market Operator’s determination in respect of a Settlement Query or Data Query, the Party that raised the Settlement Query or Data Query may raise a Dispute by issuing a Notice of Dispute to the Market Operator within 5 Working Days of receipt of

the Market Operator's determination, subject to paragraphs 6.103 and 6.104.

- 2.285 A matter which is described as a Settlement Query or Data Query under Section 6 shall not be raised as a Dispute save in accordance with paragraph 2.282 or 2.284.

Objectives of the Dispute Resolution Process

- 2.286 It is intended that the Dispute Resolution Process set out in or implemented in compliance with the Code and described in detail in the following paragraphs should to the extent possible:
1. be simple, quick and inexpensive;
 2. preserve or enhance the relationship between the Disputing Parties;
 3. resolve and allow for the continuing and proper operation of the Code and the Pool having regard to the Objectives of the Code;
 4. resolve Disputes on an equitable basis in accordance with the provisions of the Code having regard to the Objectives of the Code;
 5. take account of the skills and knowledge that are required for the relevant procedure; and
 6. encourage resolution of Disputes without formal legal representation or reliance on legal procedures.

Dispute Resolution Board

- 2.287 Where a Notice of Dispute has been served in accordance with paragraph 2.278, 2.282, or 2.284 a representative of each of the Disputing Parties, each with authority to resolve the Dispute, must meet within 10 Working Days of the date of the Notice of Dispute to seek in good faith to resolve the Dispute. The Disputing Parties shall negotiate in good faith and attempt to agree a resolution.
- 2.288 If the Disputing Parties are unable to reach agreement within a further period of 10 Working Days of meeting in accordance with paragraph 2.287, the Dispute may within a further period of 20 Working Days be referred by any Disputing Party to a Dispute Resolution Board ("DRB") by way of notice in writing to the other Disputing Party or Parties ("Referral Notice") unless expressly provided otherwise in the Code. The Disputing Party shall immediately send a copy of the Referral Notice to the Market Operator (or to the Regulatory Authorities where the Market Operator is a Disputing Party), and the Market Operator shall forward the Referral Notice to the chairperson of the Panel referred to in paragraph 2.292. The Referral Notice shall state that it is given under this paragraph and identify the relevant Dispute and Notice of Dispute.
- 2.289 The Disputing Parties may mutually agree in writing with the written consent of the Market Operator (or the Regulatory Authorities where the Market Operator is a Disputing Party) to extend the period for negotiation or any other time period set out in the Dispute Resolution Process.
- 2.290 Referral of a Dispute to a DRB in accordance with the Dispute Resolution Process and compliance with the provisions set out in paragraphs 2.276 to 2.315 is a pre-condition to the entitlement to refer a Dispute to Court.

- 2.291 The DRB shall be comprised of either a sole member or three members and shall be appointed from a panel of available DRB members established and maintained by the Market Operator with the prior approval of the Regulatory Authorities ("the Panel"). The Market Operator shall review the membership of the Panel, checking the continued willingness and availability of members to be included at least one every year. The Market Operator shall publish the name and a brief curriculum vitae for each Panel member.
- 2.292 The Panel shall consist of no less than 10 members subject to any vacancies which may arise from time to time which shall be filled as soon as practicable in accordance with paragraph 2.293. Any vacancies arising from time to time shall not invalidate the Panel. The Regulatory Authorities shall from time to time nominate a member of the Panel to act as chairperson of the Panel. The identity of the members of the Panel and the chairperson shall be published by the Market Operator. The chairperson shall be responsible for nominating the member(s) of the DRB if the parties to a Dispute fail to agree on the composition of the DRB from the members of the Panel. The members of the DRB so appointed shall be independent of any Disputing Party to any dispute on which they shall be called to deliberate. The Regulatory Authorities shall appoint a replacement chairperson immediately on the position of chairperson being vacated on a permanent basis for any reason.
- 2.293 The chairperson shall, with the prior agreement of the Regulatory Authorities, nominate a vice-chairperson from the members of the Panel, from time to time to perform the chairperson's function in the event of the latter's unavailability or in the event of the chairperson's position being temporarily vacant. The chairperson and the vice-chairperson shall be retained under contract to the Regulatory Authorities. Where appropriate and at the sole discretion of the Regulatory Authorities, the contract may include provision for payment of a stipend to the chairperson and vice-chairperson in order to cover the reasonable expenses incurred by that person in connection with carrying out his or her duties under the Code. The Market Operator will indemnify the Regulatory Authorities for any payments made under the contract. The Market Operator shall with the prior approval of the Regulatory Authorities nominate further members to the Panel from time to time as may be necessary to fill any vacancies and to maintain the membership of the panel at a minimum of 10 members. Subject to paragraph 2.294, there shall be no restriction on the ability or entitlement of the chairperson or vice-chairperson to act as a member of a DRB by virtue of holding those positions except where a dispute arises between the Disputing Parties in respect of the number of Members or the identity of Members of the DRB in relation to the Dispute concerned in which case the chairperson shall be proscribed from appointing himself to the DRB.
- 2.293A No Party to the Code shall hold the chairperson or vice-chairperson liable for any claims for anything done or omitted in the discharge or purported discharge of the chairperson's or vice-chairperson's functions under the Code, unless the act or omission is shown to be in bad faith. The Disputing Parties shall jointly and severally indemnify and hold the chairperson or vice-chairperson harmless from and against claims made by any third party against the chairperson or vice-chairperson in connection with their discharge or purported discharge of the chairperson's or vice-chairperson's functions under the Code, unless the claim is in connection with an act or omission shown to be in bad faith.

- 2.294 The Panel shall include suitably qualified experts from relevant disciplines who:
1. are experienced in and familiar with alternative dispute resolution procedures which do not involve litigation; and/or
 2. have an understanding of the electricity industry or have the ability quickly to acquire such an understanding.
- 2.295 Where there are no more than two Disputing Parties, the Disputing Parties may agree within 10 Working Days of date of receipt by the receiving Party of the Referral Notice to establish a sole member DRB or a three member DRB. If the Disputing Parties to a Dispute agree to establish a sole member DRB, they shall agree to appoint the sole DRB member within a further 5 Working Days. If the Disputing Parties agree on a three member DRB, then each Disputing Party will within a further period of 5 Working Days nominate one member of the Panel to the DRB and the two members so nominated will appoint the third member within a further period of 5 Working Days
- 2.296 In the event the Disputing Parties do not within the relevant period agree on:
1. the number of members of the DRB; or
 2. (if having agreed a sole member DRB) the identity of the sole member;
- then, the chairperson of the Panel will within a further period of 10 Working Days of a request by any or all of the Disputing Parties determine the number of members of the DRB and appoint the appropriate number from the Panel, or in the case of the appointment of a sole member DRB, appoint the sole member from the Panel. In making any such determination and appointment, the chairperson will take account of the complexity of the Dispute as set out in the Notice of Dispute and the range of issues which may be relevant.
- 2.297 In the event that the Disputing Parties agree upon a three member DRB but a Disputing Party concerned fails to make a nomination from the Panel then the chairperson, upon notification of the failure, shall make the necessary nomination from the Panel within 10 Working Days of notification that there has been a failure by one Disputing Party to make a nomination.
- 2.298 Where there are more than two Disputing Parties to any Dispute then the DRB shall be appointed by the chairperson unless all Disputing Parties have, within 10 Working Days of the date of receipt by the counter-Parties of the Referral Notice, agreed the composition of the DRB both as to the number of members which shall be either one or three and as to the identity of member(s) to be selected from the Panel. On notification that the 10 Working Day period has expired without such agreement, the chairperson shall (a) determine whether a sole member or three member DRB is appropriate; and (b) appoint the member or members of the DRB from the Panel, and shall notify the Disputing Parties. In making any such determination and appointment, the chairperson will take account of the complexity of the Dispute as set out in the Notice of Dispute and the range of issues which may be relevant.
- 2.299 The agreement between the Disputing Parties and either the sole member DRB or each of the three members of a three member DRB shall incorporate by reference the Dispute Resolution Agreement contained in Appendix B "Dispute Resolution Agreement", with such amendments as are agreed between them.

- 2.300 Subject to paragraphs 2.283 and 2.301, each Disputing Party shall be responsible for paying an equal share of the costs of the DRB in respect of the Dispute involving them and shall bear its own costs of the procedure.
- 2.301 Notwithstanding paragraph 2.300, the DRB may make a decision as to the award of costs in any Dispute which decision shall be binding on the Disputing Parties.
- 2.302 In the event any member of a DRB declines to act or is unable to act as a result of death, disability, incapacity, resignation or termination of appointment, the chairperson of the Panel or, where the chairperson of the Panel is the member affected, the vice-chairperson of the Panel shall appoint a replacement within 5 Working Days of notification of the relevant event. Such appointment shall be final and binding.
- 2.303 The appointment of any member of the DRB may be terminated by unanimous agreement of the Disputing Parties. Should this occur, paragraph 2.302 shall apply.
- 2.304 Disputing Parties shall continue to perform all of their obligations and functions as required by the Code including, for the avoidance of doubt, fulfilling any payment obligations as payment falls due.

Obtaining the DRB's Decision

- 2.305 For the purpose of paragraph 2.288, a Dispute is deemed to be referred to the DRB as of the date of the receipt of the Referral Notice by the Market Operator.
- 2.306 Disputing Parties shall promptly make available to the DRB all such additional information as they consider appropriate or as the DRB may require for the purposes of making a decision on a Dispute. The DRB may request any information it considers relevant.
- 2.307 The DRB shall be entitled to determine the applicable procedure including the manner and the timing of any written submissions and any oral hearings. In determining the applicable procedure, the DRB shall have regard to the considerations set out in paragraph 2.286 above as well as the number of Disputing Parties. The DRB shall not act as arbitrator and the Arbitration Act 1996 (United Kingdom) shall not apply.
- 2.308 The DRB shall give its decision within (i) 30 Working Days after the appointment of the DRB where there are no more than two Disputing Parties; (ii) 40 Working Days after the appointment of the DRB where there are more than two Disputing Parties; or (iii) such other period as may be proposed by the DRB and approved by the Disputing Parties. Its decision shall be in writing providing reasons and state that it is given under this paragraph 2.308. Subject to paragraphs 2.309 to 2.313 below, the decision shall be binding on all Disputing Parties, who shall promptly give effect to it unless or until it shall be revised in an amicable settlement pursuant to paragraph 2.312. The Parties shall continue to comply with the Code in all respects.
- 2.309 If any Disputing Party is dissatisfied with the DRB's decision, then that Party may, within 15 Working Days after receiving the decision, give notice to the other Disputing Party or Parties and the DRB in writing of its dissatisfaction. If the DRB fails to give its decision within the relevant period set out in paragraph 2.308, then any Disputing Party may, within 15 Working Days

after such period has expired, give notice to the other Disputing Party or Parties and the DRB in writing of its dissatisfaction.

- 2.310 A notice of dissatisfaction referred to in paragraph 2.309 shall state that it is given under paragraph 2.310, shall set out the Dispute and the reason(s) for dissatisfaction. Except as stated in paragraphs 2.280 and 2.315, no Disputing Party shall be entitled to commence any Court proceedings of whatever nature in relation to or in connection with a Dispute unless a notice of dissatisfaction has been given in accordance with paragraph 2.309.
- 2.311 If the DRB has given its decision on a Dispute to the Disputing Parties and no notice of dissatisfaction has been given by any Disputing Party within 15 Working Days after the date of the DRB's decision, then the decision shall be final and binding upon all Disputing Parties.

Amicable Dispute Settlement

- 2.312 Where notice of dissatisfaction has been given under paragraph 2.309 above, the Disputing Parties shall attempt to settle the dispute amicably before the commencement of any court proceedings may take place. However, unless both Parties agree otherwise, Court proceedings may be commenced on or after the twenty first Working Day after the day on which notice of dissatisfaction was given, even if no attempt at amicable settlement has been made.

Court Proceedings

- 2.313 Unless settled amicably, any Dispute in respect of which a Notice of Dissatisfaction has been issued may only be finally settled by Court proceedings.
- 2.314 A Disputing Party may, in the proceedings before any Court having jurisdiction, adduce evidence or raise arguments not previously put before the DRB in the course of its consideration of the Dispute or included in the notice of dissatisfaction given by that Party. Any decision of the DRB shall be admissible as evidence in any Court proceedings.

Failure to Comply with DRB's Decision

- 2.315 In the event that:
1. no Disputing Party has given notice of dissatisfaction within the period stated in paragraph 2.309; and
 2. the DRB's related decision (if any) has become final and binding; and
 3. a Disputing Party fails to comply with this decision,
- then any other Disputing Party may take such action as it deems necessary, including the commencement of court proceedings, to enforce the relevant DRB decision. There shall be no mandatory reference to the Dispute Resolution Board or requirement to refer the matter to amicable settlement in respect of such a reference.

SUPPLIER OF LAST RESORT

- 2.316 In the event that a Regulatory Authority directs that any demand shall be met by a Supplier of Last Resort in the relevant Jurisdiction, the Market Operator shall take whatever steps are necessary to enable and assist the relevant Meter Data Providers to transfer all relevant Demand Sites, final

customers or consumers represented within the Supplier Units to which such a direction relates, to the Supplier Unit that is treated as registered by the Supplier of Last Resort in that Jurisdiction, with effect from the date set out in the direction. Such steps shall include the amendment by the Market Operator of the registration of any affected Trading Site Supplier Units and Associated Supplier Units.

LIMITATION OF LIABILITY

- 2.317 No Party shall be liable to any other Party for loss arising from any breach of the Code or the Framework Agreement other than for loss resulting directly from such breach (but without prejudice to any other provision of the Code which excludes or limits liability in respect of any breach for loss directly resulting from such breach) and which was reasonably foreseeable as not unlikely to occur in the ordinary course of events from such breach in respect of:
1. physical damage to the property of any other Party or its officers, employees, or agents; and/or
 2. the liability (in law) of any other such Party to any other person for loss in respect of physical damage to the property of such other person.
- 2.318 No Party shall in any circumstances be liable to any other Party in respect of any breach of the Code or the Framework Agreement for:
1. loss of profits, loss of income, loss of contract, loss of anticipated savings, loss of investment return, loss of goodwill, loss of use, or loss of reputation; or
 2. any indirect or consequential loss or any incidental or special damages (including punitive damages); or
 3. loss resulting from the liability of any other Party to any other person howsoever and whensoever arising save as provided in paragraphs 2.317.2 and 2.320.
- 2.319 The limitations of liability set out in paragraph 2.317 are without prejudice to any provision of the Code or the Framework Agreement which provides for an indemnity and shall not relieve any Party of an obligation to pay any amounts due pursuant to the Code.
- 2.320 Nothing in the Code or the Framework Agreement shall limit or exclude the liability of any Party for death or personal injury resulting from the negligence of such Party or for fraudulent misrepresentation or any other liability which cannot be limited or excluded under Applicable Laws.
- 2.321 All terms, conditions, warranties and representations implied pursuant to Sections 13 to 15 of the Sale of Goods Act, 1893 and Section 39 of the Sale of Goods and Supply of Services Act, 1980 (Ireland) and Sections 13 to 15 of the Supply of Goods Act, 1979 (United Kingdom) and Sections 2 to 5 and 7 to 10 of the Supply of Goods and Services Act, 1982 (United Kingdom) are excluded to the fullest extent permitted by law.
- 2.322 The rights and remedies of the Parties pursuant to the Code and the Framework Agreement as set out therein are, save as expressly provided otherwise, cumulative and are in exclusion of all other substantive (but not procedural) rights or remedies express or implied and whether provided by common law, statute, tort, in equity or otherwise by law. Without prejudice to

the foregoing and paragraph 2.333 (Waiver), each Party to the fullest extent permitted by law:

1. waives any rights or remedies; and
2. releases each other Party from any duties, liabilities, responsibilities or obligations

arising or provided by common law, statute, tort, in equity or otherwise by law in respect of the Code.

- 2.323 Without prejudice to the preceding paragraph 2.322, where any provision of the Code or decision of the DRB provides for any amount to be payable by a Party upon or in respect of that Party's breach of the Code or the Framework Agreement, each Party agrees and acknowledges that the remedy conferred by such provision or decision is exclusive of and is in substitution for any remedy in damages in respect of such Default or the event or circumstance giving rise thereto.
- 2.324 Nothing in the Code or the Framework Agreement relating to limitation on liability shall prevent or restrict any Party from enforcing any obligation owed to it under or pursuant to the Code in accordance with the provisions of the Code subject to any applicable limitation of liability.
- 2.325 Save as expressly provided otherwise in the Code or the Framework Agreement, nothing in paragraphs 2.317 to 2.323 shall apply to or restrict the exercise or enforcement of any rights or remedies which one Party may have against another Party or person pursuant to any other agreement besides the Code and the Framework Agreement.
- 2.326 For the purposes of paragraphs 2.317, 2.318 and 2.320, references to a "Party" includes any of its Participants, officers, employees or agents, and each Party shall hold the benefit of those paragraphs for itself and as trustee and agent for its officers, employees and agents.
- 2.327 Each of paragraphs 2.317 to 2.326 shall be construed as a separate and severable contract term, and shall remain in full force and effect and shall continue to bind the Parties even if a Party ceases to be a Party to the Code or the Code is terminated.

FORCE MAJEURE

- 2.328 For the purposes of the Code, "Force Majeure" means any event beyond the reasonable control of the Affected Party and which could not have been reasonably prevented or the consequences of which could not have been prevented by Prudent Electric Utility Practice and which is not due to the act, error, omission, breach, default or negligence of the Affected Party, its employees, agents or contractors and which has the effect of preventing the Affected Party from complying with its obligations under this Code, and including, without limitation:
1. acts of terrorism;
 2. war (declared or undeclared), blockade, revolution, riot, insurrection, civil commotion, invasion or armed conflict;
 3. sabotage or acts of vandalism or criminal damage;
 4. natural disasters and phenomena, including extreme weather or environmental conditions, fire, meteorites, the occurrence of pressure waves caused by aircraft or other aerial devices travelling

at supersonic speeds, impact by aircraft, volcanic eruption, explosion, including nuclear explosion, radioactive or chemical contamination or ionising radiation; or

5. nationwide or industry wide strikes, lockouts or other industrial actions or labour disputes provided that such occurrence is not limited to the Affected Party and/or its suppliers, contractors, agents or employees;

or other events beyond the Affected Party's reasonable control and which could not be reasonably be expected to comply with in accordance with Prudent Electric Utility Practice provided that Force Majeure shall not include:

1. any inability (however caused) of an Affected Party to pay any amounts owing under the Code and/or a lack of funds or Credit Cover;
2. mechanical or electrical breakdown or failure of machinery, plant or systems owned or operated by the Affected Party; or
3. the failure or inability of the Affected Party's IT systems or manual processes to perform any function necessary for that Party to comply with the Code.

other than where such events arise as a result of the circumstances in subparagraphs 1-5 above.

2.329 In the event of the Affected Party other than the Market Operator being unable to perform all or any of its obligations under this Code by reason of Force Majeure:

1. the Affected Party shall notify the Market Operator of the circumstances of Force Majeure, identifying the nature of the event, its expected duration and the particular obligation(s) affected to enable the Market Operator to assess whether Force Majeure applies;
2. if the Market Operator finds in its reasonable opinion that the conditions in paragraph 2.328 are satisfied, it shall notify all Parties and the Regulatory Authorities that the Affected Party is subject to Force Majeure;
3. the Affected Party shall furnish reports at such intervals as the Market Operator may reasonably request in respect of the circumstance of Force Majeure during the period of Force Majeure;
4. no obligations of any Party that arose before the Force Majeure and which can reasonably be expected to be performed are excused as a result of Force Majeure;
5. on the occurrence of the Force Majeure, the Affected Party shall consult with the Market Operator as to how best to give effect to the obligations of the Affected Party under this Code so far as is reasonably practicable during the period of Force Majeure;
6. the Affected Party shall use all reasonable efforts to remedy and mitigate the consequences of any Force Majeure to enable it to resume full performance of its obligations under the Code insofar as such is practicable during any Force Majeure; and

7. the Affected Party shall resume full performance of its obligations under the Code on cessation of any Force Majeure and shall provide the Market Operator with written notice to that effect without delay.
- 2.330 Where the Market Operator is affected by Force Majeure, the Market Operator shall immediately inform the Regulatory Authorities of such. Where the Market Operator is affected by an event of Force Majeure:
1. no obligations of any Party that arose before the Force Majeure and which can reasonably be expected to be performed are suspended as a result of Force Majeure;
 2. the Market Operator in consultation with, and where required by, the Regulatory Authorities, shall do all acts to mitigate the consequences of the Force Majeure to enable it to resume the full performance of its functions and obligations under the Code;
 3. the Market Operator shall resume full performance of its obligations under the Code on cessation of any Force Majeure and shall inform the Regulatory Authorities of this; and
 4. the Market Operator shall be relieved of its obligations only for so long as and to the extent that the occurrence of the Force Majeure and/or its effects could not be overcome by measures which the Market Operator might reasonably be expected to take acting prudently with a view to continuing or resuming performance of its obligations as appropriate.
- 2.331 When an Affected Party is rendered wholly or partially unable to perform all or any of its obligations under the Code by reason of Force Majeure, the Affected Party's relevant obligations under this Code shall be suspended and the Affected Party shall be relieved from liability, subject to paragraph 2.332, in respect of such obligations provided that such liability and suspension shall be of no greater scope and of no longer duration than is required by the Force Majeure.
- 2.332 The Affected Party shall be relieved from liability only for so long as and to the extent that the occurrence of Force Majeure and/or the effects of such occurrence could not be overcome by measures which the Affected Party might reasonably be expected to take as a Prudent Industry Operator with a view to continuing or resuming performance of its obligations as appropriate. Notwithstanding the foregoing, Force Majeure shall not relieve any Affected Party from any liability to make any payments due under the Code save to the extent that any failure to pay is caused by Force Majeure affecting all reasonable means of payment in which event on the cessation of the Force Majeure event, the Affected Party shall pay Interest on any amounts due from the Payment Due Date to the actual date of payment.

WAIVER

- 2.333 No failure to exercise, nor any delay in exercising, on the part of any Party hereto any right or remedy under the Code or the Framework Agreement shall operate as a waiver thereof, nor shall any single or partial exercise of any right or remedy prevent any further or other exercise thereof or the exercise of any other right or remedy under the Code or the Framework Agreement.

SEVERANCE

- 2.334 Each of the provisions of the Code and the Framework Agreement is severable. If at any time any provision or part of a provision of the Code or the Framework Agreement is or becomes illegal, invalid or unenforceable in any respect for the purposes of any Applicable Law or by the decision of any Competent Authority, it shall be deemed severed from the Code and the legality, validity or enforceability of the remaining provisions (in whole or in part) of the Code or the Framework Agreement shall not in any way be affected or impaired thereby.

THIRD PARTY BENEFICIARIES

- 2.335 Subject to paragraph 2.336, a person who is not a Party shall not have the right (whether under the Contracts (Rights of Third Parties) Act 1999 (United Kingdom), or otherwise) to enforce any provision of the Code or the Framework Agreement, and the Code and the Framework Agreement shall not be construed as granting rights to or imposing any duty or liability on or to, or any duty of care with reference to, any person who is not a Party.
- 2.336 Where rights are granted to the Regulatory Authorities or the Market Auditor pursuant to the Code or the Framework Agreement, the Parties confirm and acknowledge that the Regulatory Authorities, or the Market Auditor, as applicable, shall be entitled to enforce the rights granted to them under the Code as against any other Party to the Code by virtue of the Contracts (Rights of Third Parties) Act, 1999 (United Kingdom).
- 2.337 Subject to any express rights which the Regulatory Authorities have under the Code and to any rights, powers or functions of the Regulatory Authorities under Applicable Laws, where a person who is not a party to the Code has a right to enforce any provisions of the Code pursuant to paragraph 2.336, the Parties may vary or terminate the Code in accordance with its provisions and without requiring the consent of that person.

NO ASSOCIATION

- 2.338 Except where expressly provided, the Code and the Framework Agreement shall not be interpreted or construed as creating an association, agency, joint venture or partnership between the Parties. Further, except where expressly provided, nothing in the Code or the Framework Agreement shall give any Party the right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or to be an agent or representative of, or otherwise to bind, any other Party.

ASSIGNMENT

- 2.339 Except with the prior written consent of the Regulatory Authorities, or as otherwise expressly provided herein, a Party shall not assign or transfer or purport to assign or transfer all or any of its rights or obligations under the Code or the Framework Agreement. Any request to assign or transfer any or all of a Party's rights under the Code or the Framework Agreement shall be notified to the Market Operator and shall be subject to the prior consent of the Regulatory Authorities but not of any Party. In giving consent under this paragraph, the Regulatory Authorities may impose such conditions as they determine are necessary for the purposes of the proper functioning of the Pool.

- 2.340 A Party may authorise a Data Processing Entity to submit Data in respect of its Units as provided for in Section 3, provided that each Party shall always remain liable at all times for fulfilling its obligations under the Code.

ENTIRE AGREEMENT

- 2.341 The Code and the Framework Agreement together constitute the whole and only agreement between all of the Parties hereto relating to the operation of the Pool and supersede all prior representations, arrangements, understandings and agreements between the Parties (whether written or oral) relating to the subject matter hereof. Each Party warrants to the others that, in entering into this Agreement, it has not relied on any representation, arrangement, warranty, understanding, or agreement not expressly laid out or referred to in the Code or the Framework Agreement. Nothing in this paragraph shall operate so as limit or exclude any liability of any one of the Parties to any other Party in respect of fraudulent misrepresentation.

PUBLICATION OF THE CODE

- 2.342 The Market Operator shall publish the current, effective version of the Code no less frequently than twice yearly in line with the Scheduled Release. The published version of the Code shall be amended to reflect any Modifications as soon as practical in accordance with the terms set out within Agreed Procedure 12 “Modification Committee Operation”. The date of publication of the complete amended version of the Code shall not affect the date of coming into effect of the relevant Modification.
- 2.342A The Market Operator shall also publish at all times a list of effective Modifications which have been approved but have not yet been incorporated into the current baseline version of the Code.
- 2.343 The Market Operator shall not be obliged to publish any material that it reasonably believes may be of an obscene or libellous or similar nature.

CONFIDENTIAL INFORMATION

- 2.344 Confidential Information means, in relation to any Party, information which is designated in writing by that Party as “confidential information”, or which would be considered as being confidential by its nature, and which is disclosed in connection with the Code, the Framework Agreement or the disclosing Party’s activities in connection with the Code. Confidential Information shall not include:
1. the existence of and terms of the Code or the Framework Agreement; and
 2. Data Records or items which are at the relevant time required to be published in accordance with this Code.
- 2.345 For the purpose of this section, a “Recipient Party” is any Party which receives, acquires possession or control of, or otherwise becomes aware of Confidential Information of another Party. A “Disclosing Party” is any Party by whom the Confidential Information is disclosed.
- 2.346 Each Recipient Party shall keep confidential any Confidential Information relating to any Disclosing Party and shall:
1. use the Confidential Information only for the purpose of performing its obligations under the Code and for no other purpose whatsoever;

2. not at any time disclose, reveal, or otherwise disseminate the Confidential Information to any person or Party whatsoever or to permit any person or Party any form of access to the Confidential Information without the prior written consent of the Disclosing Party;
3. treat and safeguard as private and confidential all Confidential Information received at any time keeping it and treating it with the same care as any Prudent Industry Operator would be expected to exercise;
4. not use the Confidential Information, or permit or assist a third party to use the Confidential Information, to procure a commercial advantage over, or an advantage which is in any way likely to be prejudicial, whether directly or indirectly to, the Disclosing Party or to its business, goodwill or reputation;
5. not use the Confidential Information or permit or assist a third party to use the Confidential Information to attract management, employees, advisors, agents, representatives, consultants, contractors, sub-contractors or customers away from the Disclosing Party.

Exceptions

2.347 The obligations set out in paragraph 2.346 do not apply to:

1. information which at the time of disclosure to the Receiving Party is within the public domain;
2. information which comes into the public domain other than by reason of a breach of the Code or of any Legal Requirement by the Recipient Party; or
3. information which was lawfully within the possession of the Recipient Party prior to its being furnished to it by or on behalf of the Disclosing Party as evidenced by the written records of the Recipient Party or the sworn evidence of an officer of the Recipient Party, provided that the source of such information was not bound by a confidentiality agreement or any other obligation of secrecy in respect thereof.

Permitted Disclosures

2.348 Nothing in paragraph 2.346 shall prevent the disclosure of Confidential Information by a Recipient Party:

1. to any lending or other financial institution proposing to provide or arrange the provision of finance or Credit Cover to the Recipient Party, where and to the extent that the disclosure of such Confidential Information is reasonably required for the purposes of the provision or arrangement of such finance or Credit Cover, and provided that the person to whom the Confidential Information is disclosed is bound by confidentiality provisions equivalent to those in paragraph 2.346;
2. as may be required by the regulations of any recognised stock exchange on which the share capital of the Recipient Party (or any parent or affiliated undertaking of the Recipient Party) is or is proposed to be from time to time listed or dealt in, and the Recipient Party shall, if reasonably practicable prior to making the disclosure,

and in any event as soon as reasonably practicable thereafter, supply the Disclosing Party with a copy of such disclosure or statement and details of the persons to whom the Confidential Information is to be, or has been, disclosed. Where a copy of such disclosure or statement has been supplied prior to making the disclosure, the Disclosing Party may give comments on that disclosure or statement to the Recipient Party;

3. as may be required to comply with Legal Requirements of the Recipient Party;
 4. as may be necessary in relation to an application by any person for a connection to or use of the Transmission System or Distribution System in accordance with Section 34 of the Energy Regulation Act, 1999 (Ireland) or with the Northern Ireland Grid Code or for use of an Interconnector Unit;
 5. as may be required by the DRB or a Court having competent jurisdiction or Competent Authority; or
 6. as may be otherwise agreed in writing by the Disclosing Party prior to disclosure by the Recipient Party.
- 2.349 The confidentiality obligations set out in paragraphs 2.344 to 2.348 shall continue to apply to any Terminated Party in respect of Confidential Information which came into its possession while it was a Party.

FREEDOM OF INFORMATION ACTS

- 2.350 All Parties confirm and acknowledge that although they may inform the Market Operator, the System Operators and/or the Regulatory Authorities in writing that specific data submitted under this Code may be classified as Confidential Information, such information may be subject to disclosure in accordance with the provisions of the Freedom of Information Act 1997 and 2003 (Ireland) and/or the Freedom of Information Act, 2000 (United Kingdom) where applicable. All Parties acknowledge that any such statement does not bind the Market Operator, any System Operator or the Regulatory Authorities nor guarantee that any such described information will not be subject to disclosure under Freedom of Information legislation.

DATA PROTECTION

- 2.351 Without prejudice to the generality of any other provision of this Code, each Party shall comply with applicable requirements of Data Protection Legislation in respect of any Personal Data which it Processes in the course of its activities in connection with the Code. All Parties shall use their reasonable endeavours to enter into any contract necessary to legitimise the Processing of Personal Data under Data Protection Legislation.
- 2.352 Each Party ("Indemnifying Party") shall indemnify each other Party and the Regulatory Authorities in respect of any loss or liability howsoever arising incurred by that Party, or the Regulatory Authorities, as appropriate, as a result of a breach of preceding paragraph 2.351 by the Indemnifying Party.

NOTICES

- 2.353 Paragraphs 2.354 to 2.364 apply to Notices which shall, for the avoidance of doubt, include:
1. Default Notices;

2. Suspension Orders;
3. Termination Orders;
4. Notice of Dispute (including Settlement Disputes) and the current status of each;
5. Notices of Dissatisfaction;
6. Referral Notices;
7. notification of Force Majeure;
8. Notice of revocation of an Intermediary's authority under paragraph 2.111;
9. Notice of proposed revocation of an Interconnector Administrator's authority under paragraph 2.80;
10. Notice of resignation of an Interconnector Administrator under paragraph 2.81;
11. Notice of proposed revocation of the authority of the Participant in respect of an Interconnector Error Unit under paragraph 2.91;
12. Notice of proposed Deregistration of the Interconnector Error Unit under paragraph 2.92;
13. Notices required for the purposes of disputes determination procedure as described in detail in Agreed Procedure 14 "Disputes";
14. Unless AP12 provides otherwise, Notices required for the purposes of the modifications procedure as described in Agreed Procedure 12 "Modifications Committee Operation".

Notice to Other Parties

- 2.354 Any Notices required to be given for the purposes of the Code shall be given in writing unless otherwise specified in the Code.
- 2.355 Any Notice required to be given in writing, other than a notice listed in paragraph 2.353, or a communication for which a prescribed form is otherwise required in the Code, may also be given by email.
- 2.356 Notices in writing shall be addressed and sent to the receiving Party at the address, fax number or email address specified by the receiving Party for the purposes of the receipt of Notices under the Code or such other address, fax number or email address as the receiving Party may from time to time specify by notice given in writing in accordance with this Section 2 to the Party giving the notice.
- 2.357 Notices shall be marked for the attention of the representative of the receiving Party specified for the purpose of receipt of Notices or such other person as may be notified by the receiving Party to the Sending Party in accordance with the provisions of this Section 2.
- 2.358 Any Notice given by fax or email shall be confirmed by forwarding a copy of the same by pre-paid registered post provided that failure to receive such confirmation shall not prejudice effective receipt of the notice under the following paragraph 2.359. This is with the exclusion of Warning Notices and Settlement Relocation Agreement cancellations required in order to maintain required Credit Cover which do not require confirmation by post.

- 2.359 Any Notice in writing shall be deemed to have been received:
1. in the case of delivery by hand, when delivered; or
 2. in the case of prepaid post, on the second Working Day following the day of posting or, if sent from another jurisdiction other than Northern Ireland or Ireland, on the fifth Working Day following the day of posting; or
 3. in the case of fax, at 5pm on the Working Day on which the Notice was sent as evidenced by a fax transmission report of the sending Party showing that the Notice has been transmitted; or
 4. in the case of email when the email enters the receiving Party's IT system.
- 2.360 Each Party shall, on registration, specify at least one postal address, fax number, and email address and one representative for the service of Notices in writing and may amend such details by notifying the relevant Market Operator representative in writing.
- 2.361 A Party may specify different addresses (including email addresses) or fax numbers and representatives for the purposes of Notices of different kinds or relating to different matters.

Notice to the Regulatory Authorities

- 2.362 Any Notice to the Regulatory Authorities shall be in writing (which for the purposes of this paragraph shall not include email) and shall be addressed:
1. in respect of matters relating to a particular Unit or Participant, to the relevant Regulatory Authority at such address or number and marked for the attention of such person as that Regulatory Authority may publish; and
 2. in respect of other matters, to each Regulatory Authority, or to such single address as may be published by the Regulatory Authorities for the purposes of the joint receipt of notifications under the SEM.
- 2.363 Notices to the Regulatory Authorities shall be effective upon actual receipt.

Market Operator Notices

- 2.364 Notices which are required to be published by the Market Operator shall be published on its website within any applicable timeframes set out in this Code.

3. DATA AND INFORMATION SYSTEMS

GENERAL

Introduction and Interpretation

- 3.1 This Section 3 sets out rules relating to the systems and procedures for the communication of Data Transactions by each Party to the Market Operator and by the Market Operator to one or more Parties and the rules and principles for the publication by the Market Operator of data and information relating to the trading arrangements in the Pool.
- 3.2 A Party (other than the Market Operator) may appoint a Data Processing Entity, in accordance with Agreed Procedure 1 “Participant and Unit Registration and Deregistration”, to do any or all of the following tasks for and on behalf of the Party or any of its Participants: (i) to submit Data Transactions; (ii) to raise Data Queries or Settlement Queries; or (iii) to view but not modify Settlement Statements.
- 3.3 The Isolated Market System used by any Data Processing Entity must comply with the requirements set out in the Code and must pass Communication Channel Qualification as described in the relevant provisions of Agreed Procedure 3 “Communication Channel Qualification”. A Party shall at all times remain liable for the performance of, and compliance with the Code by, its Data Processing Entity.
- 3.4 An obligation on a Party or Participant (except the Market Operator) in relation to the submission of Data Transactions shall, where that Party has appointed a Data Processing Entity, include an obligation to procure that it shall be done by the relevant Data Processing Entity.
- 3.5 Where the Code requires data forming part of a Data Transaction to be “submitted”, it must be submitted in accordance with the applicable rules for submission of Data Transactions as set out in Section 3 and Appendices F to L.
- 3.6 Where the Market Operator is required to “issue”, “submit” or “send” data to a Party, unless otherwise specified, the Market Operator may meet this requirement in respect of users of Communication Channels 2 and 3 by making the data available for retrieval by the relevant Party in accordance with timescales specified under this Code. In the event that:
1. no timescale is specified for the issue, submission or sending of data; or
 2. the event or circumstance giving rise to the issue, submission or sending of data is not timetabled; or
 3. the Market Operator has failed to “issue”, “submit” or “send” the data, as appropriate, in accordance with the specified timescale;
- the Market Operator will meet the requirement in respect of users of Communication Channels 2 and 3 by making the data available for retrieval by the relevant Party and by notifying the Party that the data is available, provided that in relation to the circumstances set out in paragraph 3.6.3, such action shall not meet the timing element of the requirement.

DATA COMMUNICATION CHANNELS

Communication Channel Types

- 3.7 The Market Operator shall establish and maintain three distinct Communication Channels, as more particularly described in Agreed Procedure 3 “Communication Channel Qualification”:
1. Type 1 Channel, meaning manual communication comprising but not limited to paper based communications and fax communications;
 2. Type 2 Channel meaning assisted communication (human to computer);and
 3. Type 3 Channel meaning automated communication (computer to computer).
- 3.8 Each Participant must designate, by Notice to the Market Operator, one or both of the Type 2 Channel and the Type 3 Channel.
- 3.9 Agreed Procedure 4 “Transaction Submission and Validation” sets out the specific rules relating to Data Transactions.

Obligation of Parties to Maintain a Functional Interface to the Communication Channels

- 3.10 A Party or Participant must meet any requirements as specified pursuant to paragraph 2.43.2 to use a Communication Channel.
- 3.11 Subject to paragraph 3.13, a Participant must remain qualified for each Communication Channel which it designates in accordance with Agreed Procedure 3 “Communication Channel Qualification” for the duration of its participation in the Pool.
- 3.12 The Market Operator may temporarily suspend a Participant’s use of a Type 2 Channel or Type 3 Channel, or both, where the Market Operator reasonably determines, as provided for in Agreed Procedure 3 “Communication Channel Qualification”, that the Participant’s communications over that Channel materially fail to meet the standards in Agreed Procedure 3 “Communication Channel Qualification” or Agreed Procedure 5 “Data Storage and IT Security”. In such an event, the Market Operator shall immediately contact the affected Participant to explain the reason for the suspension, and shall take steps with that Participant to resolve the issue.
- 3.13 A Party may apply to change its designated Communication Channel(s) for any of its Participants in accordance with Agreed Procedure 1 “Participant and Unit Registration and Deregistration” and Agreed Procedure 3 “Communication Channel Qualification”, provided that it continues to designate at least one of Type 2 Channel and Type 3 Channel for each Participant. No such change shall take effect without the Market Operator’s prior written consent which shall not be unreasonably withheld or delayed.
- 3.14 The Market Operator shall provide technical and operational advice to Parties in relation to the Communication Channels and the interfaces to those Communication Channels. This is set out in Agreed Procedure 11 “Market System Operation, Testing, Upgrading, and Support”.

Obligation on Parties to Maintain IT Security

- 3.15 Parties shall ensure that their interfaces for Type 2 Channels and Type 3 Channels shall comply with the IT security requirements set out or referenced in Agreed Procedure 5 “Data Storage and IT Security”.

Specific IT Security Obligations on the Market Operator

- 3.16 The Market Operator shall put in place and maintain procedures for the security of the Market Operator’s entire Isolated Market System in accordance with Agreed Procedure 5 ‘Data Storage and IT Security’.
- 3.17 Notwithstanding the requirements of the Modifications Process, no document required to be published in connection with the process of modifying Agreed Procedure 5 ‘Data Storage and IT Security’ shall contain a level of detail such that its publication could reasonably be expected to compromise the implemented security of the Market Operator’s Isolated Market System.

Obligation on Parties during Testing and Upgrading of Isolated Market Systems and Communication Channels

- 3.18 The Market Operator shall co-ordinate and facilitate testing of the Market Operator’s Isolated Market System and the interfaces to Communication Channels as described under Agreed Procedure 11 “Market System Operation, Testing, Upgrading, and Support”.
- 3.19 The Market Operator shall provide reasonable prior notice to all affected Parties of any proposed testing, upgrading or down-time of the Market Operator’s Isolated Market System or the Communication Channels.
- 3.20 The Market Operator shall, where practicable, schedule testing, upgrading, or down-time of the Market Operator’s Isolated Market System or the Communication Channels in consultation with Parties under Agreed Procedure 11 “Market System Operation, Testing, Upgrading, and Support”. The Market Operator will endeavour to reasonably minimise the impact of the testing or down-time of the Market Operator’s Isolated Market System on Parties.
- 3.20A The Market Operator shall ensure that the scheduled testing or down-time will not preclude Settlement and will not preclude Commercial Offer Data and Technical Offer Data being submitted before any EA1 Gate Window Closure, EA2 Gate Window Closure or any WD1 Gate Window Closure for any Trading Day.
- 3.21 Notwithstanding paragraph 3.20, scheduled Market Operator Isolated Market System down-time will not constitute failure by the Market Operator to fulfil its obligations under the Code where:
1. the down-time is of reasonable duration; and
 2. the procedure of notification under paragraph 3.19 was followed by the Market Operator.
- 3.22 All Parties shall facilitate the co-ordination of testing and upgrading of the Communication Channels and the Market Operator’s Isolated Market System as and when requested by the Market Operator in connection with a proposed event of which notice has been given pursuant to paragraph 3.19.
- 3.23 Any Party proposing to undertake any testing or upgrading work which may impact on the interfaces of the Market Operator or other Party’s Isolated

Market Systems shall inform the Market Operator of this in advance. The Market Operator shall be entitled to issue instructions in relation to the undertaking of any such work for the purposes of the proper operation of the Pool, and the Party concerned shall comply with such instructions. Each Party shall ensure that any testing or upgrading of its own Isolated Market System is undertaken at a time and in a manner so as to minimise any adverse effect for any other Party's Isolated Market System or the use by any other Party of any Communication Channel.

Data categories and Data Transactions

- 3.24 The requirements and procedures relating to Data Transactions are more particularly described in Appendices F to L and Agreed Procedure 4 "Transaction Submission and Validation".
- 3.25 For each Data Transaction, the Sending Party, other than the System Operators, Meter Data Providers and any Interconnector Administrator, may assign it an identifier in accordance with Agreed Procedure 4 "Transaction Submission and Validation" that shall be stored by the Receiving Party to assist the Sending Party in identifying the Data Transaction.
- 3.26 For each Data Transaction or group of Data Transactions in a single communication for which the Market Operator is the Receiving Party, it shall assign it a unique identifier in accordance with Agreed Procedure 4 "Transaction Submission and Validation" and shall store such identifier to enable it to uniquely identify the Data Transaction.
- 3.27 In the event that a Data Transaction is wrong or defective, the Sending Party shall, after becoming aware of the error or defect, re-submit that Data Transaction within any applicable timelines.
- 3.28 On request by a Sending Party, the Market Operator shall, within the timelines provided for pursuant to Agreed Procedure 4 "Transaction Submission and Validation", identify, or shall facilitate identification by that Sending Party of, the Accepted data for that Party or any of its Units, for any particular Trading Period.

SUBMISSION, VALIDATION AND REJECTION OF CENTRAL MARKET SYSTEM DATA

- 3.29 Parties and Participants shall, where applicable, submit Central Market System (CMS) Data Transactions in accordance with the Code.
- 3.30 Subject to paragraphs 3.52 to 3.70 (concerning communication failures and system failures), the Sending Party shall send a CMS Data Transaction using either the Type 2 Channel or Type 3 Channel, and all System Operators, Meter Data Providers and Interconnector Administrators shall use Type 3 Channels.
- 3.31 A CMS Data Transaction shall be deemed to be received by the Market Operator when it enters the Market Operator's Isolated Market System via a valid, functioning Type 2 Channel or Type 3 Channel, or if sent by another means as permitted under paragraphs 3.52 to 3.70, when deemed received in accordance with paragraph 2.359 and has completed initial validation checks that ensure that the Market Operator's Isolated Market System can receive the data as specified in Agreed Procedure 4 "Transaction Submission and Validation".

- 3.32 On receipt of a CMS Data Transaction, the Market Operator shall send a Confirmation Notice to the Sending Party using the same Communication Channel as used by the Sending Party. The Confirmation Notice shall contain a time stamp and sufficient information to enable the Sending Party to identify the Data Transaction to which it relates.
- 3.33 If the Sending Party does not receive a Confirmation Notice within the relevant timescale set out in Agreed Procedure 4 “Transaction Submission and Validation”, then:
1. for CMS Data Transactions in Appendix I “Offer Data”, the Sending Party may, but shall not be obliged to, contact the Market Operator by calling the Market Operator helpdesk as described subject to Agreed Procedure 7 “Emergency Communications”; or
 2. for CMS Data Transactions in Appendix J “Market Operator and System Operator Data Transactions” or Appendix L “Meter Data Transactions”, the Sending Party must contact the Market Operator by calling the Market Operator helpdesk as described in Agreed Procedure 7 “Emergency Communications”,
- in order to establish whether or not its CMS Data Transaction has been received.
- 3.34 The Market Operator shall be under no obligation to pursue any Party that has not submitted any particular CMS Data Transaction and shall have no liability in respect of any CMS Data Transaction which it has not received under paragraph 3.31, or which contains defective or incorrect data.
- 3.35 The Market Operator shall, in respect of each CMS Data Transaction received by it prior to the deadlines set out in Appendix I “Offer Data”, Appendix K “Market Data Transactions” and Appendix L “Meter Data Transactions” (as applicable), process the CMS Data Transaction to determine whether it is valid in accordance with Agreed Procedure 4 “Transaction Submission and Validation”. The Market Operator shall determine a CMS Data Transaction to be valid if the conditions set out in Agreed Procedure 4 “Transaction Submission and Validation” are satisfied in respect of that CMS Data Transaction and shall reject the CMS Data Transaction if such conditions are not so satisfied.
- 3.36 Following the processing of a CMS Data Transaction under paragraph 3.35, the Market Operator shall send a Validation Notice or a Rejection Notice to the Sending Party using the same Communication Channel as that used by the Sending Party to send the Data Transaction and in accordance with Agreed Procedure 4 “Transaction Submission and Validation”. The Market Operator shall specify in any Rejection Notice the reasons for the Rejection.
- 3.37 The Market Operator may send both a Confirmation Notice and a Validation Notice or Rejection Notice in respect of a CMS Data Transaction in a single communication provided that it satisfies the timelines provided for pursuant to Agreed Procedure 4 “Transaction Submission and Validation” for the issue of each of the Confirmation Notice and the Validation Notice or Rejection Notice.
- 3.38 If a Meter Data Provider or a System Operator does not receive confirmation of the receipt of a Data Transaction within the timeline provided for pursuant to Agreed Procedure 4 “Transaction Submission and Validation” then it must contact the Market Operator by calling the Market Operator helpdesk as described in Agreed Procedure 7 “Emergency Communications”.

- 3.39 Save as expressly provided otherwise, for each Participant, Unit and Trading Period, and each relevant category of CMS Data Transaction, the Market Operator shall be obliged to use, for all purposes set out in the Code, only the most recently received CMS Data Transaction of that category that has been Validated.
- 3.40 The Market Operator shall use a CMS Data Transaction as required by paragraph 3.39 regardless of whether or not it has issued a Confirmation Notice or Validation Notice to the Sending Party in respect of that CMS Data Transaction, or whether that CMS Data Transaction was Validated prior to or following any EA1 Gate Window Closure, EA2 Gate Window Closure or WD1 Gate Window Closure for the relevant Trading Day.
- 3.41 Where two or more Data Transactions are received contemporaneously, the Market Operator may use the procedures provided for in Agreed Procedure 4 "Transaction Submission and Validation" to determine the deemed order of receipt of the Data Transactions.
- 3.42 Notwithstanding paragraph 3.39, the Market Operator shall not use, for any purpose set out in the Code, any CMS Data Transaction specified in Appendix I "Offer Data" that is received by the Market Operator after the EA1 Gate Window Closure within the Ex-Ante One MSP Software Run for the Trading Day to which such CMS Data Transaction relates.
- 3.42A Notwithstanding paragraph 3.39, the Market Operator shall not use, for any purpose set out in the Code, any CMS Data Transaction specified in Appendix I "Offer Data" that is received by the Market Operator after the EA2 Gate Window Closure within the Ex-Ante Two MSP Software Run for the Trading Day to which such CMS Data Transaction relates.
- 3.42B Notwithstanding paragraph 3.39, the Market Operator shall not use, for any purpose set out in the Code, any CMS Data Transaction specified in Appendix I "Offer Data" that is received by the Market Operator after the WD1 Gate Window Closure within the Within Day One MSP Software Run for the Trading Day to which such CMS Data Transaction relates.

Validation Data Sets

- 3.42C Each Participant with one or more registered Generator Units shall have a minimum of one and a maximum of six Approved Validation Data Sets for each Generator Unit.
- 3.42D Each Approved Validation Data Set shall contain a set of Validation Technical Offer Data which shall be validated by the Market Operator as set out in Agreed Procedure 4 "Transactions Submission and Validation".
- 3.42E Approved Validation Data Set 1 in respect of each Generator Unit shall be the Approved Primary Validation Data Set for that Generator Unit. The Approved Primary Validation Data Set shall be deemed to contain the Validation Technical Offer Data components of Default Data for all purposes set out in the Code in respect of that Participant.

Submission and Approval of Validation Data Sets

- 3.42F Upon registration, and thereafter as required, a Participant shall submit a minimum of one and a maximum of six Validation Data Sets to the Market Operator for each Generator Unit. For each Validation Data Set submitted for approval, the Participant shall identify which of the six Validation Data Sets it is intended to comprise or replace.

- 3.42G The Market Operator shall provide each submitted Validation Data Set that is identified as such to the relevant System Operator for approval.
- 3.42H The System Operator shall assess each submitted Validation Data Set within 10 Working Days and either approve or reject the submitted Validation Data Set and advise the Market Operator accordingly.
- 3.42I If a submitted Validation Data Set is approved by the relevant System Operator the relevant Validation Data Set shall be deemed to be an Approved Validation Data Set and will be identified thereafter by its Validation Data Set Number. Otherwise the submitted Validation Data Set shall be deemed to be rejected.

Validation of Data Transactions containing Validation Technical Offer Data

- 3.42J If a Participant submits a Data Transaction containing a Validation Data Set Number for a given Trading Day at least 10 minutes before any EA1 Gate Window Closure, the relevant data submission shall be Accepted by the Market Operator in respect of the Ex-Ante One MSP Software Run and notification shall be issued to the Participant.
- 3.42K If a Participant submits a Data Transaction containing a Validation Data Set Number for a given Trading Day at least 10 minutes before any EA2 Gate Window Closure, the relevant data submission shall be Accepted by the Market Operator in respect of the Ex-Ante Two MSP Software Run and notification shall be issued to the Participant.
- 3.42L The Market Operator shall reject any Data Transaction containing a Validation Data Set Number for a given Trading Day that is submitted to the WD1 Gate Window.
- 3.42K If a Participant does not submit a Data Transaction containing a Validation Data Set Number for a given Trading Day, the last Accepted Approved Primary Validation Data Set shall be used by the Market Operator for the relevant Trading Day.
- 3.42M The Market Operator shall inform the System Operator by 11:00 on the day prior to the start of the relevant Trading Day which Approved Validation Data Set is active for each Generator Unit for the following Trading Day.
- 3.42N In the event that a Participant submits more than one Data Transaction containing a Validation Data Set Number for a given Trading Day, the most recent Data Transaction that has been received and Accepted shall supersede all previously submitted Data Transactions in respect of that Trading Day.

Updating Approved Validation Data Sets

- 3.42O Each Participant that has one or more Approved Validation Data Sets shall review its Approved Validation Data Sets at least once every three months and update as necessary to ensure that the Approved Validation Data Sets for each of the Participant's Generator Units continue to comply with the requirements set out in the Code.
- 3.42P Any submitted Validation Data Set which is an update to an Approved Validation Data Set shall be submitted by the relevant Participant to the Market Operator as set out in 3.42D.

CMS DATA TRANSACTION DEFAULT OFFER PROCESSES AND MARKET PROCEDURES

Updating and Use of Default Data

- 3.43 Each Participant that is required to submit Default Data shall review its submitted Default Data at least once per quarter, and update it as necessary to seek to ensure that the Default Data for each of the Participant's Units continues to comply with the requirements set out in the Code for Technical Offer Data and Commercial Offer Data as appropriate.

Starting Gate Window Data

- 3.44 In accordance with Agreed Procedure 4 "Transaction Submission and Validation", and with the exception of paragraph 5.57, if for a particular Participant, Unit and Gate Window in relation to any one of the CMS Data Transactions listed in Appendix I "Offer Data"

1. no CMS Data Transaction has been received by the Market Operator by Gate Window Closure for that Gate Window, or, in the event of a Limited Communications Failure, General Communication Failure or General System Failure, such later time as permitted under Agreed Procedure 7 "Emergency Communications"; or
2. none of the CMS Data Transactions received prior to Gate Window Closure for that Gate Window, or, in the event of a Limited Communication Failure, General Communication Failure or General System Failure, such later time as permitted under Agreed Procedure 7 "Emergency Communications", meets the requirements to be Validated by the Market Operator,

the Market Operator shall set the Starting Gate Window Data as follows:

- a. in respect of the EA1 Gate Window, the Starting Gate Window Data shall be set equal to the Default Data as Accepted;
- b. in respect of the EA2 Gate Window, the Starting Gate Window Data shall be set equal to the data as Accepted and Utilised within the Ex-Ante One MSP Software Run; or
- c. in respect of the WD1 Gate Window, the Starting Gate Window Data shall be set equal to the data as Accepted and Utilised within the Ex-Ante Two MSP Software Run.

Market Operator Queries of Submitted Validated Data

- 3.45 The Market Operator may at any time query Commercial Offer Data or Technical Offer Data (such data to be referred to as "Queried Data" for the purposes of this paragraph 3.45) it has received from a Party if the Data Record and field-level values in that CMS Data Transaction appear, pursuant to Prudent Electric Utility Practice to be materially incorrect, or the Market Operator reasonably expects that such values as submitted will cause the MSP Software to fail to solve. This discretion of the Market Operator does not in any way diminish the obligations of each Party under paragraph 2.130.4.

**System Operator Market Data Transactions, Interconnector,
Administrator Market Data Transactions and Meter Data Transactions**

- 3.46 The Market Operator shall not estimate or substitute System Operator Market Data Transactions, Interconnector Administrator Market Data Transactions or Meter Data Transactions except as required when Administered Settlement is in effect.
- 3.47 If for a particular Trading Period, in relation to any one of the CMS Data Transactions listed in Appendix J “Market Operator and System Operator Data Transactions” or Appendix L “Meter Data Transactions” either:
1. no such Data Transaction has been received by the Market Operator before the applicable deadline; or
 2. none of the Data Transactions received prior to the applicable deadline meets the requirements to be Validated by the Market Operator,
- then, all calculation and processing by the Market Operator to which the relevant data relates shall be deferred until the valid data is provided to and accepted by the Market Operator, unless Administered Settlement is in effect.
- 3.48 When processing is deferred in accordance with paragraph 3.47, the obligations of the Market Operator in respect of any consequential Data Transactions and publication shall also be deferred.
- 3.49 Notwithstanding paragraphs 3.47 and 3.48, the Market Operator shall use prudent practice to continue any provisions of the Code that it deems appropriate to avoid further delays.
- 3.50 In the event that a circumstance of the type set out in paragraph 3.47.1 arises due to a communications failure or any error affecting the System Operator, Interconnector Administrator, or Meter Data Provider outside of the Market Operator’s Isolated Market System, the System Operator, Interconnector Administrator or Meter Data Provider will comply with Agreed Procedure 7 “Emergency Communications” to submit the required Data Transaction to the Market Operator within one day of the specified submission deadline in the Code.
- 3.51 Following the occurrence of the circumstances described in paragraph 3.47, the Market Operator shall, once the necessary data has been received, take steps to undertake all the necessary deferred processing as rapidly as reasonably possible and shall promptly inform all Parties of the changes to the Settlement Calendar that will result.

COMMUNICATION AND SYSTEM FAILURES

- 3.52 As soon as is practicable following any General Communication Failure, General System Failure, or MSP Failure, the Market Operator shall take all practicable measures to maintain and, where necessary, restore its Isolated Market System and the Communication Channels under its control.
- 3.53 Agreed Procedure 7 “Emergency Communications” sets out the methods of communication to be used for Data Transactions, and any permitted derogations from the required timelines for submission of Data Transactions, which shall apply during a Limited Communication Failure, a General Communication Failure or a General System Failure.

Limited Communication Failure

- 3.54 As soon as a Participant becomes aware, or should have become, aware of the commencement of a Limited Communication Failure, that Participant shall notify the Market Operator of the Limited Communication Failure using another valid means of communication, other than the failed Communication Channel(s), as provided for pursuant to Agreed Procedure 7 “Emergency Communications”.
- 3.55 During the Limited Communication Failure, the affected Participant shall use the methods of communication, other than the failed Communication Channel(s), as provided for pursuant to Agreed Procedure 7 “Emergency Communications”.
- 3.56 A Limited Communications Failure shall not affect the obligations of any Party to submit data.
- 3.57 No Party or Participants shall be entitled to reimbursement of costs or expenses incurred in connection with using alternative communication methods during a Limited Communication Failure.

General Communication Failure

- 3.58 When the Market Operator becomes, or should reasonably have become, aware of a General Communication Failure, the Market Operator shall inform Parties of the General Communication Failure using the methods of communication provided for pursuant to Agreed Procedure 7 “Emergency Communications”.
- 3.59 During a General Communication Failure, Parties and Participants shall use the methods of communication provided for pursuant to Agreed Procedure 7 “Emergency Communications” until the General Communication Failure ceases.
- 3.60 Notwithstanding paragraph 3.52, in the event of a General Communication Failure, the Market Operator shall act prudently and reasonably to prioritise Data Transactions necessary for the calculation of System Marginal Prices, Market Schedule Quantities, Trading Charges, Trading Payments, and Settlement in the event that some of its obligations under the Code cannot be reasonably fulfilled due to the nature of the General Communication Failure.
- 3.61 No Party or Participant shall be entitled to reimbursement of costs or expenses incurred in connection with using alternative communication methods in case of a General Communication Failure.

General System Failure

- 3.62 When the Market Operator becomes aware, or should reasonably have become, aware of a General System Failure, the Market Operator shall inform Parties of the General System Failure using the methods of communication provided for pursuant to Agreed Procedure 7 “Emergency Communications”.
- 3.63 During a General System Failure, Parties shall use the methods of communication provided for pursuant to Agreed Procedure 7 “Emergency Communications” until the General System Failure ceases.
- 3.64 During a General System Failure, all calculation by the Market Operator of Trading Charges and Trading Payments and Settlement relating to Trading Days, or Settlement Days as appropriate, for which the necessary data

cannot be accessed or processed shall be deferred, unless Administered Settlement is in effect. The Market Operator may continue processing to the extent possible in respect of any Trading Periods for which all data as required by the Code is available.

- 3.65 In the event of a General System Failure, the Market Operator must restore the Market Operator's Isolated Market System to working order according to the timelines and standards provided for pursuant to Agreed Procedure 11 "Market System Operation, Testing, Upgrading, and Support".
- 3.66 Following the restoration of the Market Operator's Isolated Market System, the Market Operator shall recommence processing and restore its operation to normal timescales as soon as reasonably possible and shall promptly inform all Parties of the changes to the Settlement Calendar that will result.
- 3.67 No Party or Participant shall be entitled to reimbursement of costs or expenses incurred in connection with using alternative communication methods in case of a General System Failure.

Reporting of General Communication Failures, General System Failures and MSP Failures

- 3.68 The Market Operator shall commission an externally audited report in accordance with the timelines provided for pursuant to Agreed Procedure 11 "Market System Operation, Testing, Upgrading, and Support" in the event of any General Communication Failure, General System Failure or MSP Failure where such failure materially affects Participants. The purpose of any such report is to investigate and identify the cause of the failure and to assess the resulting response to that failure of all Parties. The Market Operator shall provide the report to the Regulatory Authorities.
- 3.69 During any General Communication Failure, General System Failure or MSP Failure, the Market Operator will keep Parties updated of the best estimate of when the Market Operator's Isolated Market System will be operational again following the General Communication Failure, General System Failure, or MSP Failure, as provided for pursuant to Agreed Procedure 7 "Emergency Communications".
- 3.70 Unless indicated otherwise by the Market Operator, a General Communication Failure, General System Failure or MSP Failure shall not affect the obligations of any Party to submit data. As soon as a Party becomes, or should have become, aware of any such failure, that Party shall use another valid means of communication other than the failed Communication Channel(s) as provided for pursuant to Agreed Procedure 7 "Emergency Communications".

METER DATA REQUIREMENTS

- 3.71 Each Meter Data Provider shall provide such meter registration identification, estimation, substitution, aggregation, communication and storage services as are provided for in the Metering Code or Grid Code (as applicable) for the installed meters of categories of electricity generating units and electricity consuming units identified under Appendix L "Meter Data Transactions".
- 3.72 Each Meter Data Provider shall submit to the Market Operator the Data Transactions defined in Appendix L "Meter Data Transactions" in accordance with the timelines provided for in Agreed Procedure 16

“Provision of Metered Data” to the standards specified in the Metering Code or Grid Code as applicable.

- 3.73 A Party (or Applicant as applicable) who applies to register a Generator Unit requesting, or whose Generator Unit is registered with, a Unit classification other than Autonomous Generator Unit must have appropriate equipment installed at the relevant Generator to permit real-time monitoring of the Output of that Generator.
- 3.74 Each Party that registers a Generator Unit must have Interval Metering installed by the Meter Data Provider responsible for installing, commissioning and maintaining such meters at the Generator to meter Active Power Generation. Such Interval Metering shall be to a standard sufficient to allow polling of that Meter by the responsible Meter Data Provider for provision of data to the Market Operator as identified under Appendix L “Meter Data Transactions”.
- 3.75 All Active Power Demand aggregated by a Meter Data Provider into Trading Site Supplier Unit or an Associated Supplier Unit for a Trading Site that contains a Generator Unit with Non-Firm Access must have Interval Metering installed by the Meter Data Provider responsible for installing, commissioning and maintaining such meters. Such Interval Metering shall be to a standard sufficient to allow polling of that Meter by the responsible Meter Data Provider for provision of data to the Market Operator as identified under Appendix L “Meter Data Transactions”.
- 3.76 All Active Power Demand or Active Power Generation aggregated by a Meter Data Provider to any other Supplier Units not listed in paragraph 3.75 may utilise standard consumption profiles to derive half-hourly metered values in place of Interval Metering.
- 3.77 During the registration process described in Agreed Procedure 1 “Participant and Unit Registration and Deregistration”, the Meter Data Provider or the System Operator as appropriate, shall inform the Market Operator if a Unit does not fulfil its metering or operational requirements for the Unit classification requested by the relevant Party.
- 3.78 If a Party does not have adequate metering installed in respect of any of its Units under paragraph 3.74 or 3.75 or appropriate equipment to permit real-time monitoring of Generator Unit availability by the System Operator under paragraph 3.73 to facilitate Settlement under the rules of the Code without further netting, aggregation or estimation rules, the Meter Data Provider shall determine, subject to accuracy, practicality and cost, in consultation with the affected Party, and subject to the prior written approval of the Regulatory Authorities, the appropriate bespoke netting, aggregation, or estimation rules to allow for Settlement of that Unit under the Code.
- 3.79 Where such netting, aggregation and estimation rules as provided for under paragraph 3.78 are determined by the Regulatory Authorities to be inaccurate or impractical following any information and advice provided by the Meter Data Provider, the Regulatory Authorities may require the Participant (or Applicant, as applicable) to adjust the form of registration of that Generator Unit or Trading Site until the appropriate metering equipment or equipment to permit real-time monitoring of Generator Unit availability under paragraph 3.73 is installed in accordance with such timeframes as are provided for in the Metering Code or Grid Code as applicable.
- 3.80 The Meter Data Providers, System Operators and Interconnector Administrators shall facilitate the timely resolution of any relevant Data

Query, Settlement Query, or Dispute raised under the Code, so that data shall comply with standards specified in the relevant Metering Code or Grid Code as applicable.

- 3.81 Parties that have registered Units must facilitate Meter Data Providers in fulfilling such obligations regarding the installation, commissioning, calibration, maintenance, testing, inspection, security, repair, reading of and access to meter equipment as are provided for in the relevant Metering Code or Grid Code as applicable.
- 3.82 Meter Data Providers are required to submit to the Market Operator, the Data Transactions as described in Agreed Procedure 1 “Participant and Unit Registration and Deregistration”.

DATA PUBLICATION

- 3.83 Where the Market Operator is required to publish information under the Code, the Market Operator shall publish the information in accordance with paragraphs 1.7.15 and 1.7.16 and as provided for pursuant to Agreed Procedure 6 “Data Publication and Data Reporting”. Agreed Procedure 6 “Data Publication and Data Reporting” sets out details of the procedures for publication of data by the Market Operator under the Code.

Items and Data Record Publication

- 3.84 The Market Operator shall publish any Data Records required to be published pursuant to Appendix E “Data Publication” in accordance with the timelines set out in Appendix E “Data Publication”.
- 3.85 The Market Operator shall not publish any Confidential Information except as otherwise expressly provided for in the Code.

Forecast Publication Rationale

- 3.86 The Market Operator shall publish Load Forecasts and Wind Power Unit Forecasts and the assumptions behind the production of those forecasts using the data most recently submitted by the System Operators to the Market Operator at the time of publication.
- 3.87 The Market Operator shall publish forecasts of Loss of Load Probability in accordance with the timelines provided for pursuant to Agreed Procedure 6 “Data Publication and Data Reporting” using the data submitted to it by the System Operator.

Updating Publications

- 3.88 Where the Market Operator has published data and such data is updated prior to its use in any calculation performed by the Market Operator, then, subject to any contrary provision of the Code, the Market Operator shall publish the updated data in accordance with Appendix E “Data Publication” and Agreed Procedure 6 “Data Publication and Data Reporting”.

NUMERICAL ROUNDING OF CALCULATIONS AND PUBLICATIONS

- 3.89 The Market Operator shall use consistent numerical rounding of all published quantities in accordance with the following rules:
1. all energy variables will be expressed in MWh to three decimal places;

2. all power variables will be expressed in MW to three decimal places;
 3. all Currency variables (excluding exchange rates) will be expressed in euro or in pounds sterling as appropriate, and to two decimal places;
 4. all parameters, ratios, factors, discounts, premiums, currency exchange rates, rates, and proportions used in calculations shall be published to the same number of decimal places as that used in calculations; and
 5. for the purpose of calculations, the following time variables will be used: Trading Period, Trading Day, Settlement Day, Billing Period, week, Capacity Period, month, or year as appropriate.
 6. within a Trading Period, time shall be expressed to the nearest second; and
 7. for clarity, all time periods start on the hour or half hour.
- 3.89A Without prejudice to paragraph 3.89, the numerical rounding of published quantities on each Statement shall be consistent with the precision to which the published quantities are calculated as set out in Agreed Procedure 5.
- 3.90 Without prejudice to paragraph 3.89, the Market Operator shall not round any variable, quantity, parameter, volume, ratio, factor, discount, premium, rate, or proportion during calculation other than that automatically arising from the limitations of its IT systems.
- 3.91 The level of computational precision and the method of computational rounding that shall be employed by the Market Operator's IT systems are set out in more detail in Agreed Procedure 5, "Data Storage and IT Security".

Obligation on the Market Operator to Retain Market Data

- 3.92 The Market Operator shall, in relation to each Trading Day, store, for the period of six years commencing on that Trading Day, at least one copy of all Data Transactions and Accepted data in a safe and secure environment and in a form which shall enable re-calculation or reproduction of any Settlement Statement by the Isolated Market System.

Obligation on the Market Operator to Maintain Market Re-Run Facilities

- 3.93 The Market Operator shall, in relation to each Settlement Day, maintain, for the period of two years commencing on that Settlement Day, the ability to perform a Settlement Rerun for that Settlement Day.
- 3.94 The Market Operator shall, in relation to each Settlement, maintain, for the period of six years (or such longer period as shall be necessary to comply with the requirements of the relevant Revenue Authority) commencing on the date of that Settlement, the ability to manually perform any Resettlement required as a result of a decision of a Dispute Resolution Board or of any other Competent Authority, using SMP prices as determined by the Dispute Resolution Board or the relevant Competent Authority.

4. PRICING

- 4.1 Section 4 sets out the market rules on pricing relating to Generator Units and Supplier Units. Specific rules relating to pricing for Special Units which apply in addition to, or where appropriate, in place of the rules set out in this Section 4, are set out in Section 5: Categorisation of Units and Rules for Special Units.
- 4.2 Within this Code, payments or charges may be either positive or negative in accordance with their calculated value except where otherwise stated.
- 4.3 Intentionally blank.

OFFER STRUCTURES

Timing of each Gate Window Opening and Gate Window Closure

- 4.3A Table 4.1 sets out the timings of each Gate Window Opening and Gate Window Closure for each Ex-Ante One MSP Software Run, Ex-Ante Two MSP Software Run and Within Day One MSP Software Run.

Table 4.1 – Timing of Gate Window Opening and Gate Window Closure

Gate Window	Gate Window Opening	Gate Window Closure
EA1	10:00 on the day that is 29 days prior to the start of the Trading Day	09:30 on the day prior to the Trading Day
EA2	09:30 on the day prior to the Trading Day	11:30 on the day prior to the Trading Day
WD1	11:30 on the day prior to the Trading Day	08:00 on the Trading Day

- 4.3B Table 4.2 sets out the set of Trading Periods which comprise each EA1 Trading Window, EA2 Trading Window and WD1 Trading Window.

Table 4.2 – Definition of Trading Windows

Trading Window	Start of Trading Window	End of Trading Window
EA1	Trading Period commencing at 06:00 on the Trading Day	Trading Period commencing at 05:30 on the day on which the Trading Day ends
EA2	Trading Period commencing at 06:00 on the Trading Day	Trading Period commencing at 05:30 on the day on which the Trading Day ends
WD1	Trading Period commencing at 18:00 on the Trading Day	Trading Period commencing at 05:30 on the day on which the Trading Day ends

Commercial and Technical Offer Data

- 4.4 A Participant shall submit Commercial Offer Data and Technical Offer Data in respect of the EA1 Trading Window, EA2 Trading Window or WD1 Trading Window for each Trading Day for each Generator Unit registered to that Participant as specified within this Code and in accordance with Appendix I “Offer Data”. Any such submitted Commercial Offer Data and Technical Offer Data shall be submitted prior to the Gate Window Closure for the Trading Window to which the data relates. Where Commercial Offer Data or Technical Offer Data are not submitted or, where such data are submitted and are not Accepted, then the provisions of paragraph 3.44 shall apply for the relevant Trading Window .
- 4.5 Each set of Commercial Offer Data and Technical Offer Data shall apply in respect of the relevant Generator Unit as set out in this Section 4 and in

Appendix N “Operation of the MSP Software”. Exceptions in relation to Technical Offer Data and Commercial Offer Data are as set out in Section 5.

- 4.6 Appendix N “Operation of the MSP Software” sets out detailed provisions for data inputs for each of the MSP Software Run Types, and of the values used in Ex-Post Indicative Settlement where these differ from those used in Initial Settlement and are not otherwise stated, whether in this Section 4 or in Section 5.

Commercial Offer Data

- 4.7 The required Data Records which must be included in the Commercial Offer Data are listed in Appendix I “Offer Data”.
- 4.8 Where any Participant submits any value for a monetary sum as part of the Commercial Offer Data for a Generator Unit, it shall express such sum in the Currency that is relevant to the Currency Zone in which the Generator Unit is registered, provided that where such value is in pounds sterling, the Market Operator shall, for the purposes of all calculations within Sections 4 or 5 within this Code, convert the value to euro in accordance with paragraph 6.10.
- 4.9 All data items submitted as part of Commercial Offer Data are deemed to apply to levels of Output which are net of Unit Load.
- 4.10 A Participant submitting Commercial Offer Data in respect of a Generator Unit u shall include a minimum of one and a maximum of ten Price Quantity Pairs, each comprising a Price (P_{uhi}) and a Quantity (Q_{uhi}), where i is the index of that Price Quantity Pair.
- 4.11 Each Price (P_{uhi}) can be either positive or negative but cannot exceed the Market Price Cap (PCAP) or be lower than the Market Price Floor (PFLOOR).
- 4.12 The Regulatory Authorities shall determine the Market Price Cap (PCAP) and the Market Price Floor (PFLOOR) from time to time. The Market Operator shall publish the approved values within 5 Working Days of receipt of the Regulatory Authorities' determination or four months before the start of the Year or other period to which the values are intended to apply, whichever is the later.
- 4.13 Each Participant shall, in respect of data submitted in respect of its Generating Units, ensure that the Price Quantity Pairs for each Generator Unit u in Trading Period h shall be ranked in order of increasing Price Quantity Pair index i , and these Prices and Quantities shall each be strictly monotonically increasing and there may not be more than one Price (P_{uhi}) for the same Quantity (Q_{uhi}). These relationships are expressed algebraically as follows:
1. $P_{uh(i+1)} > P_{uhi}$ for each i in the range $1 \leq i \leq 9$
 2. $Q_{uh(i+1)} > Q_{uhi}$ for each i in the range $1 \leq i \leq 9$
- 4.14 The Market Operator shall procure that, should any Accepted Quantity (Q_{uhi}) exceed the Actual Availability (AA_{uh}) of the Generator Unit in any Trading Period, the MSP Software will exclude, for that Trading Period, those Price Quantity Pairs which apply entirely to Quantities (Q_{uhi}) in excess of the Actual Availability (AA_{uh}). After any such exclusions, should the greatest remaining Quantity (Q_{uhi}) be less than the Actual Availability (AA_{uh}), then, for the purposes of the MSP Software, the Market Operator

shall procure that the Actual Availability (AA_{uh}) shall be used in place of the greatest remaining Quantity (Q_{uh}i).

- 4.15 The Market Operator shall procure that, should any Quantity (Q_{uh}i) be less than the Minimum Output (MINOUT_{uh}) in any Trading Period, the MSP Software shall exclude the Price Quantity Pairs which apply entirely to Quantities less than the Minimum Output (MINOUT_{uh}). After any such exclusions, should the least remaining Quantity (Q_{uh}i) be greater than the Minimum Output (MINOUT_{uh}), then, for the purposes of the MSP Software, the Market Operator shall procure that the least remaining Price shall apply from the value of Minimum Output (MINOUT_{uh}) to the least remaining Quantity.
- 4.16 The Market Operator shall procure that the Price that shall apply at each level of Output for the calculation of MSP Production Cost, Schedule Production Cost or Dispatch Production Cost, shall be determined as follows:
1. for Generator Units that are not Interconnector Units, for levels of Output less than or equal to Quantity Q_{uh}1, Price P_{uh}1 applies;
 2. for Generator Units that are Interconnector Units, for levels of Output less than or equal to Offered Modified Quantity Q_{uh}1, Offered Modified Price P_{uh}1 applies;
 3. for Generator Units that are not Interconnector Units, for levels of Output greater than Quantity Q_{uh}(i-1) where i>1 and less than or equal to Quantity Q_{uh}i, Price (P_{uh}i) applies; and
 4. for Generator Units that are Interconnector Units, for levels of Output greater than Offered Modified Quantity Q_{uh}(i-1) where i>1 and less than or equal to Offered Modified Quantity Q_{uh}i, Offered Modified Price (P_{uh}i) applies.
- 4.17 Each Participant shall ensure that the Commercial Offer Data submitted within any Gate Window in respect of each of its Generator Units shall include one No Load Cost which is applicable to all Trading Periods in the Trading Day. The Accepted No Load Cost shall be treated as that element of operating cost, expressed as an hourly cost, that is invariant with the level of Output and incurred at all times when the level of Output is greater than zero.
- 4.18 Commercial Offer Data so submitted shall include a minimum of one and a maximum of three Start Up Costs which are applicable to each Trading Period in the Trading Day.
- 4.19 Each Cold Start Up Cost shall be greater than or equal to the relevant Warm Start Up Cost, and each Warm Start Up Cost shall be greater than or equal to the relevant Hot Start Up Cost.
- 4.20 Each Participant shall ensure that the Technical Offer Data submitted within any Gate Window in respect of each of its Generator Units shall include a Hot Cooling Boundary and a Warm Cooling Boundary, each of which is applicable to each Trading Period in the Trading Day and such that the Warm Cooling Boundary shall be greater than or equal to the Hot Cooling Boundary.
- 4.21 The Market Operator shall procure that, in the event that Commercial Offer Data submitted within any Gate Window comprises only a single Start Up

Cost, then this value will be used as the Hot Start Up Cost, the Warm Start Up Cost and the Cold Start Up Cost.

- 4.22 The Market Operator shall procure that, in the event that Commercial Offer Data submitted within any Gate Window comprises only a Cold Start Up Cost and a Hot Start Up Cost, then the value of the Cold Start Up Cost will be also used as the Warm Start Up Cost.
- 4.23 The Market Operator shall procure that, in the event that Commercial Offer Data submitted within any Gate Window comprises only a Cold Start Up Cost and a Warm Start Up Cost, then the value of the Warm Start Up Cost will also be used as the Hot Start Up Cost.
- 4.24 The Market Operator shall procure that, in the event that Commercial Offer Data submitted within any Gate Window comprises only a Warm Start Up Cost and a Hot Start Up Cost, then the value of the Warm Start Up Cost will also be used as the Cold Start Up Cost.

Technical Offer Data

- 4.25 The required Data Records which must be included in the Technical Offer Data are set out in Appendix I “Offer Data”.
- 4.26 Each Participant shall use reasonable endeavours to ensure that all data items submitted as part of Technical Offer Data within any Gate Window, in respect of each of its Generator Units are accurate and reflect the real capabilities of the relevant Generator Unit at the point where the Unit is Connected, net of Unit Load and with due regard for the impact of forecast ambient conditions on that Generator Unit.
- 4.27 Each Participant shall use reasonable endeavours to ensure that Technical Offer Data (including Default Data) submitted in respect of each of its Generator Units within any Gate Window shall be consistent with data which is submitted under the applicable Grid Code in respect of the relevant Unit, provided that Technical Offer Data submitted under this Code must be net of Unit Load and shall not be scaled by any Distribution Loss Adjustment Factor.
- 4.28 Each Participant shall ensure that the Forecast Availability Profile submitted in respect of each of its Generator Units within any Gate Window shall contain the Participant's forecast of average level of Availability, in MW, for the Generator Unit for each Trading Period in the Optimisation Time Horizon in respect of the relevant Trading Day. The forecast Availability values can be positive, but cannot be negative. In the case of Dual Rated Generator Unit, the value of the Forecast Availability Profile, with respect to the relevant Dual Rated Generator Unit, shall be capped on a per Trading Period basis by its Dual Rated Limit, prior to submission to the Market Operator.
- 4.29 The Forecast Minimum Output Profile, submitted within any Gate Window, shall contain the Participant's forecast of the average level of Minimum Output, in MW, for the Generator Unit for each Trading Period in the Optimisation Time Horizon in respect of the relevant Trading Day. The forecast Minimum Output values must be zero except as otherwise specified in Section 5.
- 4.30 The Forecast Minimum Stable Generation Profile, submitted within any Gate Window, shall contain the Participant's forecast of the average level of Minimum Stable Generation, in MW, for the Generator Unit for each Trading

Period in the Optimisation Time Horizon in respect of the relevant Trading Day. The forecast Minimum Stable Generation values can be positive but cannot be negative.

PROVISION OF FORECAST DATA BY THE SYSTEM OPERATORS

- 4.31 Each System Operator shall submit to the Market Operator the following forecast values pertaining to its Jurisdiction in accordance with Appendix K “Market Data Transactions”:
1. Annual Load Forecast;
 2. Monthly Load Forecast;
 3. Four Day Load Forecast; and
 4. Wind Power Unit Forecast.
- 4.32 The Market Operator shall calculate values of Annual Combined Load Forecast (ACLFh) for each Trading Period h within the relevant Year as the sum of the submitted values of the Annual Load Forecast for each Jurisdiction within 5 Working Days of receipt of the Annual Load Forecast Data from every System Operator.

Net Output Function

- 4.33 Each System Operator, each Meter Data Provider and each Participant shall provide all values expressed in MW, MW/min or MWh that are used in the MSP Software or in Settlement or referred to in Sections 4, 5 or 6 of the Code, net of Unit Load.
- 4.34 The Net Output Function is a linear transformation that shall be used by each System Operator to convert values relating to Gross Output to values that are net of Unit Load.
- 4.35 The Net Output Function and its application are set out below. If XGu is a quantity gross of Unit Load at the relevant time, then XNu is the quantity net of Unit Load, pertaining to a Generator Unit u at that time, calculated as follows:

$$XNu = ULSu \times XGu - FULu$$

Where

1. $FULu$ is the Fixed Unit Load for Generator Unit u for the relevant time;
 2. $ULSu$ is the Unit Load Scalar for Generator Unit u for the relevant time.
- 4.36 Each System Operator shall ensure that, with the exception of Pumped Storage Units, Interconnector Units, Interconnector Residual Capacity Units, Netting Generator Units and Interconnector Error Units, the results of applying the Net Output Function shall be positive and shall be set to zero if negative.
- 4.37 Each Participant shall register the values of Fixed Unit Load ($FULu$) and Unit Load Scalar ($ULSu$) in respect of each of its Generator Units in accordance with Appendix H “Participant and Unit Registration and Deregistration” as part of Unit Registration, such that $FULu \geq 0$ and $0 \leq ULSu \leq 1$.
- 4.38 The relevant System Operator shall convert the following values using the Net Output Function to represent values net of Unit Load:

1. Outturn Availability;
2. Outturn Minimum Output;
3. Outturn Minimum Stable Generation; and
4. Dispatch Instructions.

TRADING BOUNDARY AND TREATMENT OF LOSSES

- 4.39 All trading under the Code is deemed to take place at the Trading Boundary. Notwithstanding any provisions in relation to VAT as agreed with the Revenue Authorities, each Participant with Units delivering energy (or, in the case of Demand Side Units, a reduction of demand) to the Pool is deemed to be selling to all Participants with Units taking energy from the Pool and each Participant with Units taking energy from the Pool is deemed to be buying from all Participants with Units delivering energy to the Pool.
- 4.40 In submitting data relating to any Generator Unit (other than a Demand Side Unit) that is Distribution Connected and for which the Distribution System Operator provides the Metered Generation data, the Distribution System Operator shall provide that all Meter Data values shall first have been scaled by the appropriate Distribution Loss Adjustment Factor.
- 4.41 At least four months before the start of each Tariff Year, each System Operator shall submit to the Regulatory Authorities a set of Transmission Loss Adjustment Factors for each Generator Unit (other than Demand Side Units and Interconnector Units) that is Connected within its Jurisdiction and each Interconnector linked to that Jurisdiction, calculated in co-operation with the System Operator in the other Jurisdiction and in accordance with the statutory and Licence requirements pertaining within its Jurisdiction, for each Trading Period in the Tariff Year. Such Interconnector loss factors shall be applicable to each Interconnector Unit, Interconnector Error Unit and Reserve Capacity Unit registered to the relevant Interconnector.
- 4.41A The Transmission Loss Adjustment Factors for an Interconnector shall incorporate Transmission Losses incurred on the relevant Interconnector as estimated by the System Operator in consultation with the Interconnector Owner. The System Operator shall incorporate the estimated Transmission Losses incurred on the Interconnector into the Transmission Loss Adjustment Factors having regard to its expectation of the pre-dominant direction of flow on the Interconnector in the relevant Trading Period.
- 4.41B At least three months before the start of each Tariff Year, each Distribution System Operator shall provide the relevant System Operator with a set of Distribution Loss Adjustment Factors for each Generator Unit that is Distribution Connected within its Jurisdiction, calculated in accordance with the statutory and Licence requirements pertaining within its Jurisdiction, for each Trading Period in the Tariff Year, and including the relevant supporting information to enable the System Operator to calculate the corresponding Combined Loss Adjustment Factors.
- 4.42 At least two months before the start of each Tariff Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later, each System Operator shall provide to the Market Operator in accordance with Appendix K "Market Data Transactions" the System Parameters Data Transaction which shall comprise a complete set of Combined Loss Adjustment Factors for each Generator Unit (other than Demand Side Units and Interconnector Units) Connected within its

Jurisdiction, and each Interconnector linked to that Jurisdiction, for each Trading Period in that Tariff Year.

4.42A At least two months before the start of each Tariff Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later, each System Operator shall provide the Market Operator with a complete set of Transmission Loss Adjustment Factors for each Generator Unit (other than Demand Side Units) that is Connected within its Jurisdiction for each Trading Period in that Tariff Year in accordance with those prepared and submitted to the Regulatory Authorities under paragraph 4.41.

4.42B At least two months before the start of each Tariff Year each System Operator shall provide the Market Operator with a complete set of Distribution Loss Adjustment Factors for each Generator Unit (other than Demand Side Units) that is Distribution Connected within its Jurisdiction for each Trading Period in that Tariff Year.

4.43 The Market Operator shall publish the approved Combined Loss Adjustment Factor value(s) within 5 Working Days of receipt of the System Parameters Data Transaction.

4.43A The Market Operator shall publish the approved Distribution Loss Adjustment Factor value(s) and Transmission Loss Adjustment Factor value(s) within 5 Working Days of receipt of the Loss Adjustment Factors Data Transaction.

4.44 The Transmission Loss Adjustment Factor (TLAF_v) shall be equal to 1 for each Supplier Unit v.

4.44A The Combined Loss Adjustment Factor CLAF_h for each Generator Unit u in Trading Period h shall be calculated by the relevant System Operator as follows:

$$CLAF_h = \text{round}(TLAF_h \times DLAFL_h)$$

Where round(x) is a function that rounds x to 3 decimal places.

4.44B The Combined Loss Adjustment Factor CLAF_{vh} for each Supplier Unit v in Trading Period h shall be set equal to 1.

4.45 Within this Code, the term 'Loss-Adjusted' applied to any variable, or the inclusion of letters 'LF' at the end of any variable term denotes that a value is to be calculated at the Trading Boundary, through application of the relevant Combined Loss Adjustment Factor as set out in Section 4, Section 5 and Section 6 of this Code.

4.46 Except for Loss-Adjusted Capacity Payments Eligible Availability (CPEALF_h) which are calculated in accordance with paragraph 4.111, then any variable which relates to a Generator Unit u in a Trading Period h, where XXX_{uh} is the variable before application of Transmission Losses and Distribution Losses, and XXXLF_h is the variable after application of Transmission Losses and Distribution Losses, shall be calculated as follows:

$$XXXLF_h = XXX_{uh} \times CLAF_h$$

Where

1. CLAF_h is the Combined Loss Adjustment Factor for Generator Unit u in Trading Period h.

4.47 Except for Error Supplier Units, for which the Loss-Adjusted Net Demand (NDLF_{v'h}) shall be calculated in accordance with paragraph 4.91, then any variable which relates to a Supplier Unit v in a Trading Period h, where

XXXvh is the variable before application of Transmission Losses and Distribution Losses, and XXXLFvh is the variable after application of Transmission Losses and Distribution Losses, shall be calculated as follows:

$$\text{XXXLFvh} = \text{XXXvh} \times \text{CLAFvh}$$

Where

1. CLAFvh is the Combined Loss Adjustment Factor for Supplier Unit v in Trading Period h.

AVAILABILITY, MINIMUM STABLE GENERATION AND MINIMUM OUTPUT

- 4.48 Each System Operator shall submit to the Market Operator the Generator Unit Technical Characteristics, consisting of Outturn Minimum Stable Generation, Outturn Availability and Outturn Minimum Output, in respect of each Generator Unit, which is Dispatchable, registered within its Currency Zone, for the previous Trading Day, in accordance with Appendix K “Market Data Transactions”. In the case of a Dual Rated Generator Unit, the Outturn Availability submitted to the Market Operator shall include declarations for both Primary and Secondary Fuel Types, the Primary Fuel Type Outturn Availability and Secondary Fuel Type Outturn Availability respectively. In addition, a Rating Flag shall be submitted to denote whether a Dual Rated Generator Unit is operating using its Primary or Secondary Fuel Type.
- 4.49 The Market Operator shall calculate time-weighted average values of Minimum Stable Generation (MINGEN_{uh}), Availability Profile (AP_{uh}) and Minimum Output (MINOUT_{uh}) in respect of each Generator Unit u (with the exception of each Interconnector Unit, Interconnector Error Unit, Interconnector Residual Capacity Unit, Autonomous Generator Unit and Netting Generator Unit) in each Trading Period h as follows:
1. The time-weighted average Minimum Stable Generation (MINGEN_{uh}) for Trading Period h is the sum (over all Outturn Minimum Stable Generation values for Generator Unit u that apply during Trading Period h of the product of each Outturn Minimum Stable Generation value for Generator Unit u and the proportion of the Trading Period for which that Outturn Minimum Stable Generation value applies.
 2. The time-weighted average Availability Profile (AP_{uh}) for Trading Period h is the sum over all Outturn Availability values for Generator Unit u that is not a Dual Rated Generator Unit that apply during Trading Period h of the product of each Outturn Availability value for Generator Unit u and the proportion of the Trading Period for which that Outturn Availability value applies.
 3. In the case of a Dual Rated Generator Unit, the time-weighted average Availability Profile (AP_{uh}) for Trading Period h is the sum over all Outturn Availability values for Generator Unit u that apply during Trading Period h of the product of each Outturn Availability value for Dual Rated Generator Unit u and the proportion of the Trading Period for which that Outturn Availability value applies. The value of Outturn Availability used on a per minute basis is the maximum of the Primary Fuel Type Outturn Availability value and the Secondary Fuel Type Outturn Availability value.
 4. The time-weighted average Minimum Output (MINOUT_{uh}) for Trading Period h is the sum over all Outturn Minimum Output values for Generator Unit u that apply during Trading Period h of the product of each Outturn

Minimum Output value for Generator Unit u and the proportion of the Trading Period for which that Outturn Minimum Output value applies.

- 4.50 For the purposes of the MSP Software and for the purposes of Ex-Post Indicative Settlement, certain interim values, including Availability Profile (AP_{uh}), Minimum Stable Generation ($MINGEN_{uh}$), Minimum Output ($MINOUT_{uh}$), Metered Generation (MG_{uh}), Metered Demand (MD_{vh}), Dispatch Quantity (DQ_{uh}) and other elements of Commercial Offer Data and Technical Offer Data are required, in relation to the relevant Generator Units. The derivation of these values is set out in Appendix N “Operation of the MSP Software”.

Actual Availability

- 4.51 The Market Operator shall calculate the Actual Availability (AA_{uh}) for each Trading Period, as set out below.

Actual Availability for Generator Units with no Non-Firm Access

- 4.52 For each Generator Unit u with no Non-Firm Access that is not a Netting Generator Unit, and is not a Dual Rated Generator Unit, the Actual Availability (AA_{uh}) for each Trading Period shall be calculated as follows:

$$AA_{uh} = AP_{uh}$$

Where

1. AP_{uh} is the Availability Profile for Generator Unit u in Trading Period h .

- 4.52A For each Dual Rated Generator Unit u , the Actual Availability (AA_{uh}) for each Trading Period shall be calculated as the sum over all Outturn Availability values for Dual Rated Generator Unit u that apply during Trading Period h of the product of each Outturn Availability value for Dual Rated Generator Unit u and the proportion of the Trading Period for which that Outturn Availability value applies where the Outturn Availability equals the Primary Fuel Type Outturn Availability when the Rating Flag denotes the Primary Fuel Type and the Outturn Availability equals the Secondary Fuel Type Outturn Availability when the Rating Flag denotes the Secondary Fuel Type.

Actual Availability for Generator Units with Non-Firm Access

- 4.53 For each Generator Unit u with Non-Firm Access, the Actual Availability (AA_{uh}) for each Trading Period shall be calculated as set out below:

Step 1: The Firm Access Quantity (FAQ_{uh}) for each Generator Unit u in Trading Site s with Non-Firm Access in Trading Period h shall be calculated as follows:

$$\text{if } \sum_{u \text{ in } s} AP_{uh} = 0 \text{ then}$$

$$FAQ_{uh} = 0$$

else

$$FAQ_{uh} = \left(FAQ_{Sst} + \frac{MD_{vh}}{TPD} \right) \times \frac{AP_{uh}}{\sum_{u \text{ in } s} AP_{uh}}$$

Where

1. FAQuh is the Firm Access Quantity of Generator Unit u in Trading Period h;
2. FAQSst is the Firm Access Quantity of Trading Site s in each Trading Period h within Trading Day t;
3. MDvh in Trading Period h is the Metered Demand for Supplier Unit v where v is the Trading Site Supplier Unit for the Trading Site s, or otherwise zero for any Supplier Unit v that is not a Trading Site Supplier Unit for the Trading Site;
4. APuh is the Availability Profile for Generator Unit u in Trading Period h;
5. $\sum_{u \in s}$ is a summation over all Generator Units u in Trading Site s, except the Netting Generator Unit;
6. TPD is the Trading Period Duration.

Step 2: The Access Quantity (AQuh) shall be calculated as follows:

$$AQ_{uh} = \text{Min}\{AP_{uh}, \text{Max}\{FAQ_{uh}, DQ_{uh}\}\}$$

Step 3: The Site Access Quantity (SAQsh) for each Trading Site s which has Generator Units with Non-Firm Access in Trading Period h, shall be calculated as follows:

$$SAQ_{sh} = \text{Min}\left\{\sum_{u \in s} AP_{uh}, \text{Max}\left\{FAQ_{Sst} + \frac{MD_{vh}}{TPD}, \sum_{u \in s} DQ_{uh}\right\}\right\}$$

Step 4: The Actual Availability (AAuh) for each Generator Unit u with Non-Firm Access in Trading Period h shall be calculated as follows:

$$\text{if } \sum_{u \in s} (AQ_{uh} - DQ_{uh}) = 0 \text{ then}$$

$$AA_{uh} = AQ_{uh}$$

else

$$AA_{uh} = AQ_{uh} - \left(\frac{(AQ_{uh} - DQ_{uh})}{\sum_{u \in s} (AQ_{uh} - DQ_{uh})} \right) \times \left(\sum_{u \in s} AQ_{uh} - SAQ_{sh} \right)$$

ELIGIBLE AVAILABILITY FOR CAPACITY PAYMENTS

- 4.54 The values of Eligible Availability (EAuh) for use within the determination of Capacity Payments will be taken from the values of Availability Profile (APuh), which are calculated by the Market Operator from Availability data submitted by the relevant System Operator. The Market Operator shall calculate the values of Availability Profile (APuh) in relation to the Availability of the Generator Unit without consideration of access limitations. The Market

Operator shall calculate the Eligible Availability (EA_{uh}) for each Generator Unit u in Trading Period h as follows:

$$EA_{uh} = AP_{uh}$$

Where

1. AP_{uh} is the Availability Profile for Generator Unit u in Trading Period h.

DISPATCH QUANTITY

- 4.55 Each System Operator shall submit to the Market Operator the Dispatch Instructions in respect of each Generator Unit which is Dispatchable and is registered within its Currency Zone, and may submit an associated Ramp Rate for each Dispatch Instruction. Each System Operator shall submit this information to the Market Operator in accordance with Appendix K “Market Data Transactions”, based on Outturn Data, and the values submitted shall be net of Unit Load.
- 4.56 The Market Operator shall, in accordance with Appendix O “Instruction Profiling Calculations”, determine the Dispatch Quantity (DQ_{uh}) for each Generator Unit u in Trading Period h from the Dispatch Instructions submitted by the relevant System Operator.

Maximisation Instructions

- 4.57 The relevant System Operator may issue a Maximisation Instruction to maximise the Output of a Generator Unit under the terms of the Grid Code. Where a System Operator issues a Maximisation Instruction in respect of a Generator Unit, that Generator Unit will be treated as subject to Maximisation in the relevant Trading Period or Trading Periods as set out within Appendix O “Instruction Profiling Calculations”. The values for Outturn Availability which are submitted to the Market Operator by the System Operator or the values of Availability Profile (AP_{uh}) which are calculated by the Market Operator for that Generator Unit u for those Trading Periods h will not be revised upwards to reflect the Short-Term Maximisation Capability (STMCut) for Generator Unit u within Trading Day t.
- 4.58 In any Trading Period when a Generator Unit is treated as being subject to Maximisation in accordance with Appendix O “Instruction Profiling Calculations”, the Market Operator shall calculate the revised Dispatch Quantity (DQ’_{uh}) as follows:

Under a Maximisation Instruction,

$$DQ'_{uh} = \text{Max} \left\{ DQ_{uh}, \text{Min} \left\{ STMCut, \frac{MG_{uh}}{TPD} \right\} \right\}$$

Where

1. DQ’_{uh} is the revised Dispatch Quantity in respect of Generator Unit u which is treated as being subject to Maximisation in Trading Period h;
2. DQ_{uh} is the Dispatch Quantity for Generator Unit u in Trading Period h prior to revision, as calculated by the Market Operator in accordance with Appendix O “Instruction Profiling Calculations”;
3. TPD is the Trading Period Duration;

4. MGuh is the Metered Generation for Generator Unit u in Trading Period h;
 5. STMCut is the Short-Term Maximisation Capability for Generator Unit u for Trading Day t, which applies for all Trading Periods within that Trading Day.
- 4.59 The revised Dispatch Quantity (DQ'uh) may at such times exceed both the Registered Capacity (RCu) and the Availability Profile (APuh) for the relevant Generator Unit.
- 4.60 In the event that the revised Dispatch Quantity (DQ'uh) calculated pursuant to paragraph 4.58 exceeds the greatest Accepted Quantity (Quhi), then the revised Dispatch Quantity (DQ'uh) shall be used in place of the greatest Accepted Quantity (Quhi) in all other relevant calculations under this Code.

PRICING ALGORITHM

The MSP Software

- 4.61 Within this Code, where a run of the MSP Software is associated with a Trading Day, it means the Trading Day that is entirely within the relevant Optimisation Time Horizon.
- 4.62 The Market Operator shall perform the Ex-Ante Indicative MSP Software Run for each Trading Day and shall create the Ex-Ante Indicative Market Schedule and ex-ante indicative values for System Marginal Price for each Trading Period in that Trading Day within one hour of Gate Closure for that Trading Day.
- 4.63 The Market Operator shall perform the Ex-Post Indicative MSP Software Run for each Trading Day and shall create the Ex-Post Indicative Market Schedule and the indicative ex-post values for System Marginal Price for each Trading Period in that Trading Day by 16:00 on the day after the start of the relevant Trading Day.
- 4.64 The Market Operator shall perform the Ex-Post Initial MSP Software Run for each Trading Day and shall create the Ex-Post Initial Market Schedule and the values for System Marginal Price for each Trading Period in that Trading Day by 16:00 four days after the start of the relevant Trading Day.
- 4.65 The Market Operator shall perform additional Ex-Post Initial MSP Software Runs as required for Settlement purposes in accordance with the Code.
- 4.66 The Market Operator shall ensure that the MSP Software operates in accordance with the Code including on the basis of the principles set out below and as further specified within Appendix N "Operation of the MSP Software".
- 4.67 The high level objective of each run of the MSP Software when producing a Unit Commitment Schedule or Market Schedule Quantities, as set out in more detail within Appendix N "Operation of the MSP Software", is to minimise the aggregate sum of MSP Production Costs for all Price Maker Generator Units over a given Optimisation Time Horizon, subject to the following constraints:
1. to schedule Output by Price Maker Generator Units to match, in aggregate, Schedule Demand (as set out within Appendix N "Operation of the MSP Software" for the relevant run of the MSP

- Software) in each Trading Period within the Optimisation Time Horizon;
2. to schedule each Price Maker Generator Unit at a level of Output between its Minimum Output and its Availability; and
 3. to schedule each Price Maker Generator Unit within the additional Technical Capabilities given within its Minimum Stable Generation and Technical Offer Data, including Ramp Rates, Minimum On Times and Minimum Off Times, with consideration given to the Warmth State.
- 4.68 The overall objective for that part of the MSP Software which calculates Uplift is to set the System Marginal Price to reflect the marginal cost of producing or consuming electricity during the Optimisation Time Horizon, subject to balancing the following supplementary objectives and as set out in further detail within Appendix N “Operation of the MSP Software”:
1. energy prices should be reflective of underlying market dynamics; consequently the recovery of Start Up Costs and No Load Costs through SMP should not deviate significantly from the Shadow Prices (the Uplift Profile Objective); and
 2. the revenue paid through Uplift revenues should be minimised (the Uplift Cost Objective).
- 4.69 The calculation of Uplift is subject to the constraint that the Schedule Production Cost for each Price Maker Generator Unit during a Contiguous Operation Period should be recovered through SMP within that period of operation, subject to the detailed specification within Appendix N “Operation of the MSP Software”.
- 4.70 The following three input parameters that are to be used in the calculation of Uplift in each Year shall be determined by the Regulatory Authorities 4 months in advance of that Year:
1. The Uplift Alpha value α , which governs the importance of the Uplift Cost Objective, such that $0 \leq \alpha \leq 1$;
 2. The Uplift Beta value β , which governs the importance of the Uplift Profile Objective, such that $0 \leq \beta \leq 1$ and such that $\alpha + \beta = 1$; and
 3. The Uplift Delta value δ , to constrain the overall impact on revenue in each Trading Day t arising from the Uplift calculation, such that $\delta \geq 0$.
- 4.71 The Market Operator shall publish the approved values of Uplift Alpha, Uplift Beta and Uplift Delta within 5 Working Days of receipt of the Regulatory Authorities' determination or four months before the start of the Year to which they shall apply whichever is the later.
- 4.72 The Market Operator shall procure that, except for the treatment of Generator Units with Non-Firm Access, the MSP Software shall not take explicit account of the topology of the Transmission System or any requirements for reserve.
- 4.73 An Insufficient Capacity Event occurs for a Trading Period within a run of the MSP Software for a Trading Period where the MSP Software identifies that the Schedule Demand in that Trading Period cannot be met in full by Price Maker Generator Units. The Market Operator shall procure that, in respect of each Insufficient Capacity Event, the balance of Schedule Demand shall

be met by a notional generator which is not further used in Settlement, so that Market Schedule Quantities can be determined for other Generator Units.

- 4.74 An Excessive Generation Event occurs for a Trading Period where Schedule Demand in that Trading Period is less than the sum of the Market Schedule Quantities for Price Maker Generator Units as calculated by the MSP Software in that Trading Period.
- 4.75 The MSP Software shall be deemed to produce a Valid MSP Solution when each of the following conditions is met:
1. the run of the MSP Software produces the required set of Market Schedule Quantities and System Marginal Prices in accordance with this Code, including for Trading Periods in which an Insufficient Capacity Event or an Excessive Generation Event has occurred. In the event of an Insufficient Capacity Event, Market Schedule Quantities for Price Maker Generator Units and System Marginal Prices shall be calculated in accordance with paragraph 4.79, and in the event of an Excessive Generation Event, Market Schedule Quantities for Price Maker Generator Units and System Marginal Prices shall be calculated in accordance with paragraph 4.80;
 2. no Price Maker Generator Unit is scheduled inconsistently with its Technical Capabilities, with the exception that:
 - a. where there is no Preceding MSP Run to determine the starting conditions for a Generator Unit then the Market Operator must employ reasonable endeavours to populate surrogate data that best reflects its understanding of the starting conditions of the Generator Unit at that time;
 - b. if Technical Capabilities applying to a Generator Unit within a run of the MSP Software are incompatible with the initial operating level of that Generator Unit, then the MSP Software may disregard limits on Ramp Rates in the first period of the Trading Day for that Generator Unit;
 - c. if Technical Capabilities applying to a Generator Unit within a run of the MSP Software are internally inconsistent so as to allow no possible solution for that Generator Unit, then the MSP Software may disregard one or more Technical Capability limits as required to allow a solution to be found for that Generator Unit.

Tie-Break Situations

- 4.76 The Market Operator shall procure that, in the event of a Tie-Break, the MSP Software will resolve the order in which Generator Units are scheduled using a systematic process of random selection which may include making small alterations to the submitted Prices of the Price Maker Generator Units concerned. Such amended prices shall only be used in the calculation of System Marginal Price and Market Schedule Quantities within the MSP Software for the purposes of the Tie-Break concerned, as set out within Appendix N "Operation of the MSP Software". The systematic process of random selection shall be capable of being repeated, should that be necessary, to effect the same selection.

Calculation of SMP

- 4.77 The Market Operator shall calculate the System Marginal Price (SMP_h) using the MSP Software for each Trading Period *h* using the methodology specified in Appendix N “Operation of the MSP Software”.
- 4.78 The Market Operator shall procure that, except in Trading Periods where the Market Price Cap (PCAP) applies, the System Marginal Price (SMP_h) shall allow the recovery of the Start Up Costs and No Load Costs of Price Maker Generator Units (except Interconnector Units and Pumped Storage Units) that are scheduled to generate within that run of the MSP Software. Each Price Maker Generator Unit (except Interconnector Units and Pumped Storage Units) shall recover the Start Up Costs and No Load Costs that it incurred in each Contiguous Operation Period. However, System Marginal Price (SMP_h) will not necessarily allow for the recovery of all of the running costs incurred by scheduled Generator Units in all circumstances.
- 4.79 The Market Operator shall procure that, for any Trading Period when an Insufficient Capacity Event has occurred within a run of the MSP Software in accordance with paragraph 4.73 above, then the results of that run of the MSP Software for that Trading Period shall be determined as follows:
1. the System Marginal Price (SMP_h) for that Trading Period *h* shall be set equal to the Market Price Cap (PCAP); and
 2. the Market Schedule Quantities for each Price Maker Generator Unit shall be as calculated within that run of the MSP Software.
- 4.80 The Market Operator shall procure that, for any Trading Period *h* when an Excessive Generation Event has occurred in accordance with Paragraph 4.74 above, then the results of that run of the MSP Software for that Trading Period shall be determined as follows:
1. the System Marginal Price (SMP_h) in the relevant Trading Periods *h* shall be set to equal the Market Price Floor (PFLOOR); and
 2. the Market Schedule Quantities for each Price Maker Generator Unit shall be as calculated within that run of the MSP Software.
- 4.81 In the event that the System Marginal Price (SMP_h) is calculated to exceed the Market Price Cap (PCAP), the System Marginal Price (SMP_h) in the Trading Period (SMP_h) will be set to equal the Market Price Cap (PCAP).
- 4.82 In the event that the System Marginal Price (SMP_h) is calculated to fall below the Market Price Floor (PFLOOR), the System Marginal Price (SMP_h) in the Trading Period *h* will be set to equal the Market Price Floor (PFLOOR).
- 4.82A The value of the Residual Meter Volume Interval Proportion for Year *y* (RMVIP_y) shall be determined by the Regulatory Authorities, four months in advance of the period to which the value relates.
- 4.82B The Market Operator shall publish the approved value of the Residual Meter Volume Interval Proportion within 5 Working Days of receipt of the Regulatory Authorities' determination or four months before the start of the Year or the period to which it shall apply, whichever is the later.

DERIVATION OF QUANTITIES USED IN SETTLEMENT

Trading Sites with a Trading Site Supplier Unit

- 4.83 The Market Operator shall procure that the Eligible Netting Quantity (ENQsh) for each Trading Site s with a Trading Site Supplier Unit v in Trading Period h shall be calculated as follows:

$$ENQ_{sh} = \text{Min} \left\{ \left(\sum_{u \text{ in } s} \text{Min} \left\{ DQ_{uh}, \frac{MG_{uh}}{TPD} \right\} \right) \frac{MD_{vh}}{TPD} \right\}$$

Where

1. DQ_{uh} is the Dispatch Quantity in respect of Generator Unit u in Trading Period h;
2. MG_{uh} is the Metered Generation for Generator Unit u in Trading Period h;
3. MD_{vh} is the Metered Demand of Trading Site Supplier Unit v in Trading Period h;
4. TPD is the Trading Period Duration;
5. the summation $\sum_{u \text{ in } s}$ is over all Generator Units u in Trading Site s excluding the Netting Generator Unit.

- 4.84 The Market Operator shall procure that, for a Trading Site Supplier Unit v that is within a Trading Site s, the Net Demand in Trading Period h (NDvh) shall be calculated as follows:

$$ND_{vh} = MD_{vh} - (ENQ_{sh} \times TPD)$$

Where

1. ENQ_{sh} is the Eligible Netting Quantity for the relevant Trading Site s in Trading Period h;
2. MD_{vh} is the Metered Demand for Trading Site Supplier Unit v in Trading Period h;
3. TPD is Trading Period Duration.

Trading Sites with an Associated Supplier Unit

- 4.85 The Market Operator shall calculate the Eligible Netting Quantity (ENQsh) for each Trading Site s with an Associated Supplier Unit v in Trading Period h as follows:

$$ENQ_{sh} = \text{Min} \left\{ \left(\sum_{u \text{ in } s} \text{Min} \left\{ DQ_{uh}, \frac{MG_{uh}}{TPD} \right\} \right) \right\}$$

Where

1. DQ_{uh} is the Dispatch Quantity at Generator Unit u in Trading Period h;
2. MG_{uh} is the Metered Generation at Generator Unit u in Trading Period h;
3. TPD is the Trading Period Duration;

4. the summation $\sum_{u \text{ in } s}$ is over all Generator Units u in Trading Site s excluding the Netting Generator Unit.

- 4.86 The Market Operator shall procure that, for each Supplier Unit v which is an Associated Supplier Unit to one or more Trading Sites s , the Net Demand (ND $_{vh}$) in Trading Period h shall be calculated as follows:

$$ND_{vh} = MD_{vh} - \left(\sum_{s \text{ with } v} (ENQ_{sh} \times TPD) \right)$$

Where

1. ENQ $_{sh}$ is the Eligible Netting Quantity for the relevant Trading Site s in Trading Period h ;
2. MD $_{vh}$ is the Metered Demand at Supplier Unit v in Trading Period h ;
3. TPD is Trading Period Duration;
4. the summation $\sum_{s \text{ with } v}$ is over all Trading Sites for which the Supplier Unit v is an Associated Supplier Unit.

Netting Generator Unit calculations

- 4.87 The Market Operator shall procure that, for each Netting Generator Unit u' at a Trading Site s (either with a Trading Site Supplier Unit or an Associated Supplier Unit), the Metered Generation (MG $_{u'h}$), Dispatch Quantity (DQ $_{u'h}$) and Market Schedule Quantity (MSQ $_{u'h}$) in Trading Period h shall be calculated as follows:

$$MG_{u'h} = -ENQ_{sh} \times TPD$$

$$MSQ_{u'h} = -ENQ_{sh}$$

$$DQ_{u'h} = -ENQ_{sh}$$

Where

1. ENQ $_{sh}$ is the Eligible Netting Quantity for Trading Site s in Trading Period h ;
2. TPD is the Trading Period Duration.

- 4.88 The Market Operator shall procure that, for each Netting Generator Unit u' at a Trading Site s (either with a Trading Site Supplier Unit or an Associated Supplier Unit), the Eligible Availability (EA $_{u'h}$) in Trading Period h shall be calculated as follows:

$$EA_{u'h} = -ENQ_{sh} + \sum_{u \text{ in } s} \left(\text{Min} \left\{ \left(\text{Min} \left\{ DQ_{uh}, \frac{MG_{uh}}{TPD} \right\} - MINOUT_{uh} \right) 0 \right\} \right)$$

Where

1. ENQ $_{sh}$ is the Eligible Netting Quantity for Trading Site s in Trading Period h ;
2. DQ $_{uh}$ is the Dispatch Quantity at Generator Unit u in Trading Period h ;

3. MG_{uh} is the Metered Generation at Generator Unit *u* in Trading Period *h*;
4. TPD is the Trading Period Duration;
5. MINOUT_{uh} is the Minimum Output for Generator Unit *u* in Trading Period *h*;
6. $\sum_{u \in s}$ is a summation over all Generator Units *u* in Trading Site *s* excluding the Netting Generator Unit.

4.89 The Market Operator shall procure that, for each Netting Generator Unit *u*', the Combined Loss Adjustment Factor (CLAF_{u'h}) shall be calculated as follows:

$$\begin{aligned}
 & \text{if } \sum_{u \in s} RC_u \neq 0 \text{ then} \\
 & \quad CLAF_{u'h} = \frac{\left(\sum_{u \in s} CLAF_{uh} \times RC_u \right)}{\sum_{u \in s} RC_u} \\
 & \text{else } CLAF_{u'h} = \text{Max}(\{CLAF_{uh}\} \forall u \in s)
 \end{aligned}$$

Where

1. CLAF_{uh} is the Combined Loss Adjustment Factor for Generator Unit *u* in Trading Period *h*;
2. RC_u is the Registered Capacity of Generator Unit *u*;
3. the summation $\sum_{u \in s}$ is over all Generator Units *u* (not including the Netting Generator Unit) in Trading Site *s* (to which the Netting Generator Unit is registered);
4. the expression $\text{Max}(\{CLAF_{uh}\} \forall u \in s)$ denotes the highest Combined Loss Adjustment Factor (CLAF_{uh}) of each Generator Unit *u* in Trading Site *s* (excluding the Netting Generator Unit) in Trading Period *h*.

Actual Output for Generator Units

4.90 The Market Operator shall procure that, for each Generator Unit *u* in each Trading Period *h*, the value of Actual Output (AO_{uh}) shall be calculated as follows:

$$AO_{uh} = \frac{MG_{uh}}{TPD}$$

Where

1. MG_{uh} is the Metered Generation for Generator Unit *u* in Trading Period *h*;
2. TPD is the Trading Period Duration.

Error Supplier Units

- 4.91 The Market Operator shall procure that, for each Jurisdiction e, the Loss-Adjusted Net Demand (NDLFeh) shall be calculated as follows:

$$NDLFeh = \sum_{u \text{ in } e} (MGuh) - \sum_{v \text{ in } e} (MDvh) + NIJleh$$

$$- \left(\sum_u (MGuh) - \sum_u (MGLFuh) + \sum_v (MDLFvh) - \sum_v (MDvh) \right) \times \left(\frac{\sum_{u \text{ in } e} (MGuh) + NIJleh}{\sum_e \sum_{u \text{ in } e} MGuh} \right)$$

Where

1. MGuh is the Metered Generation of Generator Unit u in Trading Period h;
2. MGLFuh is the Metered Generation, Loss-Adjusted, of Generator Unit u in Trading Period h;
3. $\sum_{u \text{ in } e}$ is a summation over all Generator Units u within Jurisdiction e excluding Netting Generator Units and Demand Side Units;
4. MDvh is the total Metered Demand of Supplier Unit v in Trading Period h;
5. MDLFvh is the total Metered Demand, Loss-Adjusted, of Supplier Unit v in Trading Period h;
6. $\sum_{v \text{ in } e}$ is a summation over all Supplier Units v within Jurisdiction e excluding the Error Supplier Unit;
7. NIJleh is the Net Inter-Jurisdictional Import to Jurisdiction e in Trading Period h, expressed in MWh.
8. \sum_u is a summation over all Generator Units u
9. \sum_v is a summation over all Supplier Units v
10. \sum_e is a summation over all Jurisdictions e

- 4.91A Where an Error Supplier Unit has been registered in Jurisdiction e in accordance with paragraph 2.59, the Loss-Adjusted Net Demand NDLFv'h shall be calculated as follows:

$$NDLFv'h = NDLFeh$$

Where

1. NDLFv'h is the Loss-Adjusted Net Demand for an Error Supplier Unit registered in Jurisdiction e.

2. $NDLF_{eh}$ is the Loss-Adjusted Net Demand for Jurisdiction e .

4.91B The Market Operator shall procure that the Loss-Adjusted Residual Error Volume ($REVL_{Feh}$) for each Jurisdiction e shall be calculated as follows:

If no Error Supplier Unit is registered in Jurisdiction e in accordance with paragraph 2.59,

$$REVL_{Feh} = NDL_{Feh}$$

Otherwise,

$$REVL_{Feh} = 0$$

Where

1. $NDLF_{eh}$ is the Loss-Adjusted Net Demand for Jurisdiction e .

Net Demand at Supplier Units

4.92 The Market Operator shall procure that, for all Supplier Units v , which are not Error Supplier Units, Trading Site Supplier Units or Associated Supplier Units, the Net Demand in Trading Period h (ND_{vh}) shall be calculated as follows:

$$ND_{vh} = MD_{vh}$$

Where

1. MD_{vh} is the Metered Demand at Supplier Unit v in Trading Period h .

Net Demand Adjustment at Supplier Units

4.92A The Market Operator shall procure that, for all Jurisdictions e , the Aggregated Interval Net Demand (AIN_{Deh}) in Trading Period h shall be calculated as follows:

$$AIN_{Deh} = \sum_{v \in e} [ND_{vh} \times (1 - NIEP_{vh})]$$

Where

1. ND_{vh} is the Net Demand for Supplier Unit v in Trading Period h .
2. $NIEP_{vh}$ is the Non Interval Energy Proportion for Supplier Unit v in Trading Period h .

4.92B The Market Operator shall procure that, for all Jurisdictions e , the Aggregated Non Interval Net Demand in Trading Period h ($ANIN_{Deh}$) shall be calculated as follows:

$$ANIN_{Deh} = \sum_{v \in e} [ND_{vh} \times NIEP_{vh}]$$

Where

1. ND_{vh} is the Net Demand for Supplier Unit v in Trading Period h .
2. $NIEP_{vh}$ is the Non Interval Energy Proportion for Supplier Unit v in Trading Period h .

4.92C The Market Operator shall procure that, for all Supplier Units v , the Net Demand Adjustment Factor in Trading Period h ($NDAF_{vh}$) shall be calculated as follows:

$$NDAF_{vh} = RMVIP_y \times \left[\frac{ND_{vh} \times [1 - NIEP_{vh}]}{AINDeh} \right] + (1 - RMVIP_y) \times \left[\frac{ND_{vh} \times NIEP_{vh}}{ANINDeh} \right]$$

Where

1. $RMVIP_y$ is the Residual Meter Volume Interval Proportion for Year y .
2. ND_{vh} is the Net Demand at Supplier Unit v in Trading Period h .
3. $NIEP_{vh}$ is the Non Interval Energy Proportion for Supplier Unit v in Trading Period h .

- 4.92D The Market Operator shall procure that, for all Supplier Units v , the Net Demand Adjustment in Trading Period h (NDA_{vh}) shall be calculated as follows:

$$NDA_{vh} = REVLFe_h \times NDAF_{vh}$$

Where

1. $REVLFe_h$ is the Loss-Adjusted Residual Error Volume for Jurisdiction e in Trading Period h .
2. $NDAF_{vh}$ is the Net Demand Adjustment Factor in Trading Period h .

Settlement Net Demand at Supplier Units

- 4.92E The Market Operator shall procure that, for all Supplier Units v , the Settlement Net Demand in Trading Period h (SND_{vh}) shall be calculated as follows:

$$SND_{vh} = ND_{vh} + NDA_{vh}$$

Where

1. ND_{vh} is the Net Demand at Supplier Unit v in Trading Period h .
2. NDA_{vh} is the Net Demand Adjustment for Supplier Unit v in Trading Period h .

ENERGY PAYMENTS AND ENERGY CHARGES

Energy Payments for Generator Units

- 4.93 The Market Operator shall procure that the Energy Payment (ENP_{uh}) payable in respect of each Generator Unit u for Trading Period h shall be calculated as follows:

$$ENP_{uh} = TPD \times MSQLF_{uh} \times SMP_h$$

Where

1. TPD is Trading Period Duration;
2. $MSQLF_{uh}$ is the Loss-Adjusted Market Schedule Quantity for Generator Unit u in Trading Period h ;
3. SMP_h is the System Marginal Price in Trading Period h .

Energy Charges to Supplier Units

- 4.94 The Market Operator shall procure that the Energy Charge (ENC_{vh}) recoverable in respect of each Supplier Unit v for Trading Period h shall be calculated as follows:

$$ENC_{vh} = SNDLF_{vh} \times SMP_h$$

Where

1. $SNDLF_{vh}$ is the Loss-Adjusted Settlement Net Demand from Supplier Unit v in Trading Period h ;
 2. SMP_h is the System Marginal Price in Trading Period h .
- 4.100 The Market Operator shall procure that Capacity Charges shall be levied in respect of Loss- Adjusted Settlement Net Demand at each Supplier Unit in each Trading Period as set out algebraically below.

CAPACITY PAYMENTS AND CAPACITY CHARGES

Parameters for the determination of Capacity Payments and Capacity Charges

- 4.95 No later than four months before the start of the first Capacity Period in each Year, the Regulatory Authorities shall consider and shall determine values, which will then be made available to the Market Operator, for the following parameters for the calculation of Capacity Payments and Capacity Charges for that Year:
1. Annual Capacity Payment Sum ($ACPS_y$);
 2. Capacity Period Payment Sum ($CPPS_c$) for each Capacity Period, such that the total of Capacity Period Payment Sums over the Year is equal to the Annual Capacity Payment Sum ($ACPS_y$);
 3. Fixed Capacity Payments Proportion ($FCPP_y$), such that $0 \leq FCPP_y \leq 1$;
 4. Ex-Post Capacity Payments Proportion ($ECPP_y$), such that $0 \leq ECPP_y \leq (1-FCPP_y)$; and
 5. The Value of Lost Load ($VOLL$).
- 4.96 The Market Operator shall make a report to the Regulatory Authorities at least four months before the start of the Year and in advance of the first Capacity Period in each Year, proposing a value for the following parameter for that Year:
1. the Annual Capacity Exchange Rate ($ACER_y$).
- 4.97 The Market Operator's report must set out any relevant research or analysis carried out by the Market Operator and any justification for the specific values proposed. Such a report may, and shall, if so requested by the Regulatory Authorities, include alternative values from those proposed and must set out the arguments for and against such alternatives.
- 4.98 The Market Operator shall publish the approved value(s) for each of the parameters set out in paragraphs 4.95 and 4.96 within 5 Working Days of receipt of the Regulatory Authorities' determination or two months before the start of the Year to which they shall apply whichever is the later.

Basis for Capacity Payments and Capacity Charges

- 4.99 The Market Operator shall procure that Capacity Payments shall be made in respect of each Generator Unit on the basis of its Loss-Adjusted Eligible Availability in each Trading Period as set out algebraically below.
- 4.100 The Market Operator shall procure that Capacity Charges shall be levied in respect of Loss-Adjusted Settlement Net Demand at each Supplier Unit in each Trading Period as set out algebraically below.
- 4.101 The System Operator shall calculate prior to the start of each Capacity Period the Loss of Load Probability (λ_h) in each Trading Period h of that Capacity Period. The calculation methodology is set out in Appendix M "Description of the Function for the Determination of Capacity Payments".
- 4.102 The Market Operator shall calculate the Ex-Post Loss of Load Probability (Φ_h) in each Trading Period h , in accordance with the Settlement Calendar. The relevant calculation methodology is set out in Appendix M "Description of the Function for the Determination of Capacity Payments".
- 4.103 The Market Operator shall calculate prior to the start of the first Capacity Period in each Year the Annual Combined Load Forecast (ACLF $_h$) in each Trading Period h (based on the Annual Load Forecast Data) as set out in paragraph 4.32.

Calculation of Capacity Payments

- 4.104 The Capacity Period Payment Sum (CPPSc) shall be divided into the Capacity Period Fixed Sum (CPFSc), the Capacity Period Variable Sum (CPVSc) and the Capacity Period Ex-Post Sum (CPESc) within each Capacity Period c , using the Fixed Capacity Payments Proportion (FCPP $_y$) and the Ex-Post Capacity Payments Proportion (ECPP $_y$) as follows:

$$CPFSc = CPPSc \times FCPP_y$$

$$CPESc = CPPSc \times ECPP_y$$

$$CPVSc = CPPSc \times (1 - (FCPP_y + ECPP_y))$$

Where

2. CPPSc is the Capacity Period Payment Sum in Capacity Period c ;
 3. FCPP $_y$ is the Fixed Capacity Payments Proportion for Year y ;
 4. ECPP $_y$ is the Ex-Post Capacity Payments Proportion for Year y .
- 4.105 For each Trading Period h within Capacity Period c , the Market Operator shall calculate a Fixed Capacity Payments Weighting Factor (FCPWF $_h$) prior to the start of the first Capacity Period in the Year based on the relative values of Annual Combined Load Forecast (ACLF $_h$) as follows:

if $\sum_{h \text{ in } c} (ACLF_h - MinACLF_c) > 0$ then

$$FCPWF_h = \frac{ACLF_h - MinACLF_c}{\sum_{h \text{ in } c} (ACLF_h - MinACLF_c)}$$

$$\text{else } FCPWF_h = \frac{1}{\text{Number of Trading Periods in Capacity Period}}$$

Where

5. ACLF_h is the Annual Combined Load Forecast for Trading Period h determined by the Market Operator;
6. MinACLF_c is the minimum value of ACLF_h in any Trading Period h within Capacity Period c;
7. $\sum_{h \text{ in } c} (ACLF_h - MinACLF_c)$ is a summation over all Trading Periods h in Capacity Period c.

- 4.106 For each Trading Period h within the Capacity Period, the Market Operator shall calculate a Variable Capacity Payments Weighting Factor (VCPWF_h) prior to the start of the relevant Capacity Period based on the relative values of the Loss of Load Probability in Trading Period h (λ_h) as follows:

if $\sum_{h \text{ in } c} I_h > 0$ then

$$VCPWF_h = \frac{I_h}{\sum_{h \text{ in } c} I_h},$$

$$\text{else } VCPWF_h = \frac{1}{\text{Number of Trading Periods in Capacity Period}}$$

Where

1. λ_h is the Loss of Load Probability in Trading Period h determined as set out in Appendix M "Description of the Function for the Determination of Capacity Payments";
2. $\sum_{h \text{ in } c}$ is a summation over all Trading Periods h in Capacity Period c.

- 4.107 For each Trading Period h within Capacity Period c, an Interim Ex-Post Capacity Payments Weighting Factor (IECPWF_h) shall be calculated based on the relative values of the Interim Ex-Post Loss of Load Probability ($I\Phi_h$) as follows:

if $\sum_{h \text{ in } c} If_h > 0$ then

$$IECPWFh = \frac{If_h}{\sum_{h \text{ in } c} If_h},$$

$$\text{else } IECPWFh = \frac{1}{\text{Number of Trading Periods in Capacity Period}}$$

Where

1. $I\Phi_h$ is the Interim Ex-Post Loss of Load Probability in Trading Period h determined as set out in Appendix M “Description of the Function for the Determination of Capacity Payments”;
2. $\sum_{h \text{ in } c}$ is a summation over all Trading Periods h in Capacity Period c.

- 4.108 For each Trading Period h within the Capacity Period c, the Market Operator shall calculate an Ex-Post Capacity Payments Weighting Factor (ECPWFh) based on the relative values of the Ex-Post Loss of Load Probability in Trading Period h (Φ_h) as follows:

if $\sum_{h \text{ in } c} f_h > 0$ then

$$ECPWFh = \frac{f_h}{\sum_{h \text{ in } c} f_h},$$

$$\text{else } ECPWFh = \frac{1}{\text{Number of Trading Periods in Capacity Period}}$$

Where

1. Φ_h is the Ex-Post Loss of Load Probability in Trading Period h determined as set out in Appendix M “Description of the Function for the Determination of Capacity Payments”;
2. summation $\sum_{h \text{ in } c}$ is over all Trading Periods h in Capacity Period c.

- 4.109 For each Trading Period h within the Capacity Period c, a Capacity Payments Price Factor (CPPFh) shall be calculated to scale Capacity Payments for Demand and scheduled generation based on the level of System Marginal Price (SMP_h) and the Value of Lost Load (VOLL) as follows:

$$CPPFh = \text{Max} \left\{ \left(\frac{(VOLL - SMP_h)}{VOLL} \right), 0 \right\}$$

Where

1. SMP_h is the System Marginal Price in Trading Period h;
2. VOLL is the Value of Lost Load.

Capacity Payments in Respect of Generator Units

- 4.110 Capacity Payments shall be determined for each Generator Unit in each Trading Period as set out in this Section 4 and paid to the relevant Participant as a separate payment in each Capacity Period according to the procedures set out in Section 6.
- 4.111 The Loss-Adjusted Capacity Payments Eligible Availability ($CPEALF_{uh}$) for each Generator Unit u in each Trading Period h shall be calculated as follows:

$$CPEALF_{uh} = TPD \times EALF_{uh}$$

Where

1. TPD is the Trading Period Duration;
2. $EALF_{uh}$ is the Loss-Adjusted Eligible Availability for Capacity Payments for Generator Unit u in Trading Period h .

Capacity Payments Generation Price Factor

- 4.112 Capacity Payments for Generator Units shall be calculated as set out below.
- 4.113 For Generator Units u in respect of which Participants submit Prices as part of their Commercial Offer Data, then for each Accepted Price Quantity Pair i which is applicable in Trading Period h , the Unscheduled Capacity Offer Quantity ($UCOQ_{uhi}$) and Unscheduled Capacity Offer Price ($UCOP_{uhi}$) shall be calculated as follows:

$$UCOP_{uhi} = \text{Max}\{SMP_h, P_{uhi}\}$$

$$UCOQ_{uhi} = \text{Min}\{EA_{uh}, \text{Max}\{Q_{uhi}, MSQ_{uh}\}\} - \text{Min}\{EA_{uh}, \text{Max}\{Q_{uh}(i-1), MSQ_{uh}\}\}$$

Where

1. SMP_h is the System Marginal Price in Trading Period h ;
 2. P_{uhi} is the i th Price for Generator Unit u which is applicable in Trading Period h ;
 3. Q_{uhi} is the i th Quantity for Generator Unit u which is applicable in Trading Period h ;
 4. $Q_{uh}(0)$ is defined as the Minimum Output ($MINOUT_{uh}$) for Generator Unit u in Trading Period h ;
 5. EA_{uh} is the Eligible Availability for Generator Unit u in Trading Period h ;
 6. MSQ_{uh} is the Market Schedule Quantity for Generator Unit u in Trading Period h .
- 4.114 For any Generator Unit u for which the relevant Participant is not required to submit Prices as part of its Commercial Offer Data for any Trading Period h , all values of Unscheduled Capacity Offer Quantity ($UCOQ_{uhi}$) will be calculated by the Market Operator to be zero.
- 4.115 The Capacity Payments Generation Price Factor ($CPGPF_{uh}$) shall be determined for each Generator Unit u in Trading Period h as follows:

if $(MSQuh + \sum_i UCOQuhi) \neq 0$, then

$$CPGPFuh = \frac{\left((MSQuh \times CPPFh) + \sum_i \left(UCOQuhi \times \text{Max} \left\{ \frac{VOLL - UCOPuhi}{VOLL}, 0 \right\} \right) \right)}{MSQuh + \sum_i UCOQuhi}$$

else $CPGPFuh = 0$

Where

1. MSQuh is the Market Schedule Quantity for Generator Unit u in Trading Period h;
2. CPPFh is the Capacity Payments Price Factor for Trading Period h in the Capacity Period c;
3. \sum_i is a summation over all Accepted Price Quantity Pairs i for Generator Unit u which are applicable in Trading Period h;
4. UCOQuhi is the Unscheduled Capacity Offer Quantity for Generator Unit u, for Price Quantity Pair i which is applicable in Trading Period h;
5. UCOPuhi is the Unscheduled Capacity Offer Price for Generator Unit u, for Price Quantity Pair i which is applicable in Trading Period h;
6. VOLL is the Value of Lost Load.

Fixed Capacity Payments Generation Price Calculations

- 4.116 For each Capacity Period c, the Capacity Period Fixed Generation Scaling Price (CPFGSPc) shall be calculated by the Market Operator as follows:

if $\sum_{u,h \text{ in } c} (CPEALFuh \times FCPWFh \times CPGPFuh) > 0$ then

$$CPFGSPc = \frac{CPFSc}{\sum_{u,h \text{ in } c} (CPEALFuh \times FCPWFh \times CPGPFuh)}$$

else $CPFGSPc = 0$

Where

1. CPFSc is the Capacity Period Fixed Sum in Capacity Period c;
2. CPEALFuh is the Loss-Adjusted Capacity Payments Eligible Availability for Generator Unit u in Trading Period h;
3. FCPWFh is the Fixed Capacity Payments Weighting Factor in Trading Period h;

4. CPGPF_{uh} is the Capacity Payments Generation Price Factor for Generator Unit *u* in Trading Period *h*;
 5. the summation $\sum_{u,h \text{ in } c}$ is a summation over all Generator Units *u*, and across all Trading Periods *h* within Capacity Period *c*.
- 4.117 For each Trading Period *h* within Capacity Period *c*, the Fixed Capacity Payments Generation Price (FCGPh) shall be calculated by the Market Operator as follows:

$$FCGPh = FCPWFh \times CPGSPc$$

Where

1. FCPWF_h is the Fixed Capacity Payments Weighting Factor in Trading Period *h*;
2. CPGSP_c is the Capacity Period Fixed Generation Scaling Price in Capacity Period *c*.

Variable Capacity Payments Generation Price Calculations

- 4.118 For each Capacity Period *c*, the Capacity Period Variable Generation Scaling Price (CPVGSP_c) shall be calculated by the Market Operator as follows:

$$\text{if } \sum_{u,h \text{ in } c} (CPEALF_{uh} \times CPGPF_{uh} \times VCPWFh) > 0 \text{ then}$$

$$CPVGSPc = \frac{CPVSc}{\sum_{u,h \text{ in } c} (CPEALF_{uh} \times VCPWFh \times CPGPF_{uh})}$$

$$\text{else } CPVGSPc = 0$$

Where

1. CPVSc is the Capacity Period Variable Sum in Capacity Period *c*;
 2. CPEALF_{uh} is the Loss-Adjusted Capacity Payments Eligible Availability for Generator Unit *u* in Trading Period *h*;
 3. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period *h*;
 4. CPGPF_{uh} is the Capacity Payments Generation Price Factor for Generator Unit *u* in Trading Period *h*;
 5. the summation $\sum_{u,h \text{ in } c}$ is a summation over all Generator Units *u*, and across all Trading Periods *h* within Capacity Period *c*.
- 4.119 For each Trading Period *h* within Capacity Period *c*, the Variable Capacity Payments Generation Price (VCGPh) shall be calculated by the Market Operator as follows:

$$VCGPh = VCPWFh \times CPVGSPc$$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period *h*;
2. CPVGSP_c is the Capacity Period Variable Generation Scaling Price in Capacity Period *c*.

Ex-Post Capacity Payments Generation Price Calculations

- 4.120 For each Capacity Period *c*, the Capacity Period Ex-Post Generation Scaling Price (CPEGSP_c) shall be calculated by the Market Operator as follows:

$$\text{if } \sum_{u,h \text{ in } c} (CPEALF_{uh} \times CPGPF_{uh} \times ECPWF_h) > 0 \text{ then}$$

$$CPEGSP_c = \frac{CPES_c}{\sum_{u,h \text{ in } c} (CPEALF_{uh} \times ECPWF_h \times CPGPF_{uh})}$$

$$\text{else } CPEGSP_c = 0$$

Where

1. CPES_c is the Capacity Period Ex-Post Sum in Capacity Period *c*;
2. CPEALF_{uh} is the Loss-Adjusted Capacity Payments Eligible Availability for Generator Unit *u* in Trading Period *h*;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period *h*;
4. CPGPF_{uh} is the Capacity Payments Generation Price Factor for Generator Unit *u* in Trading Period *h*;
5. the summation $\sum_{u,h \text{ in } c}$ is a summation over all Generator Units *u*, and across all Trading Periods *h* within Capacity Period *c*.

- 4.121 For each Trading Period *h* within Capacity Period *c*, the Ex-Post Capacity Payments Generation Price (ECGPh) shall be calculated by the Market Operator as follows:

$$ECGPh = ECPWF_h \times CPEGSP_c$$

Where

1. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period *h*;
2. CPEGSP_c is the Capacity Period Ex-Post Generation Scaling Price in Capacity Period *c*.

Capacity Payments Generation Price Calculations

- 4.122 The Capacity Payments Generation Price (CPGPh) shall be calculated by the Market Operator for each Trading Period *h* as follows:

$$CPGPh = (VCGPh + FCGPh + ECGPh) \times CPPF_h$$

Where

1. VCGPh is the Variable Capacity Payments Generation Price in Trading Period *h*;

2. FCGPh is the Fixed Capacity Payments Generation Price in Trading Period h;
3. ECGPh is the Ex-Post Capacity Payments Generation Price in Trading Period h;
4. CPPFh is the Capacity Payments Price Factor in Trading Period h.

Capacity Payments Calculations

- 4.123 The Capacity Payment (CPuh) for each Generator Unit u in Trading Period h shall be calculated by the Market Operator as follows:

if CPPFh ≠ 0 then

$$CPuh = CPGPh \times CPEALFuh \times \left(\frac{CPGPFuh}{CPPFh} \right)$$

else $CPuh = CPGPFuh \times CPEALFuh \times (VCGPh + FCGPh + ECGPh)$

Where

1. CPPFh is the Capacity Payments Price Factor in Trading Period h;
2. CPGPh is the Capacity Payments Generation Price in Trading Period h;
3. CPEALFuh is the Loss-Adjusted Capacity Payments Eligible Availability for Generator Unit u in Trading Period h;
4. CPGPFuh is the Capacity Payments Generation Price Factor for Generator Unit u in Trading Period h;
5. VCGPh is the Variable Capacity Payments Generation Price in Trading Period h;
6. FCGPh is the Fixed Capacity Payments Generation Price in Trading Period h;
7. ECGPh is the Ex-Post Capacity Payments Generation Price in Trading Period h.

- 4.124 The Capacity Period Payment (CPPuc) for each Generator Unit u in each Capacity Period c shall be calculated by the Market Operator as follows:

$$CPPuc = \sum_{h \text{ in } c} CPuh$$

Where

1. CPuh is the Capacity Payment for Generator Unit u in Trading Period h;
2. the summation $\sum_{h \text{ in } c}$ is over all Trading Periods h in Capacity Period c.

Capacity Charges

- 4.125 Capacity Charges shall be levied by the Market Operator on a Participant in respect of its Supplier Units in each Trading Period according to the procedures set out below.
- 4.126 For each Capacity Period c , the Capacity Period Demand Scaling Price (CPDSP c) shall be calculated by the Market Operator as follows:

if $\sum_{v,h \text{ in } c} (SNDLF_{vh} \times FCPWF_h \times CPPF_h) \neq 0$ then

$$CPDSP_c = \frac{CPPS_c}{\sum_{v,h \text{ in } c} (SNDLF_{vh} \times FCPWF_h \times CPPF_h)}$$

else $CPDSP_c = 0$

Where

1. CPPS c is the Capacity Period Payment Sum in Capacity Period c ;
2. SNDLF $_{vh}$ is the Loss-Adjusted Settlement Net Demand of Supplier Unit v in Trading Period h ;
3. FCPWF $_h$ is the Fixed Capacity Payments Weighting Factor in Trading Period h ;
4. CPPF $_h$ is the Capacity Payments Price Factor in Trading Period h ;
5. the summation $\sum_{v,h \text{ in } c}$ is over all Trading Periods h in Capacity Period c and over all Supplier Units v .

- 4.127 The Capacity Payments Demand Price (CPDP h) shall be calculated by the Market Operator for each Trading Period h as follows:

$$CPDP_h = FCPWF_h \times CPDSP_c \times CPPF_h$$

Where

1. FCPWF $_h$ is the Fixed Capacity Payments Weighting Factor in Trading Period h ;
2. CPDSP c is the Capacity Period Demand Scaling Price in Capacity Period c ;
3. CPPF $_h$ is the Capacity Payments Price Factor in Trading Period h .

Capacity Charge Calculations

- 4.128 The Capacity Charge (CC $_{vh}$) for each Supplier Unit v in Trading Period h shall be calculated by the Market Operator as follows:

$$CC_{vh} = CPDP_h \times SNDLF_{vh}$$

Where

1. CPDP h is the Capacity Payments Demand Price in Trading Period h ;

2. $SNDLF_{vh}$ is the Loss-Adjusted Settlement Net Demand at Supplier Unit v in Trading Period h .
- 4.129 The Capacity Period Charge (CPC_{vc}) for each Supplier Unit v in each Capacity Period c shall be calculated by the Market Operator as follows:

$$CPC_{vc} = \sum_{h \text{ in } c} CC_{vh}$$

Where

1. CC_{vh} is the Capacity Charge for Supplier Unit v in Trading Period h ;
2. the summation $\sum_{h \text{ in } c}$ is over all Trading Periods h in Capacity Period c .

CONSTRAINT PAYMENTS

- 4.130 The Market Operator shall apply a Constraint Payment to each Participant in respect of each of its Generator Units in any Trading Period for which the Dispatch Production Cost differs from the Schedule Production Cost, as set out algebraically below.
- 4.131 For the avoidance of doubt, Constraint Payments will apply irrespective of the cause for the difference in Dispatch Production Cost and Schedule Production Cost, including, inter alia, the decision of the relevant System Operator to dispatch Generator Units to provide reserve or other ancillary services.

Calculation of the Market and Dispatch Offer Prices

- 4.132 The calculation of Constraint Payments requires the determination by the Market Operator of the Market Offer Price (MOP_{uh}) and the Dispatch Offer Price (DOP_{uh}) for each Generator Unit u in each Trading Period h as set out below.
- 4.133 The Market Operator shall calculate the Market Offer Price for Generator Unit u in Trading Period h (MOP_{uh}) as follows:
- if $MSQ_{uh} \leq Q_{uh1}$, then $MOP_{uh} = P_{uh1}$,
else $MOP_{uh} = P_{uhi}$, where i satisfies
- a. $Q_{uh(i-1)} < MSQ_{uh} \leq Q_{uhi}$ or
 - b. $MSQ_{uh} > Q_{uhi}$, where Q_{uhi} is the Quantity of the last Price Quantity Pair to have a Quantity less than or equal to the Availability.

Where

1. MSQ_{uh} is the Market Schedule Quantity for Generator Unit u in Trading Period h ;
 2. P_{uhi} is the i th Price Accepted for Generator Unit u applicable to Trading Period h ;
 3. Q_{uhi} is the i th Quantity for Generator Unit u applicable to Trading Period h .
- 4.134 The Market Operator shall calculate the Dispatch Offer Price for Generator Unit u in Trading Period h (DOP_{uh}) as follows:

if $DQ_{uh} \leq Q_{uh1}$, then $DOP_{uh} = P_{uh1}$,

else $DOP_{uh} = P_{uhi}$, where i satisfies

a. $Q_{uh(i-1)} < DQ_{uh} \leq Q_{uhi}$ or

b. $DQ_{uh} > Q_{uhi}$, where Q_{uhi} is the Quantity of the last Price Quantity Pair to have a Quantity less than or equal to the Availability

Where

1. DQ_{uh} is the Dispatch Quantity for Generator Unit u in Trading Period h ;
2. P_{uhi} is the i th Price for Generator Unit u applicable to Trading Period h ;
3. Q_{uhi} is the i th Quantity for Generator Unit u applicable to Trading Period h .

Calculation of Constraint Payments to Generator Units

4.135 For the following calculations, where required for the calculation of Constraint Payments, Uninstructed Imbalance Payments or Make Whole Payments for the relevant Generator Unit:

1. $MSQLF_{uh}$ is the Loss-Adjusted Market Schedule Quantity for Generator Unit u in Trading Period h ;
2. NLC_{uh} is the No Load Cost for Generator Unit u in Trading Period h ;
3. MOP_{uh} is the Market Offer Price for Generator Unit u in Trading Period h , corresponding to a Market Schedule Quantity of MSQ_{uh} , or System Marginal Price (SMP_h) for any Generator Unit that does not submit Prices as part of its Commercial Offer Data;
4. $MNLC_{uh}$ is the Market No Load Cost calculated as follows:

if $MSQ_{uh} > 0$ then

$$MNLC_{uh} = NLC_{uh}$$

else $MNLC_{uh} = 0$

5. $MSQCCLF_{uh}$ is the Loss-Adjusted Market Schedule Quantity Cost Correction for Generator Unit u in Trading Period h , as determined according to paragraph 4.137 and then Loss-Adjusted, or zero for any Generator Unit that does not submit Prices as part of its Commercial Offer Data;
6. $DQLF_{uh}$ is the Loss-Adjusted Dispatch Quantity for Generator Unit u in Trading Period h ;
7. DOP_{uh} is the Dispatch Offer Price for Generator Unit u in Trading Period h , corresponding to a Dispatch Quantity of DQ_{uh} , or System Marginal Price (SMP_h) for any Generator Unit that does not submit Prices as part of its Commercial Offer Data;
8. $DNLC_{uh}$ is the Dispatch No Load Cost calculated as follows:

if $DQ_{uh} > 0$ then

$$DNLC_{uh} = NLC_{uh}$$

else $DNLC_{uh} = 0$

9. DQCCLFuh is the Loss-Adjusted Dispatch Quantity Cost Correction for Generator Unit u in Trading Period h, as determined according to paragraph 4.138 and then Loss-Adjusted, or zero for any Generator Unit that does not submit Prices as part of its Commercial Offer Data;
10. TPD is the Trading Period Duration;
11. CONPuh is the Constraint Payment payable to Generator Unit u for Trading Period h;
12. DSUCuh is the Dispatch Start Up Cost for Generator Unit u in Trading Period h, calculated in accordance with paragraph 4.138B;
13. MSUCuh is the Market Start Up Cost for Generator Unit u in Trading Period h, calculated in accordance with paragraph 4.138A;
14. Quh(0) is defined as the Minimum Output (MINOUTuh) for Generator Unit u in Trading Period h, either positive or negative.

- 4.136 For each Generator Unit u in each Trading Period h, the Market Operator shall calculate the Constraint Payments (CONPuh) as set out below, and the calculated value of CONPuh can be either positive or negative:

$$CONPuh = TPD \times \left[\begin{array}{l} (DQLFuh \times DOPuh + DNLCuh + DQCCLFuh) \\ - (MSQLFuh \times MOPuh + MNLCuh + MSQCCLFuh) \end{array} \right] + DSUCuh - MSUCuh$$

- 4.137 The Market Operator shall calculate the Market Schedule Quantity Cost Correction (MSQCCuh) for Generator Unit u in Trading Period h as follows:

1. Let n = the number of Accepted Price Quantity Pairs for Generator Unit u applicable to Trading Period h;
2. The integer k is defined as the smallest integer such that Quhk is greater than zero. If Quhn is zero or negative, then k=n+1;
3. Let:

$$CCXuhk = 0$$

$$CCXuhn = CCXuh(n+1) \text{ (this equation is only required if } k=n+1 \text{)}$$

$$CCXuhi = CCXuh(i-1) + (Puh(i-1) - Puhi) \times Quh(i-1), \text{ for each } i \text{ in the range } \text{Max}\{2, k+1\} \leq i \leq n \text{ in ascending order of } i$$

$$CCXuh(i-1) = CCXuhi - (Puh(i-1) - Puhi) \times Quh(i-1) \text{ for each } i \text{ in the range } \text{Min}\{k, n\} \geq i \geq 2 \text{ in descending order of } i$$

$$\text{if } MSQuh \leq Quh1 \text{ then } MSQCCuh = CCXuh1$$

$$\text{else } MSQCCuh = CCXuhx$$

where x is an integer which satisfies

- a. $Quh(x-1) < MSQuh \leq Quhx$; or
- b. $MSQuh > Quhx$, where Quhx is the Quantity of the last Price Quantity Pair to have a Quantity less than or equal to the Availability.

4. The subscripts x and k are re-set after each value of $MSQCC_{uh}$ is determined. CCX_{uhi} are local variables used for the determination of $MSQCC_{uh}$.

4.138 The Market Operator shall calculate the Dispatch Quantity Cost Correction ($DQCC_{uh}$) as follows:

1. Let n = the number of Accepted Price Quantity Pairs for Generator Unit u applicable to Trading Period h ;
2. The integer k is defined as the smallest integer such that Q_{uhk} is greater than zero. If Q_{uhn} is zero or negative, then $k=n+1$;
3. Let:

$$CCX_{uhk} = 0$$

$$CCX_{uhn} = CCX_{uh}(n+1) \text{ (this equation is only required if } k=n+1\text{)}$$

$$CCX_{uhi} = CCX_{uh}(i-1) + (P_{uh}(i-1) - P_{uhi}) \times Q_{uh}(i-1), \text{ for each } i \text{ in the range } \text{Max}\{2, k+1\} \leq i \leq n \text{ in ascending order of } i$$

$$CCX_{uh}(i-1) = CCX_{uhi} - (P_{uh}(i-1) - P_{uhi}) \times Q_{uh}(i-1), \text{ for each } i \text{ in the range } \text{Min}\{k, n\} \geq i \geq 2 \text{ in descending order of } i$$

$$\text{if } DQ_{uh} \leq Q_{uh1} \text{ then } DQCC_{uh} = CCX_{uh1}$$

$$\text{else } DQCC_{uh} = CCX_{uhx},$$

where x is an integer which satisfies

- a. $Q_{uh}(x-1) < DQ_{uh} \leq Q_{uhx}$; or
 - b. $DQ_{uh} > Q_{uhx}$, where Q_{uhx} is the Quantity of the last Price Quantity Pair to have a Quantity less than or equal to the Availability.
4. The subscripts x and k are re-set after each value of $DQCC_{uh}$ is determined. CCX_{uhi} are local variables used for the determination of $DQCC_{uh}$.

4.138A The Market Operator shall procure that the value of Market Start Up Cost ($MSUC_{uh}$) for a Generator Unit u in Trading Period h shall be zero except in those Trading Periods where that Generator Unit has a Market Schedule Start. In such Trading Periods, the Market Start Up Cost ($MSUC_{uh}$) shall be set equal to the Accepted Start Up Cost for the relevant Market Schedule Warmth State.

4.138B The Market Operator shall procure that the value of Dispatch Start Up Cost ($DSUC_{uh}$) for a Generator Unit u in Trading Period h shall be zero except in those Trading Periods where that Generator Unit has a Dispatch Start. In such Trading Periods, the Dispatch Start Up Cost shall be set equal to the Accepted Start Up Cost value relating to the Dispatch Warmth State at the time of the Dispatch Start.

MAKE WHOLE PAYMENTS

4.139 The purpose of Make Whole Payments is to make up any difference between the total Energy Payments to a Generator Unit in a Billing Period, and the Schedule Production Cost within that Billing Period (where the

difference is arithmetically positive calculated over the Billing Period), as set out algebraically below.

- 4.140 The Market Operator shall procure that Make Whole Payments shall be calculated on a Billing Period basis for each Generator Unit u in Billing Period b , as follows:

$$MW_{Pub} = \text{Max} \left\{ \sum_{h \in b} \left[\left((MOP_{uh} - SMP_h) \times MSQ_{LFuh} \right) \times TPD + MSUC_{uh} \right], 0 \right\}$$

Where

1. MW_{Pub} is the Make Whole Payment for Generator Unit u in Billing Period b ;
2. MOP_{uh} is the Market Offer Price of Generator Unit u in Trading Period h ;
3. SMP_h is the System Marginal Price for Trading Period h ;
4. MSQ_{LFuh} is the Loss-Adjusted Market Schedule Quantity for Generator Unit u in Trading Period h ;
5. TPD is the Trading Period Duration;
6. $MNLC_{uh}$ is the Market No Load Cost for Generator Unit u in Trading Period h ;
7. $MSQCCLF_{uh}$ is the Loss-Adjusted Market Schedule Quantity Cost Correction for Generator Unit u in Trading Period h ;
8. $MSUC_{uh}$ is the Market Start Up Cost for Generator Unit u in Trading Period h ;
9. the summation $\sum_{h \in b}$ is over all Trading Periods h in Billing Period b excluding any Trading Periods h in which the Generator Unit is Under Test.

UNINSTRUCTED IMBALANCES

General Rules for Uninstructed Imbalances

- 4.141 The Market Operator shall procure that Uninstructed Imbalances shall be calculated as set out algebraically below. An Uninstructed Imbalance occurs in a Trading Period if the Actual Output of a Generator Unit differs from its Dispatch Quantity in that Trading Period.
- 4.142 The System Operators shall make a report to the Regulatory Authorities at least four months before the start of the Year, proposing values for the following parameters to be used in the calculation of Uninstructed Imbalances for that Year:
1. the Engineering Tolerance (ENG_{TOL}) (where $0 \leq ENG_{TOL} \leq 1$);
 2. the MW Tolerance (MW_{TOLt}) (where $0 \leq MW_{TOLt}$) for each Trading Day t ;
 3. the System per Unit Regulation parameter ($UREG$);
 4. the Discount for Over Generation (DOG_{uh}) for each Generator Unit u in each Trading Period h , such that $0 \leq DOG_{uh} \leq 1$; and

5. the Premium for Under Generation (PUG_{uh}) for each Generator Unit *u* in each Trading Period *h* such that $0 \leq \text{PUG}_{uh} \leq 1$.
- 4.143 The System Operators' report must set out any relevant research or analysis carried out by the System Operators and any justification for the specific values proposed. Such a report may, and shall if so requested by the Regulatory Authorities, include alternative values from those proposed and must set out the arguments for and against such alternatives.
 - 4.144 The System Operators shall, in accordance with Appendix K "Market Data Transactions", provide to the Market Operator at least two months prior to the start of each Year or within 5 Working Days of approval by the Regulatory Authorities, whichever is the later, the Uninstructed Imbalance Parameters Data Transaction, which comprises a complete set of Uninstructed Imbalance Parameters that have been approved by the Regulatory Authorities for that Year.
 - 4.145 The Market Operator shall publish the approved value(s) for each Uninstructed Imbalance Parameter within 5 Working Days of receipt of the Regulatory Authorities' determination or two months before the start of the Year to which they shall apply whichever is the later.
 - 4.146 For each Trading Day, the System Characteristics Data, consisting of values of Nominal System Frequency (NORFRQ_h) and Average System Frequency (AVGFRQ_h) for each Trading Period *h* in that Trading Day, shall be submitted to the Market Operator by the System Operators, in accordance with Appendix K "Market Data Transactions".

Uninstructed Imbalance Tolerances

- 4.147 The Market Operator shall calculate the Tolerance Bands for over generation and under generation for each Generator Unit for each Trading Period with reference to system frequency and the frequency characteristics of the Generator Unit as set out algebraically below.
- 4.148 The Engineering Limit (ENGLIM_{uh}), expressed in MW, shall be calculated for each Generator Unit *u* for each Trading Period *h* as follows:

$$\text{ENGLIM}_{uh} = \text{Max}\{ |DQ_{uh}| \times \text{ENG TOL}, \text{MWTOL}_t \}$$

Where

1. DQ_{uh} is the Dispatch Quantity for Generator Unit *u* in Trading Period *h*;
 2. ENG TOL is the Engineering Tolerance;
 3. MWTOL_t is the MW Tolerance for the relevant Trading Period *h* within Trading Day *t*.
- 4.149 The Tolerance for Over Generation (TOLOG_{uh}) and Tolerance for Under Generation (TOLUG_{uh}) values shall be calculated by the Market Operator as positive values, expressed in MW for each Generator Unit *u* for each Trading Period *h* as follows:

if $AVGFRQh \leq NORFRQh$ then

$$TOLOGuh = \left(\frac{(NORFRQh - AVGFRQh) \times RCu}{(UREG \times NORFRQh)} \right) + ENGLIMuh$$

$$TOLUGuh = ENGLIMuh$$

else

$$TOLOGuh = ENGLIMuh$$

$$TOLUGuh = \left(\frac{(AVGFRQh - NORFRQh) \times RCu}{(UREG \times NORFRQh)} \right) + ENGLIMuh$$

Where

1. $AVGFRQh$ is the Average System Frequency in Trading Period h ;
2. $NORFRQh$ is the Nominal System Frequency for Trading Period h ;
3. RCu is the Registered Capacity of Generator Unit u ;
4. $UREG$ is the System per Unit Regulation parameter;
5. $ENGLIMuh$ is the Engineering Limit for Generator Unit u for Trading Period h .

Payments to Generator Units for Uninstructed Imbalance

4.150 For the following calculations:

1. $DQLFuh$ is the Loss-Adjusted Dispatch Quantity for Generator Unit u in Trading Period h ;
2. $AOLFuh$ is the Loss-Adjusted Actual Output from Generator Unit u in Trading Period h ;
3. $TOLOGLFuh$ is the Loss-Adjusted Tolerance for Over Generation for Generator Unit u in Trading Period h ;
4. $TOLUGLFuh$ is the Loss-Adjusted Tolerance for Under Generation for Generator Unit u in Trading Period h ;
5. $DOGu$ is the Discount for Over Generation for Generator Unit u in Trading Period h ;
6. $PUGuh$ is the Premium for Under Generation for Generator Unit u in Trading Period h ;
7. SMP_h is the System Marginal Price in Trading Period h ;
8. $DOPuh$ is the Dispatch Offer Price for Generator Unit u in Trading Period h ;
9. TPD is the Trading Period Duration.

4.151 The Market Operator shall calculate the payments for Uninstructed Imbalances ($UNIMPuh$) for each Generator Unit u in Trading Period h as follows:

if $DQLF_{uh} \leq AOLF_{uh} \leq (DQLF_{uh} + TOLOGLF_{uh})$ then

$$UNIMP_{uh} = TPD \times \min\{SMP_h, DOP_{uh}\} \times (AOLF_{uh} - DQLF_{uh})$$

else if $(DQLF_{uh} - TOLUGLF_{uh}) \leq AOLF_{uh} < DQLF_{uh}$ then

$$UNIMP_{uh} = TPD \times \max\{SMP_h, DOP_{uh}\} \times (AOLF_{uh} - DQLF_{uh})$$

else if $AOLF_{uh} > (DQLF_{uh} + TOLOGLF_{uh})$ then

$$UNIMP_{uh} = TPD \times \min\{SMP_h, DOP_{uh}\} \times TOLOGLF_{uh} + \\ TPD \times [AOLF_{uh} - (DQLF_{uh} + TOLOGLF_{uh})] \times \\ [\min\{DOP_{uh} - DOG_{uh} \times |DOP_{uh}|, SMP_h - DOG_{uh} \times |SMP_h|\}]$$

else if $AOLF_{uh} < (DQLF_{uh} - TOLUGLF_{uh})$ then

$$UNIMP_{uh} = -TPD \times \max\{SMP_h, DOP_{uh}\} \times TOLUGLF_{uh} - \\ TPD \times [(DQLF_{uh} - TOLUGLF_{uh}) - AOLF_{uh}] \times \\ [\max\{DOP_{uh} + PUG_{uh} \times |DOP_{uh}|, SMP_h + PUG_{uh} \times |SMP_h|\}]$$

IMPERFECTIONS CHARGES

- 4.152 The Market Operator shall make a report to the Regulatory Authorities at least four months before the start of the Year, proposing the following parameters to be used in the calculation of Imperfections Charges for that Year:
1. The Imperfections Price in euro/MWh for Year y; and
 2. Values of the Imperfections Charge Factor for each Trading Period h in Year y.
- 4.153 The Market Operator's report must set out any relevant research or analysis carried out by the Market Operator and the justification for the specific values proposed. Such a report may, and shall if so requested by the Regulatory Authorities, include alternative values from those proposed and must set out the arguments for and against such alternatives.
- 4.154 The Market Operator shall publish the approved value(s) for each such parameter within 5 Working Days of receipt of the Regulatory Authorities' determination or two months before the start of the Year to which they shall apply whichever is the later.
- 4.155 The purpose of the Imperfections Charge is to recover the anticipated net payments to Generator Units in respect of Constraint Payments, Uninstructed Imbalances (less Testing Charges for Generator Units), Make Whole Payments and any net imbalance between Energy Payments and Energy Charges over the Year, with adjustments for previous Years as appropriate.
- 4.156 The Market Operator shall calculate the Imperfections Charge (IMPC_{vh}) for each Supplier Unit v in each Trading Period h as follows:

$$IMCP_{vh} = SNDLF_{vh} \times IMP_y \times IMPF_h$$

Where

1. IMP_y is the Imperfections Price for Year y ;
 2. $SNDLF_{vh}$ is the Loss-Adjusted Settlement Net Demand of Supplier Unit v in Trading Period h ;
 3. $IMPF_h$ is the Imperfections Charge Factor for Trading Period h .
- 4.157 The Imperfections Charge Factor ($IMPF_h$) shall be set equal to 1 for all Trading Periods.

5. CATEGORISATION OF UNITS AND RULES FOR SPECIAL UNITS

DEFINITIONS AND GENERAL

- 5.1 Special Units are subject to the specific rules set out in this Section 5. These specific rules are in addition to, or, where appropriate, in replacement of, the rules set out elsewhere in the Code and, in particular, in Section 4.
- 5.2 The extent of application of any specific conditions in this Section 5 to a Unit shall be determined by:
1. the Classification of the Unit into a Generic Settlement Class as set out further below, and/or
 2. the specific category of the Special Unit concerned for the purposes of paragraph 2.34 above.

Classification of Generator Units

Classification as Predictable, Variable or Autonomous

- 5.3 At registration, each Generator Unit shall be classified as:
1. A Predictable Generator Unit; or
 2. A Variable Generator Unit; or
 3. An Autonomous Generator Unit.

Classification as Autonomous Generator Unit

- 5.4 A Generator Unit shall be classified as an Autonomous Generator Unit and a Price Taker Generator Unit if the Unit
- a. is not Dispatchable or
 - b. is a Generator (which is not classified as a Variable or a Predictable Generator Unit) whose Classification change to a Variable Generator Unit is not yet effective.

Classification as Variable Generator Unit

- 5.5 A Generator Unit shall be classified as a Variable Generator Unit if:
1. the short-term availability of the Generator Unit is unpredictable as a result of its fuel source; and
 2. the Generator Unit is a Wind Power Unit or a Run-of-River Hydro Unit; and
 3. the Generator Unit is Dispatchable.

Classification as Predictable Generator Unit

- 5.6 Predictable Generator Units are Generator Units which are Dispatchable and which are not otherwise required to be classified as Variable in accordance with paragraph 5.5.

Generic Settlement Classes for Generator Units

- 5.7 At registration, each Generator Unit will be classified as one of the following five Generic Settlement Classes.

1. Predictable Price Maker Generator Unit;
 2. Predictable Price Taker Generator Unit;
 3. Variable Price Maker Generator Unit;
 4. Variable Price Taker Generator Unit; or
 5. Autonomous Generator Unit.
- 5.8 The circumstances under which a Generator Unit may be classified as a Price Maker or Price Taker are set out in paragraphs 2.53 to 2.56.

CONDITIONS APPLYING TO GENERIC SETTLEMENT CLASSES

- 5.9 Paragraphs 5.10 to 5.31 set out the specific conditions which apply to particular Generic Settlement Classes.
- 5.9A Commercial Offer Data and Technical Offer Data in accordance with paragraphs 5.10, 5.15 and 5.17 shall be submitted in accordance with the provisions of Appendix I of the Code.

Submission of Data

Submission of Data for Predictable Price Taker Generator Units

- 5.10 The relevant Participant shall submit Technical Offer Data and Commercial Offer Data in respect of each Predictable Price Taker Generator Unit. The Commercial Offer Data so submitted shall include a Decremental Price for each Trading Period h and a Nomination Profile.
- 5.11 The values of Decremental Price (DEC_{Puh}), for each Predictable Price Taker Generator Unit u in each Trading Period h , submitted by the Participant shall be equal to zero.
- 5.12 A Nomination Profile for a Generator Unit u shall comprise Nominated Quantities (NQ_{uh}) in respect of each Trading Period h during the Trading Day.
- 5.13 Nominated Quantities shall be equal to the Output intended by the Participant for each of its Generator Units for each Trading Period during the Trading Day.
- 5.14 The Nominated Quantities in each Trading Period shall be Physically Feasible.

Submission of Data for Variable Price Taker Generator Units

- 5.15 The relevant Participant shall submit Technical Offer Data and Commercial Offer Data for each Variable Price Taker Generator Unit. The Commercial Offer Data shall include only a Nomination Profile (as set out in paragraphs 5.12 to 5.14) and a Decremental Price for each Trading Period.
- 5.16 The values of Decremental Price (DEC_{Puh}), for each Variable Price Taker Generator Unit u in each Trading Period h , submitted by the Participant shall be equal to zero.

Submission of Data for Autonomous Generator Units

- 5.17 Participants shall not submit Commercial Offer Data or Technical Offer Data in respect of Autonomous Generator Units under the Code.

Sources of Data Values in Initial Settlement

- 5.18 Table 5.3 sets out the source of data values used in Initial Settlement for each of the Generic Settlement Classes under a variety of Dispatch Instructions except for Predictable Price Maker Generator Units.

Table 5.3 – Source of data for Initial Settlement for each of the Generic Settlement Classes other than Predictable Price Maker Generator Units

Category	Form of Dispatch Instruction	Dispatch Quantity (DQuh)	Availability Profile (APuh)	Market Schedule Quantity (MSQuh)
Autonomous Generator Units	N/A	Actual Output (AOuh)	Actual Output (AOuh)	Actual Output (AOuh)
Variable Price Taker Generator Units	Run	Actual Output (AOuh)	Actual Output (AOuh)	Actual Output AOuh
Variable Price Taker Generator Units	Unit constrained down in Dispatch Instructions to remain below a level of Output of X MW	Time weighted average of (Outturn Availability when not constrained down below X MW, Min{X MW, Outturn Availability} when constrained down below X MW)	Max {Actual Output (AOuh), Time weighted average of Outturn Availability}	Max {Actual Output (AOuh), Time weighted average of Outturn Availability}
Variable Price Maker Generator Units	Run	Actual Output (AOuh)	Actual Output (AOuh)	Calculated by the MSP Software
Variable Price Maker Generator Units	Unit constrained down in Dispatch Instructions to remain below a level of Output of X MW	Time weighted average of (Outturn Availability when not constrained down below X MW, Min{X MW, Outturn Availability} when constrained down below X MW)	Max (Actual Output (AOuh), Time weighted average of Outturn Availability)	Calculated by the MSP Software
Predictable Price Taker Generator Units	Any	As set out in Section 4	As set out in Section 4	Minimum of Nominated Quantity (NQuh) and Availability Profile (APuh)

- 5.18A Ex-Post Indicative Settlement for each of the Generic Settlement Classes except for Predictable Price Maker Generator Units is as set out in Table 5.1 above, subject to the following:

1. Appendix N “Operation of the MSP Software” makes provision for the detailed derivation of data values for use in Ex-Post Indicative Settlement.

Constraint Payments and Other Payments and Charges

Autonomous Generator Units

- 5.19 Participants shall not be liable for Uninstructed Imbalance Payments in respect of Autonomous Generator Units.
- 5.20 Participants shall not receive Constraint Payments or Make Whole Payments in respect of Autonomous Generator Units.
- 5.21 The Market Operator shall calculate the value of Minimum Output (MINOUT_{uh}) for each Autonomous Generator Unit *u* in Trading Period *h* including, for the avoidance of doubt, Netting Generator Units, as follows:

$$MINOUT_{uh} = \min\{AO_{uh}, 0\}$$

Where

1. AO_{uh} is the Actual Output for Generator Unit *u* in Trading Period *h*.
- 5.22 There are no Market Schedule Quantities defined for any Autonomous Generator Unit that is not a Wind Power Unit for any Ex-Ante Indicative Market Schedule.
- 5.23 The Market Schedule Quantities defined for each Autonomous Generator Unit for the Trading Periods that are after midnight on that Trading Day for each Ex-Post Indicative Market Schedule, each of which comprises data for an entire Trading Day, shall be set by the Market Operator to equal the Market Schedule Quantity set for the Trading Period directly prior to midnight on that Trading Day.

Variable Price Taker Generator Units

- 5.24 The Market Operator shall calculate Constraint Payments (CONP_{uh}) in respect of each Variable Price Taker Generator Unit *u* in each Trading Period *h* as follows:

if DQ_{uh} < MSQ_{uh} *then*

$$CONP_{uh} = TPD \times (DQLF_{uh} - MSQ_{uh}) \times DECP_{uh}$$

else CONP_{uh} = 0

Where

1. TPD is the Trading Period Duration;
2. DQLF_{uh} is the Loss-Adjusted Dispatch Quantity for Generator Unit *u* in Trading Period *h*;
3. MSQ_{uh} is the Loss-Adjusted Market Schedule Quantity for Generator Unit *u* in Trading Period *h*;
4. DECP_{uh} is the Decremental Price for Generator Unit *u* in Trading Period *h*;

5. DQuh is the Dispatch Quantity for Generator Unit u in Trading Period h;
 6. MSQuh is the Market Schedule Quantity for Generator Unit u in Trading Period h.
- 5.25 Participants shall not receive Make Whole Payments in respect of their Variable Price Taker Generator Units.
- 5.26 For the purpose of the calculation of Uninstructed Imbalances, as set out in paragraphs 4.141 to 4.151, for Variable Price Taker Generator Units u in Trading Period h, the Market Operator shall deem the value of Dispatch Offer Price (DOPuh) to be equal to the System Marginal Price (SMP_h).
- 5.27 For each Variable Price Taker Generator Unit u, the Market Operator shall set the indicative value of Market Schedule Quantity (MSQuh) for the Ex-Ante Indicative Market Schedule for each Trading Period h to equal the minimum of the Accepted Nominated Quantity value and the relevant Accepted Forecast Availability value. In the case of Wind Power Units, the relevant value from the System Operator's submitted Wind Power Unit Forecast shall be used in place of the Accepted Nominated Quantity.

Predictable Price Taker Generator Units

- 5.28 The Market Operator shall calculate Constraint Payments (CONPuh) in respect of Predictable Price Taker Generator Units u in each Trading Period h as follows:
1. where the Dispatch Quantity (DQuh) exceeds the Market Schedule Quantity (MSQuh), Constraint Payments shall be calculated in accordance with Section 4, and based on the relevant Commercial Offer Data;
 2. where the Dispatch Quantity (DQuh) is less than or equal to the Market Schedule Quantity (MSQuh), Constraint Payments shall be calculated as follows:

$$CONPuh = TPD \times (DQLFuh - MSQFuh) \times DECPuh$$

Where

- a. TPD is the Trading Period Duration;
 - b. DQLFuh is the Loss-Adjusted Dispatch Quantity for Generator Unit u in Trading Period h;
 - c. MSQFuh is the Loss-Adjusted Market Schedule Quantity for Generator Unit u in Trading Period h;
 - d. DECPuh is the Decremental Price for Generator Unit u in Trading Period h.
- 5.29 Participants shall not receive Make Whole Payments in respect of their Predictable Price Taker Generator Units.
- 5.30 For the purpose of calculation of Uninstructed Imbalances for Predictable Price Taker Generator Units as set out in paragraph 4.141 to 4.151, the Market Operator shall deem the value of Dispatch Offer Price (DOPuh) to be equal to the System Marginal Price (SMP_h) for each Generator Unit u in Trading Period h for which AOL_{Fuh} ≤ MSQFuh. Where AOL_{Fuh} > MSQFuh the Dispatch Offer Price (DOPuh) is set according to paragraph 4.134.

- 5.31 For each Predictable Price Taker Generator Unit u , the indicative values of Market Schedule Quantity for the Ex-Ante Indicative Market Schedule for each Trading Period will equal the minimum of the Accepted Nominated Quantities and the relevant Accepted Forecast Availability value.

INTERCONNECTORS

- 5.32 Each Interconnector Residual Capacity Unit shall be classified as a Predictable Generator Unit, but shall not be classified either as a Price Maker Generator Unit or as a Price Taker Generator Unit. Further special provisions for Settlement for Interconnector Residual Capacity Units are set out below.
- 5.33 Participants shall not submit Commercial Offer Data or Technical Offer Data in respect of any Interconnector Residual Capacity Unit.
- 5.34 Each Interconnector Error Unit shall be classified as an Autonomous Generator Unit and as a Price Taker Generator Unit. Further special provisions for Settlement for Interconnector Error Units are detailed below.
- 5.35 All values expressed in MW or MWh that relate to imports into the Pool in relation to an Interconnector, Interconnector Units, Interconnector Residual Capacity Units or Interconnector Error Units shall be positive.
- 5.36 All values expressed in MW or MWh that relate to exports from the Pool in relation to an Interconnector, Interconnector Units, Interconnector Residual Capacity Units or Interconnector Error Units shall be negative or zero.

Interconnector Unit

- 5.37 For the avoidance of doubt, no Interconnector Residual Capacity Unit and no Interconnector Error Unit is an Interconnector Unit for the purposes of this Code.
- 5.38 Each Interconnector Unit shall be classified as a Predictable Price Maker Generator Unit. Further special provisions for Settlement for Interconnector Units are set out below.

Available Transfer Capacity

- 5.39 For each Trading Day for each Interconnector, the relevant Interconnector Owner shall, or shall procure that the relevant Interconnector Administrator shall, for that Trading Day, calculate the Available Transfer Capacity (consisting of the Maximum Import Available Transfer Capacity and the Maximum Export Available Transfer Capacity) for each Trading Period in the Optimisation Time Horizon and shall submit the resulting values to the Market Operator via the Interconnector Available Transfer Capacity Data Transaction in accordance with Appendix K "Market Data Transactions".
- 5.40 The Market Operator shall publish such Available Transfer Capacity values for each Trading Day by 10:00 on the day prior to Gate Closure for the relevant Trading Day.
- 5.41 Maximum Import Available Transfer Capacity shall relate to the physical capability of the Interconnector to deliver energy to the Transmission System, and shall take account of any further restrictions placed by any relevant agreement or the provisions of any Licence in respect of the Interconnector, but shall not otherwise take account of any expected transmission constraints or other aspects of the operation of the Transmission System.

- 5.42 Maximum Export Available Transfer Capacity shall relate to the physical capability of the Interconnector to off-take energy from the Transmission System, and shall take account of any further restrictions placed by any relevant agreement or the provisions of any Licence in respect of the Interconnector, but shall not otherwise take account of any expected transmission constraints or other aspects of the operation of the Transmission System.
- 5.43 If, after the submission of Available Transfer Capacity for an Interconnector in accordance with paragraph 5.39, the Available Transfer Capacity for that Interconnector in either direction is changed in any Trading Period within the relevant Optimisation Time Horizon before Gate Closure for the relevant Trading Day, then the Interconnector Administrator shall submit revised values of Available Transfer Capacity to the Market Operator by Gate Closure if practically possible.

Active Interconnector Unit Capacity Holding Data

- 5.44 For each Trading Day for each Interconnector, the relevant Interconnector Administrator shall submit the Active Interconnector Unit Capacity Holding Data to the Market Operator by Gate Closure for each Trading Period in that Trading Day, via the Active Interconnector Unit Capacity Holding Data Transaction in accordance with Appendix K “Market Data Transactions”.
- 5.45 The Active Interconnector Unit Capacity Holding Data shall comprise for each Interconnector Unit, the Active Interconnector Unit Import Capacity Holding and the Active Interconnector Unit Export Capacity Holding for each Trading Period during the Optimisation Time Horizon.
- 5.46 The relevant Interconnector Administrator shall make reasonable endeavours to ensure that for each Interconnector Unit, the submitted values of Active Interconnector Unit Capacity Holding Data for the last six hours of the Optimisation Time Horizon are a reasonable estimate of the final values that will be submitted for those Trading Periods.
- 5.47 The Market Operator shall by 10:30 on the day prior to the Trading Day notify each Interconnector User of the Active Interconnector Unit Capacity Holding for its Interconnector Unit.
- 5.48 The relevant Interconnector Administrator shall ensure that the submitted Active Interconnector Unit Capacity Holding Data for each Interconnector is such that the sum of the Active Interconnector Unit Import Capacity Holdings is less than or equal to the Maximum Import Available Transfer Capacity in each Trading Period.
- 5.49 The relevant Interconnector Administrator shall ensure that the submitted Active Interconnector Unit Capacity Holding Data for each Interconnector is such that the sum of the Active Interconnector Unit Export Capacity Holdings is in absolute magnitude less than or equal to the Maximum Export Available Transfer Capacity in each Trading Period.
- 5.50 Agreed Procedure 2 “Interconnector Unit Capacity Right Calculation and Dispatch Notification” sets out the procedure for the calculation and notification of Active Interconnector Unit Capacity Holding.

Commercial and Technical Offer Data

- 5.51 Within each Gate Window for each Trading Window, Interconnector Users may submit Commercial Offer Data to the Market Operator for that Trading

Day in respect of each of their Interconnector Units for each corresponding Gate Window.

5.52 Commercial Offer Data for Interconnector Units for each Ex Ante One MSP Software Run, Ex Ante Two MSP Software Run and Within Day One MSP Software Run must only include:

1. Up to ten Price Quantity Pairs for each Trading Period during the Trading Day for each Interconnector Unit, where negative Quantities relate to exports from the Pool;
2. Maximum Interconnector Unit Import Capacity offered on the Interconnector Unit for each Trading Period in the Trading Day; and
3. Maximum Interconnector Unit Export Capacity offered on the Interconnector Unit in each Trading Period in the Trading Day.

5.52A For an Interconnector Unit the relevant Price Quantity Pairs for each Trading Period in the Optimisation Time Horizon shall apply only over the range from the Maximum Interconnector Unit Export Capacity to the Maximum Interconnector Unit Import Capacity in Trading Period h , where for each Trading Period h in the Optimisation Time Horizon:

- a. the Price of the first Price Quantity Pair to have a Quantity less in absolute magnitude than the Maximum Interconnector Unit Export Capacity shall apply between the Maximum Interconnector Unit Export Capacity and that Quantity;
- b. if the Maximum Interconnector Unit Import Capacity is greater than or equal to the Quantity of the greatest Price Quantity Pair, the Price of the greatest Price Quantity Pair shall apply between that Quantity and the Maximum Interconnector Unit Import Capacity;
- c. if the Maximum Interconnector Unit Import Capacity is less than the Quantity of one or more Price Quantity Pairs, the Maximum Interconnector Unit Import Capacity is used in place of the Quantity in the first Price Quantity Pair in which the Quantity is greater than the Maximum Interconnector Unit Import Capacity;

where the relevant Price Quantity Pairs for Trading Period h within the first Trading Day of the Optimisation Time Horizon are the Accepted Price Quantity Pairs submitted in Commercial Offer Data for that Interconnector Unit and Trading Period, as modified in accordance with paragraph N.48, while the Price Quantity Pairs used for each Trading Period h in the Ending Overlap Optimisation Period are the Price Quantity Pairs for that same Interconnector Unit and the corresponding Trading Period h in the Trading Day associated with the Optimisation Time Horizon.

5.53 Participants shall not submit any Technical Offer Data for any Interconnector Unit.

5.54 The Maximum Interconnector Unit Export Capacity may be less in absolute magnitude than the Active Interconnector Unit Export Capacity Holding.

5.55 The Maximum Interconnector Unit Import Capacity may be less than the Active Interconnector Unit Import Capacity Holding.

5.56 The Price Quantity Pairs for each Interconnector Unit in each Trading Period in a given Trading Window apply within the range set by the Maximum Interconnector Unit Import Capacity and the Maximum Interconnector Unit Export Capacity.

- 5.57 In the event that no valid Commercial Offer Data is submitted within a particular Gate Window for an Interconnector Unit for a Trading Period in accordance with the Code, the Market Operator shall set the Maximum Interconnector Unit Import Capacity and Maximum Interconnector Unit Export Capacity for the relevant Unit equal to zero for that Trading Period.

Interconnector Unit Nominations and Modified Interconnector Unit Nominations

- 5.58 For each Trading Day, the Market Operator shall by 11:00 on the day prior to the start of the Trading Day determine Interconnector Unit Nominations for each Interconnector Unit from the Ex-Ante Indicative MSP Software Run based on the Active Interconnector Unit Capacity Holding and Commercial Offer Data such that the following conditions are satisfied:
1. the Ramp Rate for each Interconnector Unit that is implied by the Interconnector Unit Nominations shall not exceed a value of 99999.9 MW/min; and
 2. the implied Ramp Rate for the sum of all Interconnector Units on any Interconnector that is implied by their Interconnector Unit Nominations shall not exceed the Aggregate Interconnector Ramp Rate for that Interconnector at any time.
- 5.59 Based on the Interconnector Unit Nominations, the Market Operator shall calculate Modified Interconnector Unit Nominations in accordance with Agreed Procedure 2 "Interconnector Unit Capacity Right Calculation and Dispatch Notifications". These shall be calculated by the Market Operator such that the Modified Interconnector Unit Nominations, when considered in aggregate across any Interconnector, are consistent with the Interconnector Technical Data for that Interconnector at all times.
- 5.59A For each Trading Day, the Market Operator shall by 12:00 on the day prior to the start of the Trading Day submit to each Interconnector User the Modified Interconnector Unit Nominations in respect of its Interconnector Units, via the Modified Interconnector Unit Nominations Data Transaction in accordance with Appendix K "Market Data Transactions".
- 5.60 For each Trading Day, the Market Operator shall calculate Aggregate Modified Interconnector Unit Nominations for each Interconnector for each Trading Period, and by 12:00 on the day prior to the start of the Trading Day shall submit the Aggregate Modified Interconnector Unit Nomination Data Transaction to the relevant System Operator in accordance with Appendix J "Market Operator and System Operator Data Transactions".

Technical Failures on an Interconnector

- 5.61 In the event of a technical failure on an Interconnector which causes a reduction in the magnitude of the Available Transfer Capacity (this includes reductions in the absolute magnitude of the Maximum Import Available Transfer Capacity and/or the Maximum Export Available Transfer Capacity) after the time of submission of the Active Interconnector Unit Capacity Holding Data stated in paragraph 5.44, the procedures detailed in paragraphs 5.63 and 5.67 and in Agreed Procedure 2 "Interconnector Unit Capacity Right Calculation and Dispatch Notification" shall be followed.
- 5.62 Following an event as described in paragraph 5.61, if each of the following conditions is satisfied:

1. if there has been a technical failure on the relevant Interconnector causing a reduction in the magnitude of Available Transfer Capacity after Gate Closure for the relevant Trading Periods in accordance with paragraph 5.61;
2. and if values of the Modified Interconnector Unit Nominations have been calculated and issued to Interconnector Users in accordance with paragraph 5.63; and
3. and if there has been a subsequent increase in the absolute magnitude of the Available Transfer Capacity for the relevant Interconnector in either direction;

then the procedures detailed in paragraphs 5.63 and 5.67 and in Agreed Procedure 2 “Interconnector Unit Capacity Right Calculation and Dispatch Notification” shall be followed.

- 5.63 In the case of the events described in paragraphs 5.61 or 5.62, then the Market Operator shall recalculate and re-issue the Modified Interconnector Unit Nominations for each Trading Period in the relevant Optimisation Time Horizon to each Interconnector User for each of their Interconnector Units as soon as possible, such that the sum of Modified Interconnector Unit Nominations across all relevant Interconnector Units does not exceed in magnitude the revised Available Transfer Capacity in either direction in any Trading Period and such that the value of each Modified Interconnector Unit Nomination must be in the same direction and must not exceed in absolute magnitude the relevant Interconnector Unit Nomination calculated in accordance with paragraph 5.58, for any Interconnector Unit in any Trading Period.
- 5.64 Intentionally blank.
- 5.65 Intentionally blank.
- 5.66 For the avoidance of doubt, each Interconnector User will be responsible for any consequent alteration to the position of its Interconnector Unit(s) in any market outside of the Pool.
- 5.67 In the case of the event described in paragraph 5.61, then the Market Operator shall recalculate the Aggregate Modified Interconnector Unit Nominations and the Market Operator shall re-issue the Aggregate Modified Interconnector Unit Nominations Data Transaction to the System Operator as soon as possible.

SO Interconnector Trades

- 5.68 Subject to commercial agreement, the relevant System Operator which is the Participant in respect of an Interconnector Residual Capacity Unit shall be entitled under the terms of the Code to make SO Interconnector Trades across the relevant Interconnector in either direction, using any available Interconnector capacity which is not allocated to Interconnector Users under the aggregate of the prevailing Modified Interconnector Unit Nominations.
- 5.69 Any SO Interconnector Trades that are conducted by the System Operator must be conducted after Gate Closure and after receipt by the relevant System Operator of the Aggregate Modified Interconnector Unit Nomination Data Transaction.
- 5.70 For each Interconnector *l* on each Trading Day, the relevant System Operator shall submit, as part of the Dispatch Instruction and SO Interconnector Trades Data Transaction in accordance with Appendix K

“Market Data Transactions”, data for each Trading Period h in the Optimisation Time Horizon relating to that Trading Day to the Market Operator no later than 14:00 on the day on which the Trading Day ends as follows:

1. SO Interconnector Import Price (SIIP $_{lh}$) which is the volume-weighted average price for each Trading Period for SO Interconnector Trades which are for import to the Pool (or zero if there are no such trades);
2. SO Interconnector Export Price (SIEP $_{lh}$) which is the volume-weighted average price for each Trading Period for SO Interconnector Trades which are for export from the Pool (or zero if there are no such trades);
3. SO Interconnector Import Quantity (SIQ $_{lh}$) which is the time-weighted average quantity for each Trading Period (expressed as a positive number in MW) of SO Interconnector Trades which are for import to the Pool (or zero if there are no such trades); and
4. SO Interconnector Export Quantity (SEQ $_{lh}$) which is the time-weighted average quantity for each Trading Period (expressed as a negative number in MW) of SO Interconnector Trades which are for export from the Pool (or zero if there are no such trades).

- 5.71 Agreed Procedure 2 “Interconnector Unit Capacity Right Calculation and Dispatch Notifications” shall provide that, in the event of a revision to Available Transfer Capacity in accordance with paragraph 5.61, the Modified Interconnector Unit Nominations for each Interconnector Unit shall be revised to the minimum extent necessary, taking account of any SO Interconnector Trades which are in the opposite direction to the aggregate of the Modified Interconnector Unit Nominations but taking no account of any SO Interconnector Trades which are in the same direction as the aggregate of the Modified Interconnector Unit Nominations.

Dispatch Quantities

- 5.72 For each Interconnector Unit u , the Market Operator shall set the Dispatch Quantity (DQ $_{uh}$) to be equal to the Modified Interconnector Unit Nomination for each Trading Period h .
- 5.73 For each Interconnector Residual Capacity Unit u' in each Trading Period h , the Market Operator shall set the Dispatch Quantity (DQ $_{u'h}$) to be equal to the sum of SO Interconnector Export Quantity (SEQ $_{lh}$) and the SO Interconnector Import Quantity (SIQ $_{lh}$) for that Interconnector in that Trading Period.
- 5.74 The Market Operator shall set the Dispatch Quantity for the Interconnector Error Unit to be equal to zero.

Actual Availability and Minimum Output

Values for Ex-Ante Indicative MSP Software Runs

- 5.75 The Market Operator shall procure that, for each Interconnector Unit u in each Trading Period h , the Actual Availability (AA $_{uh}$) used as an input to each Ex-Ante Indicative MSP Software Run shall be the lesser of the Active Interconnector Unit Import Capacity Holding and the Maximum Interconnector Unit Import Capacity, or zero if either the Active Interconnector Unit Import Capacity Holding or the Maximum Interconnector Unit Import Capacity is equal to zero.

- 5.76 The Market Operator shall procure that, for each Interconnector Unit u in each Trading Period h , the Minimum Output ($MINOUT_{uh}$) used as an input to each Ex-Ante Indicative MSP Software Run shall be the lesser in absolute magnitude of the Active Interconnector Unit Export Capacity Holding and the Maximum Interconnector Unit Export Capacity expressed as a negative number, or zero if either the Active Interconnector Unit Export Capacity Holding or the Maximum Interconnector Unit Export Capacity is equal to zero.

Values for Ex-Post Indicative MSP Software Runs and Ex-Post Initial MSP Software Runs

- 5.77 The Market Operator shall procure that, for each Interconnector Unit u in each Trading Period h , the Actual Availability (AA_{uh}) used as an input to each Ex-Post Indicative MSP Software Run and each Ex-Post Initial MSP Software Run shall be calculated as follows:

$$\begin{aligned} & \text{if } DQ_{uh} \geq 0 \text{ then} \\ & \quad AA_{uh} = DQ_{uh} \\ & \text{else} \\ & \quad AA_{uh} = 0 \end{aligned}$$

Where

1. DQ_{uh} is the Dispatch Quantity for Interconnector Unit u in Trading Period h .

- 5.78 The Market Operator shall procure that, for each Interconnector Unit u in each Trading Period h , the Minimum Output ($MINOUT_{uh}$) used as an input to each Ex-Post Indicative MSP Software Run and each Ex-Post Initial MSP Software Run shall be calculated as follows:

$$\begin{aligned} & \text{if } DQ_{uh} \geq 0 \text{ then} \\ & \quad MINOUT_{uh} = 0 \\ & \text{else} \\ & \quad MINOUT_{uh} = DQ_{uh} \end{aligned}$$

Where

1. DQ_{uh} is the Dispatch Quantity for Interconnector Unit u in Trading Period h

Market Schedule Quantities

- 5.79 The Market Operator shall procure that each Interconnector Unit u shall be included in the MSP Software as a Predictable Price Maker Generator Unit.
- 5.80 The Market Operator shall procure that the Market Schedule Quantity (MSQ_{uh}) for each Interconnector Unit u in Trading Period h shall be calculated using the MSP Software such that the following conditions are satisfied:
1. the Ramp Rate for each Interconnector Unit that is implied by the Market Schedule Quantities shall not exceed a value of 99999.9 MW/min at any time; and
 2. the implied Ramp Rate for the sum of all Interconnector Units on any Interconnector that is implied by their Market Schedule Quantities

shall not exceed the Aggregate Interconnector Ramp Rate for that Interconnector at any time.

- 5.81 Intentionally blank.
- 5.82 The Market Operator shall calculate the Market Schedule Quantities in each Trading Period such that the aggregate of the Ramp Rates for all Interconnector Units on any Interconnector that is implied by the Interconnector Unit Nominations does not exceed the Aggregate Interconnector Ramp Rate for that Interconnector at any time.
- 5.83 The Market Operator shall set the Market Schedule Quantity (MSQu'h) for each Interconnector Residual Capacity Unit u' in Trading Period h to be equal to zero.
- 5.84 The Market Operator shall set the Market Schedule Quantity (MSQu''h) for each Interconnector Error Unit u'' in Trading Period h to be equal to zero.

Metered Quantities

- 5.85 The Market Operator shall procure that the Metered Generation (MGuh) for each Interconnector Unit u and for each Interconnector Residual Capacity Unit u' (MGu'h) in each Trading Period h shall be calculated as follows:

$$MGuh = DQuh \times TPD$$

$$MGu'h = DQu'h \times TPD$$

Where

1. DQuh is the Dispatch Quantity for Interconnector Unit u in Trading Period h;
 2. DQu'h is the Dispatch Quantity for the Interconnector Residual Capacity Unit u' in Trading Period h;
 3. TPD is the Trading Period Duration.
- 5.86 The Market Operator shall procure that the Metered Generation (MGu''h) for each Interconnector Error Unit u'' in each Trading Period h shall be calculated as follows:

$$MGu''h = IMGlh - \left(\sum_{u \text{ in } l} DQuh + DQu'h \right) \times TPD$$

Where

1. IMGlh is the Interconnector Metered Generation for Interconnector l in Trading Period h;
2. $\sum_{u \text{ in } l} DQuh$ is the sum of the Dispatch Quantities for each Interconnector Unit u within each Interconnector l in Trading Period h;
3. DQu'h is the Dispatch Quantity for the Interconnector Residual Capacity Unit u' in Trading Period h;
4. TPD is the Trading Period Duration.

Interconnector Capacity Payments

- 5.87 The Market Operator shall set the Eligible Availability (EA_uh) used to determine Capacity Payments for each Interconnector Unit u in each Trading Period h to be equal to the Dispatch Quantity (DQ_uh).
- 5.88 The Market Operator shall set the Eligible Availability (EA_{u'}h) for each Interconnector Residual Capacity Unit u' in each Trading Period h to be equal to the Dispatch Quantity (DQ_{u'}h).
- 5.89 The Market Operator shall calculate the Eligible Availability (EA_{u''}h) for the Interconnector Error Unit u'' as follows:

$$EA_{u''}h = \frac{MG_{u''}h}{TPD}$$

Where

1. MG_{u''}h is Metered Generation for Interconnector Error Unit u'' in Trading Period h;
2. TPD is the Trading Period Duration.

Constraint Payments for Interconnector Residual Capacity Units

- 5.90 The Market Operator shall calculate the Constraint Payments in respect of each Interconnector Residual Capacity Unit u' in each Trading Period h (CONP_{u'}h) as follows:

$$CONP_{u'}h = (SIEPlh \times SIEQlh + SIIPlh \times SIQlh) \times TPD \times CLAF_{u'}h$$

Where

1. SIEPlh is the SO Interconnector Export Price for the relevant Interconnector I for Trading Period h
2. SIEQlh is the SO Interconnector Export Quantity for the relevant Interconnector I for Trading Period h
3. SIIPlh is the SO Interconnector Import Price for the relevant Interconnector I for Trading Period h
4. SIQlh is the SO Interconnector Import Quantity for the relevant Interconnector I for Trading Period h
5. TPD is the Trading Period Duration
6. CLAF_{u'}h is the Combined Loss Adjustment Factor for Interconnector Residual Capacity Unit u' in Trading Period h

Settlement

- 5.91 Following calculation of the values for Eligible Availability (EA_uh), Market Schedule Quantity (MSQ_uh), Dispatch Quantity (DQ_uh) and Metered Generation (MG_uh), and, for Interconnector Residual Capacity Units, Constraint Payments (CONP_uh) as above, the Market Operator shall procure that Settlement for each Interconnector Unit, Interconnector Residual Capacity Unit and Interconnector Error Unit will otherwise be conducted in accordance with Section 4.

ENERGY LIMITED GENERATOR UNITS

General

- 5.92 Save as provided in paragraph 5.93, the relevant Participant shall ensure that a Generator Unit is not categorised as an Energy Limited Generator Unit, and that the additional Technical Offer Data Records listed in paragraph 5.95 are not submitted in relation to it.
- 5.93 A Hydro-electric Generator Unit shall be categorised as an Energy Limited Generator Unit if it is:
1. subject to a physical Energy Limit; and
 2. a Price Maker Generator Unit.
- 5.94 For the purposes of the Code, an Energy Limit may only apply to a single Generator Unit and Participants shall not submit any data in relation to any Energy Limit that would or may apply to more than a single Generator Unit.

Offering and Scheduling

- 5.95 Participants shall submit additional Data Records for each Energy Limited Generator Unit for each Trading Day, as part of their Technical Offer Data. The Market Operator shall procure that such Data Records shall be used within the MSP Software to calculate the Market Schedule Quantity for the Energy Limited Generator Unit. These parameters are:
1. the Energy Limit;
 2. the Energy Limit Start;
 3. the Energy Limit Stop; and
 4. the Energy Limit Factor.
- 5.96 The relevant Participant shall ensure that, in respect of its Energy Limited Generator, the Energy Limit (in MWh) shall not exceed the total energy that the plant is physically capable of generating during the Energy Limit Period.
- 5.97 In accordance with the relevant Grid Code, a System Operator may accept a revised declaration of the Energy Limit of an Energy Limited Generator Unit from the plant operator for operational purposes. In this event, the relevant System Operator shall submit Energy Limited Generator Unit Technical Characteristics, consisting of the revised Energy Limit for each Energy Limited Generator Unit on each Trading Day to the Market Operator in accordance with Appendix K "Market Data Transactions", and this will replace the Energy Limit submitted by the Participant as part of its Technical Offer Data.
- 5.98 For each Trading Day, the Market Operator shall multiply the Energy Limit Factor by the Energy Limit to give a value which the Market Operator shall use in the MSP Software to limit the total Market Schedule Quantity of the relevant Energy Limited Generator Unit in the set of Trading Periods that fall within the Ending Overlap Optimisation Period.
- 5.99 The relevant Participant shall submit an Energy Limit Factor of 0.25 for each Energy Limited Generator Unit.
- 5.100 The Market Operator shall procure that the Market Schedule Quantity for each Energy Limited Generator Unit shall be as determined by the MSP Software based on the Technical and Commercial Offer Data of the Energy

Limited Generator Unit, including the Energy Limit, the Energy Limit Period and the Energy Limit Factor, and shall be Physically Feasible.

5.101 Subject to the physical capability of the plant, the Energy Limit used by the Market Operator in the Ex-Post Initial MSP Software Runs, Ex-Post Indicative MSP Software Runs, and in Settlement shall be the greater of:

1. either the Energy Limit for the Energy Limited Generator Unit u submitted as part of its Technical Offer Data or the re-submitted Energy Limit for the Energy Limited Generator Unit u submitted by the relevant System Operator in accordance with Appendix K "Market Data Transactions", as appropriate for the relevant MSP Software Run; and
2. the sum of the Actual Output values (AO_{uh}) multiplied by the Trading Period Duration in each Trading Period h in the Trading Day for the Energy Limited Generator Unit u ,

and the derivation of the values of Energy Limit used in Ex-Ante Indicative MSP Software Runs are detailed within Appendix N "Operation of the MSP Software".

Capacity Payments

5.102 The Eligible Availability of each Energy Limited Generator Unit in each Trading Period shall be calculated by the Market Operator as set out below.

5.103 The Interim Eligible Availability (IEA_{uh}) for each Energy Limited Generator Unit u in each Trading Period h other than those Trading Periods referred to in paragraphs 5.104 and 5.105 shall be calculated as follows:

Given λ_h and $I_{\phi h}$, select values of IEA_{uh} to maximise:

$$\sum_{h \text{ in } t} \left[IEA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (I_h) \right. \right. \\ \left. \left. + \left(\frac{IECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (If_h) \right\} \right]$$

subject to the following conditions:

1. $\sum_{h \text{ in } t} IEA_{uh} \leq \left(\frac{SEL_{ut}}{TPD} \right)$
2. $\forall h : IEA_{uh} \geq \text{Max} \{MSQ_{uh}, 0\}$
3. $\forall h : IEA_{uh} \leq AP_{uh}$

Where

1. $VCPWF_h$ is the Variable Capacity Payments Weighting Factor in Trading Period h ;
2. $CPVSc$ is the Capacity Period Variable Sum in Capacity Period c ;
3. $IECPWF_h$ is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period h ;
4. $CPESc$ is the Capacity Period Ex-Post Sum in Capacity Period c ;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each

Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;

6. $l_{\phi h}$ is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;
7. SEL_{ut} is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. TPD is the Trading Period Duration;
9. MSQ_{uh} is the Market Schedule Quantity for Energy Limited Generator Unit u in Trading Period h ;
10. AP_{uh} is the Availability Profile for Energy Limited Generator Unit u in Trading Period h ;
11. $\sum_{h \in t}$ is a summation over all Trading Periods h in Trading Day t .

5.104 The Interim Eligible Availability (IEA_{uh}) for each Energy Limited Generator Unit u in each Trading Period h in the period commencing at the start of the first Trading Period in each Capacity Period c and ending at the end of the last Trading Period of the first Trading Day t in each Capacity Period shall be calculated as follows:

Given λ_h and $l_{\phi h}$, select values of IEA_{uh} to maximise:

$$\sum_{h=a}^{h=b} IEA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (I_h) \right. \\ \left. + \left(\frac{IECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (If_h) \right\}$$

subject to the following conditions:

1. $\sum_{h=a}^{h=b} IEA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQ_{uh}, 0) \right) \left(\frac{SEL_{ut}}{TPD} + \left[\left(\frac{SEL_{ut}(t-1)}{TPD} \right) \times 0.25 \right] \right) \right\}$
2. $\forall h : IEA_{uh} \geq \text{Max} \{MSQ_{uh}, 0\}$
3. $\forall h : IEA_{uh} \leq AP_{uh}$

Where

1. $VCPWF_h$ is the Variable Capacity Payments Weighting Factor in Trading Period h ;
2. $CPVSc$ is the Capacity Period Variable Sum in Capacity Period c ;
3. $IECPWF_h$ is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period h ;
4. $CPESc$ is the Capacity Period Ex-Post Sum in Capacity Period c ;

5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. $l_{\phi h}$ is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. SEL_{ut} is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. $SEL_{u(t-1)}$ is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day $t-1$ expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
9. TPD is the Trading Period Duration;
10. MSQ_{uh} is the Market Schedule Quantity for Energy Limited Generator Unit u in Trading Period h ;
11. AP_{uh} is the Availability Profile for Energy Limited Generator Unit u in Trading Period h ;
12. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b , where a is the first Trading Period in each Capacity Period c and b is the last Trading Period in the first Trading Day t to commence in each Capacity Period.

5.105 The Interim Eligible Availability (IEA_{uh}) for each Energy Limited Generator Unit u in each Trading Period h in the last Trading Day commencing in each Capacity Period c , where each such Trading Period lies within such Capacity Period c shall be calculated as follows:

Given λ_h and $l_{\phi h}$, select values of IEA_{uh} to maximise:

$$\sum_{h=a}^{h=b} \left[IEA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (I_h) + \left(\frac{IECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (If_h) \right\} \right]$$

subject to the following conditions:

1. $\sum_{h=a}^{h=b} IEA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQ_{uh}, 0) \right) \left(\frac{SEL_{ut}}{TPD} \right) \times 0.75 \right\}$
2. $\forall h : IEA_{uh} \geq \text{Max} \{MSQ_{uh}, 0\}$
3. $\forall h : IEA_{uh} \leq AP_{uh}$

Where:

1. VCPWF $_h$ is the Variable Capacity Payments Weighting Factor in Trading Period h ;

2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. IECWFh is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. $I_{\phi h}$ is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. SELut is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. TPD is the Trading Period Duration;
9. MSQuh is the Market Schedule Quantity for Energy Limited Generator Unit u in Trading Period h;
10. APuh is the Availability Profile for Energy Limited Generator Unit u in Trading Period h;
11. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in the last Trading Day t to commence in each Capacity Period c and b is the last Trading Period in each Capacity Period c.

5.106 The Eligible Availability (EAuh) for each Energy Limited Generator Unit u for each Trading Period h other than those Trading Periods referred to in 5.107 and 5.108 shall be calculated as follows:

Given λ_h and Φ_h , select values of EAuh to maximise:

$$\sum_{h \text{ in } t} \left[EAuh \times \left\{ \left(\frac{VCPWFh \times CPVSc}{(VCPWFh \times CPVSc) + (ECPWFh \times CPESc)} \right) \times (I_h) + \left(\frac{ECPWFh \times CPESc}{(VCPWFh \times CPVSc) + (ECPWFh \times CPESc)} \right) \times (f_h) \right\} \right]$$

subject to the following conditions:

1. $\sum_{h \text{ in } t} EAuh \leq \left(\frac{SELut}{TPD} \right)$
2. $\forall h : EAuh \geq \text{Max} \{MSQuh, 0\}$
3. $\forall h : EAuh \leq APuh$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period h;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. Φ_h is the Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. SEL_{ut} is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. TPD is the Trading Period Duration;
9. MSQu_h is the Market Schedule Quantity for Energy Limited Generator Unit u in Trading Period h;
10. AP_{uh} is the Availability Profile for Energy Limited Generator Unit u in Trading Period h;
11. $\sum_{h \text{ in } t}$ is a summation over all Trading Periods h in Trading Day t.

5.107 The Eligible Availability (EA_{uh}) for each Energy Limited Generator Unit u for each Trading Period h in the period commencing at the start of the first Trading Period in each Capacity Period c and ending at the end of the last Trading Period of the first Trading Day t in each Capacity Period shall be calculated as follows:

Given λ_h and Φ_h, select values of EA_{uh} to maximise:

$$\sum_{h=a}^{h=b} EA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (I_h) + \left(\frac{ECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (f_h) \right\}$$

subject to the following conditions:

1. $\sum_{h=a}^{h=b} EA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQu_h, 0) \right) \left(\frac{SEL_{uh}}{TPD} + \left[\left(\frac{SEL_{u(t-1)}}{TPD} \right) \times 0.25 \right] \right) \right\}$
2. $\forall h : EA_{uh} \geq \text{Max} \{MSQu_h, 0\}$
3. $\forall h : EA_{uh} \leq AP_{uh}$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period *h*;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period *c*;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period *h*;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period *c*;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period *h* and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. φ_h is the Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period *h* and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. SEL_{ut} is the Accepted Energy Limit for Energy Limited Generator Unit *u* in Trading Day *t* expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. SEL_{u(t-1)} is the Accepted Energy Limit for Energy Limited Generator Unit *u* in Trading Day *t-1* expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
9. TPD is the Trading Period Duration;
10. MSQu_h is the Market Schedule Quantity for Energy Limited Generator Unit *u* in Trading Period *h*;
11. APu_h is the Availability Profile for Energy Limited Generator Unit *u* in Trading Period *h*;
12. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods *h* in the range *a* to *b*, where *a* is the first Trading Period in each Capacity Period *c* and *b* is the last Trading Period in the first Trading Day *t* to commence in each Capacity Period.

5.108 The Eligible Availability (EA_{uh}) for each Energy Limited Generator Unit *u* in each Trading Period *h* in the last Trading Day commencing in each Capacity Period *c*, where each such Trading Period lies within such Capacity Period *c* shall be calculated as follows:

Given λ_h and φ_h, select values of EA_{uh} to maximise:

$$\sum_{h=a}^{h=b} EA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (I_h) \right. \\ \left. + \left(\frac{ECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (f_h) \right\}$$

subject to the following conditions:

1. $\sum_{h=a}^{h=b} EA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQ_{uh}, 0) \right) \left(\frac{SEL_{ut}}{TPD} \right)^{0.75} \right\}$
2. $\forall h : EA_{uh} \geq \text{Max} \{MSQ_{uh}, 0\}$
3. $\forall h : EA_{uh} \leq AP_{uh}$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period h;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;
6. φ_h is the Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;
7. SEL_{ut} is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. TPD is the Trading Period Duration;
9. EA_{uh} is the Eligible Availability for Energy Limited Generator Unit u in Trading Period h;
10. AP_{uh} is the Availability Profile for Energy Limited Generator Unit u in Trading Period h;
11. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in the last Trading Day t to commence in each Capacity Period c and b is the last Trading Period in each Capacity Period c.

PUMPED STORAGE

General

- 5.109 The Market Operator shall procure that each Pumped Storage Unit shall be settled as a Generator Unit irrespective of whether its net Output in any Trading Period is positive or negative.
- 5.110 The relevant Participant shall not register any Pumped Storage Unit as part of any Trading Site.

- 5.111 Each Pumped Storage Unit shall be classified as a Predictable Price Maker Generator Unit.

Offering and Scheduling

- 5.112 Notwithstanding this classification, the relevant Participant shall submit Price Quantity Pairs, Start Up Costs and No Load Costs for Pumped Storage Units, including Default Data, in all cases equal to zero.
- 5.113 Each Participant shall submit additional Data Records in the Commercial Offer Data and Technical Offer Data in respect of each of its Pumped Storage Units. These additional Data Records shall be submitted in accordance with the provisions of Appendix I and shall be as follows:

Commercial Offer Data

1. Target Reservoir Level at the end of the Trading Day;

Technical Offer Data

2. Pumped Storage Cycle Efficiency (PSCE_{ut}), submitted as a single value for each Trading Day to apply to all Trading Periods h within that Trading Day t . The value of Pumped Storage Cycle Efficiency shall in all cases be submitted as greater than 0% and less than or equal to 100% (with the specific value calculated as the relevant quantity of Generation divided by the relevant quantity of Demand);
 3. Target Reservoir Level Percentage;
 4. Maximum Storage Capacity (PSMAX_{Lut}) expressed in terms of generation (MWh) for each Pumped Storage Unit u within Trading Day t ; and
 5. Minimum Storage Capacity (PSMIN_{Lut}) expressed in terms of generation (MWh) for each Pumped Storage Unit u within Trading Day t .
- 5.114 The relevant Participant shall ensure that values of the Forecast Minimum Output Profile submitted as part of Technical Offer Data for a particular Gate Window shall be equal to the expected pumping capability for Pumped Storage Unit u in Trading Period h .
- 5.115 The relevant Participant shall ensure that values of the Forecast Availability Profile submitted as part of Technical Offer Data for a particular Gate Window shall be equal to the expected generation availability for Pumped Storage Unit u in Trading Period h .
- 5.116 The Market Operator shall procure that for each run of the MSP Software, the Target Reservoir Level shall be used as a lower limit for the reservoir level at the end of the Trading Day and the MSP Software shall (where feasible in relation to the Technical Capability of the relevant Unit) schedule each Pumped Storage Unit such that the reservoir level at the end of the Trading Day is greater than or equal to the submitted Target Reservoir Level.
- 5.117 The Market Operator shall procure that for each run of the MSP Software, the Target Reservoir Level Percentage shall be multiplied by the Target Reservoir Level to derive a lower limit for the reservoir level at the end of the Optimisation Time Horizon and the MSP Software shall (where feasible in relation to the Technical Capability of the relevant Unit) schedule each Pumped Storage Unit such that the reservoir level at the end of the

Optimisation Time Horizon is greater than or equal to the resultant reservoir level.

- 5.118 The relevant Participant shall ensure that the values of the Target Reservoir Level for each Trading Window, submitted by the relevant Gate Window Closure shall be less than or equal to the relevant values of Maximum Storage Capacity.
- 5.119 The relevant Participant shall submit a Target Reservoir Level Percentage of 50% for each Pumped Storage Unit for the relevant Gate Window.
- 5.120 The Market Operator shall procure that within the Technical Offer Data or Generator Unit Technical Characteristics for each Pumped Storage Unit, any submitted value for Minimum Stable Generation shall not be used within the MSP Software.
- 5.121 The Market Operator shall procure that within the Technical Offer Data or Generator Unit Technical Characteristics for each Pumped Storage Unit, the submitted values of Ramp Rate shall be applied within the MSP Software to levels of Output that are positive or negative, other than for the calculation of Dispatch Quantities as part of Instruction Profiling..
- 5.122 For all Pumped Storage Units which utilise the same reservoir, for any Trading Window, the relevant Participant shall ensure that the values of Maximum Storage Capacity submitted by the Gate Window Closure for the associated Gate Window shall be equal.
- 5.123 For all Pumped Storage Units which utilise the same reservoir for any Trading Window, the relevant Participant shall ensure that the values of Minimum Storage Capacity submitted by the Gate Window Closure for the associated Gate Window shall be equal.
- 5.124 For all Pumped Storage Units which utilise the same reservoir for any Trading Window, the relevant Participant shall ensure that the values of Target Reservoir Level submitted by the Gate Window Closure for the associated Gate Window shall be equal.
- 5.125 The Market Operator shall procure that for each run of the MSP Software, the reservoir level at the start of the Optimisation Time Horizon will be taken from the results referred to at the same point in time that were produced by the Preceding MSP Run.

Energy Settlement

- 5.126 The Market Operator shall procure that the Market Schedule Quantities will be calculated to be positive when the Pumped Storage Unit is scheduled to generate and negative when the Pumped Storage Unit is scheduled to pump.

Constraint Payments and Charges

- 5.127 There shall be no Constraint Payments in respect of Pumped Storage Units.
- 5.128 The Market Operator shall procure that each Pumped Storage Unit u shall be subject to Uninstructed Imbalances, and for these purposes the value of Dispatch Offer Price for each Pumped Storage Unit u in each Trading Period h (DOP $_{uh}$) shall be equal to the System Marginal Price (SMP h).

Capacity Payments for Pumped Storage Units

- 5.129 The Market Operator shall procure that Capacity Payments for each Pumped Storage Unit shall be based on its Eligible Availability in each Trading Period, adjusted for losses, and determined in accordance with the applicable algebraic formulation set out below and in Section 4.
- 5.130 The Market Operator shall calculate the Interim Eligible Generation Availability (IEGA_{uh}) for each Pumped Storage Unit *u* in each Trading Period *h* other than those Trading Periods referred to in 5.131 and 5.132 as follows:

Given λ_h and $I\phi_h$, select values of IEGA_{uh} to maximise:

$$\sum_{h \text{ in } t} \left[IEGA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (Ih) + \left(\frac{IECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (Ifh) \right\} \right]$$

subject to the following conditions:

1. $\sum_{h \text{ in } t} IEGA_{uh} \leq \text{Max} \left\{ \left(\sum_{h \text{ in } t} (\text{Max} \{MSQuh, 0\}) \right) \left(\frac{PSMAXLut - PSMINLut}{TPD} \right) \right\}$
2. $\forall h : IEGA_{uh} \geq \text{Max} \{MSQuh, 0\}$
3. $\forall h : IEGA_{uh} \leq APuh$

Where:

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period *h*;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period *c*;
3. IECPWF_h is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period *h*;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period *c*;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period *h* and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. $I\phi_h$ is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period *h* and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. MSQu_h is the Market Schedule Quantity for Pumped Storage Unit *u* in Trading Period *h*;
8. PSMAXLut is the Maximum Storage Capacity for Pumped Storage Unit *u* in Trading Day *t*;

9. $PSMINL_{ut}$ is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day t ;
10. TPD is the Trading Period Duration;
11. AP_{uh} is the Availability Profile for Pumped Storage Unit u in Trading Period h ;
12. $\sum_{h \in t}$ is a summation over all Trading Periods h in Trading Day t .

5.131 The Market Operator shall calculate the Interim Eligible Generation Availability ($IEGA_{uh}$) for each Pumped Storage Unit u in each Trading Period h in the period commencing at the start of the first Trading Period in each Capacity Period c and ending at the end of the last Trading Period of the first Trading Day t in each Capacity Period as follows:

Given λ_h and $I\phi_h$, select values of $IEGA_{uh}$ to maximise:

$$\sum_{h=a}^{h=b} IEGA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (I_h) + \left(\frac{IECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (I\phi_h) \right\}$$

subject to the following conditions:

$$1. \sum_{h=a}^{h=b} IEGA_{uh} \leq \max \left\{ \left(\sum_{h=a}^{h=b} (Max\{MSQ_{uh}, 0\}) \right), \left(\frac{PSMAXL_{ut} - PSMINL_{ut}}{TPD} \right) + \left(\frac{PSMAXL_{(t-1)} - PSMINL_{(t-1)}}{TPD} \right) \times 0.25 \right\}$$

$$2. \forall h : IEGA_{uh} \geq \max \{MSQ_{uh}, 0\}$$

$$3. \forall h : IEGA_{uh} \leq AP_{uh}$$

Where

1. $VCPWF_h$ is the Variable Capacity Payments Weighting Factor in Trading Period h ;
2. $CPVSc$ is the Capacity Period Variable Sum in Capacity Period c ;
3. $IECPWF_h$ is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period h ;
4. $CPESc$ is the Capacity Period Ex-Post Sum in Capacity Period c ;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. $I\phi_h$ is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity

weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;

7. $MSQuh$ is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h ;
8. $PSMAXLut$ is the Maximum Storage Capacity for Pumped Storage Unit u in Trading Day t ;
9. $PSMINLut$ is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day t ;
10. $PSMAXLu(t-1)$ is the Maximum Storage Capacity for Pumped Storage Unit u in Trading Day $t-1$;
11. $PSMINLu(t-1)$ is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day $t-1$;
12. TPD is the Trading Period Duration;
13. $APuh$ is the Availability Profile for Pumped Storage Unit u in Trading Period h ;
14. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b , where a is the first Trading Period in each Capacity Period c and b is the last Trading Period in the first Trading Day t to commence in each Capacity Period.

5.132 The Market Operator shall calculate the Interim Eligible Generation Availability ($IEGAuh$) for each Pumped Storage Unit u in each Trading Period h in the last Trading Day commencing in each Capacity Period c , where each such Trading Period lies within such Capacity Period c as follows:

Given λ_h and $l_{\phi h}$, select values of $IEGAuh$ to maximise:

$$\sum_{h=a}^{h=b} \left[IEGAuh \times \left\{ \left(\frac{VCPWFh \times CPVSc}{(VCPWFh \times CPVSc) + (IECPWFh \times CPESc)} \right) \times (Ih) + \left(\frac{IECPWFh \times CPESc}{(VCPWFh \times CPVSc) + (IECPWFh \times CPESc)} \right) \times (Ifh) \right\} \right]$$

subject to the following conditions:

1. $\sum_{h=a}^{h=b} IEGAuh \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} (\text{Max}\{MSQuh, 0\}) \right), \left(\frac{PSMAXLut - PSMINLut}{TPD} \right) \times 0.75 \right\}$
2. $\forall h : IEGAuh \geq \text{Max}\{MSQuh, 0\}$
3. $\forall h : IEGAuh \leq APuh$

Where

1. $VCPWFh$ is the Variable Capacity Payments Weighting Factor in Trading Period h ;

2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. IECPW_{Fh} is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;
6. l_{oph} is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;
7. MSQ_{uh} is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h;
8. PSMA_XL_{ut} is the Maximum Storage Capacity for Pumped Storage Unit u in Trading Day t;
9. PSMI_NL_{ut} is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day t;
10. TPD is the Trading Period Duration;
11. AP_{uh} is the Availability Profile for Pumped Storage Unit u in Trading Period h;
12. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in the last Trading Day t to commence in each Capacity Period c and b is the last Trading Period in each Capacity Period c.

5.133 The Market Operator shall calculate the Interim Eligible Availability (IEA_{uh}) for Pumped Storage Unit u in each Trading Period h as follows:

$$\forall h : IEA_{uh} = IEGA_{uh} + \text{Min}\{MSQ_{uh}, 0\}$$

Where

1. MSQ_{uh} is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h;
2. IEGA_{uh} is the Interim Eligible Generation Availability for Pumped Storage Unit u in Trading Period h.

5.134 The Market Operator shall calculate the Eligible Generation Availability (EGA_{uh}) for each Pumped Storage Unit u in each Trading Period h other than those Trading Periods referred to in paragraphs 5.135 and 5.136 as follows:

Given λ_h and Φ_h, select values of EGA_{uh} to maximise:

$$\sum_{h \text{ in } t} \left[EGA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (I_h) \right. \right. \\ \left. \left. + \left(\frac{ECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (f_h) \right\} \right]$$

subject to the following conditions:

1. $\sum_{h \text{ in } t} EGA_{uh} \leq \text{Max} \left\{ \left(\sum_{h \text{ in } t} (\text{Max} \{MSQ_{uh}, 0\}) \right) \left(\frac{PSMAX_{Lut} - PSMIN_{Lut}}{TPD} \right) \right\}$
2. $\forall h : EGA_{uh} \geq \text{Max} \{MSQ_{uh}, 0\}$
3. $\forall h : EGA_{uh} \leq AP_{uh}$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period h;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. MSQ_{uh} is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h;
6. PSMAX_{Lut} is the Maximum Storage Capacity for Pumped Storage Unit u in Trading Day t;
7. PSMIN_{Lut} is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day t;
8. TPD is the Trading Period Duration;
9. λ_h is the Loss of Load Probability for Trading Period h determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments” and is a value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period;
10. Φ_h is the Ex-Post Loss of Load Probability for Trading Period h determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments” and is a value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period;
11. AP_{uh} is the Availability Profile for Pumped Storage Unit u in Trading Period h;
12. $\sum_{h \text{ in } t}$ is a summation over all Trading Periods h in Trading Day t.

- 5.135 The Market Operator shall calculate the Eligible Generation Availability (EGA_{uh}) for each Pumped Storage Unit u in each Trading Period h in the period commencing at the start of the first Trading Period in each Capacity Period c and ending at the end of the last Trading Period of the first Trading Day t in each Capacity Period as follows:

Given λ_h and ϕ_h , select values of EGA_{uh} to maximise:

$$\sum_{h=a}^{h=b} \left[EGA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (I_h) + \left(\frac{ECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (f_h) \right\} \right]$$

subject to the following conditions:

$$1. \sum_{h=a}^{h=b} EGA_{uh} \leq \max \left\{ \left(\sum_{h=a}^{h=b} \{ \max \{ MSQu_h, 0 \} \} \right), \left(\frac{PSMAXLu_t - PSMINLu_t}{TPD} \right) + \left(\frac{PSMAXLu_{(t-1)} - PSMINLu_{(t-1)}}{TPD} \right) \times 0.25 \right\}$$

$$2. \forall h : IEGA_{uh} \geq \max \{ MSQu_h, 0 \}$$

$$3. \forall h : IEGA_{uh} \leq AP_{uh}$$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period h;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. ϕ_h is the Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. MSQu_h is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h;
8. PSMAXLu_t is the Maximum Storage Capacity for Pumped Storage Unit u in Trading Day t;
9. PSMINLu_t is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day t;
10. PSMAXLu_(t-1) is the Maximum Storage Capacity for Pumped Storage Unit u in Trading Day t-1;
11. PSMINLu_(t-1) is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day t-1;
12. TPD is the Trading Period Duration;
13. AP_{uh} is the Availability Profile for Pumped Storage Unit u in Trading Period h;

14. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b , where a is the first Trading Period in each Capacity Period c and b is the last Trading Period in the first Trading Day t to commence in each Capacity Period.

5.136 The Market Operator shall calculate the Eligible Generation Availability (EGA_{uh}) for each Pumped Storage Unit u in each Trading Period h in the last Trading Day commencing in each Capacity Period c , where each such Trading Period lies within such Capacity Period c as follows:

Given λ_h and ϕ_h , select values of EGA_{uh} to maximise:

$$\sum_{h=a}^{h=b} EGA_{uh} \times \left[\left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (I_h) + \left(\frac{ECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (f_h) \right]$$

subject to the following conditions:

1.

$$\sum_{h=a}^{h=b} EGA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} (\text{Max}\{MSQuh, 0\}) \right), \left(\frac{PSMAXLut - PSMINLut}{TPD} \right) \times 0.75 \right\}$$

2. $\forall h : IEGA_{uh} \geq \text{Max}\{MSQuh, 0\}$

3. $\forall h : IEGA_{uh} \leq AP_{uh}$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period h ;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c ;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period h ;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c ;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. ϕ_h is the Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. MSQu_h is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h ;
8. PSMAXLut is the Maximum Storage Capacity for Pumped Storage Unit u in Trading Day t ;

9. PSMINLut is the Minimum Storage Capacity for Pumped Storage Unit u in Trading Day t;
10. TPD is the Trading Period Duration;
11. APuh is the Availability Profile for Pumped Storage Unit u in Trading Period h;
12. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in the last Trading Day t to commence in each Capacity Period c and b is the last Trading Period in each Capacity Period c.

5.137 The Market Operator shall calculate the Eligible Availability (EAuh) for each Pumped Storage Unit u in Trading Period h as follows:

$$\forall h : EAuh = EGAuh + \text{Min}\{MSQuh, 0\}$$

Where

1. MSQuh is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h;
2. EGAuh is the Eligible Generation Availability for Pumped Storage Unit u in Trading Period h.

5.138 The Market Operator shall calculate the Pumped Storage Unscheduled Capacity Daily Price (PSUCDPut) as follows:

if PSCEut = 0 then

$$PSUCDPut = PCAP$$

else

if MSQuh ≥ 0 ∀ h in Trading Day t then

$$PSUCDPut = \text{Min}\left\{\left(\frac{SMP_h}{PSCE_{ut}}\right) : \forall h \text{ in Trading Day } t\right\}$$

else

$$PSUCDPut = \text{Max}\left\{\left(\frac{SMP_h}{PSCE_{ut}}\right) : \forall h \text{ in Trading Day } t \text{ where } MSQuh < 0\right\}$$

Where

1. PSCEut is the Pumped Storage Cycle Efficiency for Pumped Storage Unit u for the relevant Trading Period h within Trading Day t;
2. PCAP is the Market Price Cap;
3. MSQuh is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h;
4. SMP_h is the System Marginal Price in Trading Period h.

5.139 For the purposes of the summation \sum_i within the equation in paragraph

4.115, i is limited to 1, and therefore only a single value of Unscheduled Capacity Offer Price (UCOPuhi) and Unscheduled Capacity Offer Quantity (UCOQuhi) is required within that equation for each Pumped Storage Unit u in each Trading Period h.

- 5.140 The Market Operator shall calculate the value of the Unscheduled Capacity Offer Price (UCOPu_{hi}) (where $i = 1$) for each Pumped Storage Unit u for each Trading Period h during Trading Day t as follows:

$$UCOPu_{hi} = \text{Max}\{SMP_h, PSUCDP_{ut}\} \text{ where } i = 1$$

Where

1. SMP_h is the System Marginal Price in Trading Period h ;
2. PSUCDP_{ut} is the Pumped Storage Unscheduled Capacity Daily Price for Pumped Storage Unit u in Trading Day t .

- 5.141 The Market Operator shall calculate value of the Unscheduled Capacity Offer Quantity (UCOQ_{uhi}) (where $i = 1$) for each Pumped Storage Unit u for each Trading Period h during Trading Day t as follows:

$$UCOQ_{uhi} = \text{Max}\{(EA_{uh} - MSQ_{uh}), 0\} \text{ where } i = 1$$

Where

1. EA_{uh} is the Eligible Availability for Pumped Storage Unit u in Trading Period h ;
2. MSQ_{uh} is the Market Schedule Quantity for Pumped Storage Unit u in Trading Period h .

PRIORITY DISPATCH

- 5.142 The Market Operator shall procure that, in the event of a Tie-Break, Price Maker Generator Units which have Priority Dispatch for their entire capacity shall take precedence in the allocation of Market Schedule Quantities over other Price Maker Generator Units, in accordance with Appendix N "Operation of the MSP Software".

AUTOPRODUCERS

General

- 5.143 An Autoproducer Site is a Demand Site where Demand is not solely for the purposes of generation, but which contains one or more Generator Units none of which are Demand Side Units.
- 5.144 The Units which form part of an Autoproducer Site are eligible to be registered as a Trading Site in accordance with the provisions set out in paragraphs 2.60 to 2.64.
- 5.145 If all of the Generator Units which form part of an Autoproducer Site are Autonomous Generator Units, those Generator Units may be registered as a single Autonomous Generator Unit as part of a Trading Site with an Associated Supplier Unit.
- 5.146 Save as provided in paragraph 5.145, each Autoproducer Site must have separate metering for its import energy quantity and export energy quantity. A Party must register Generator Units and Supplier Units separately for the purposes of a Trading Site (including a Netting Generator Unit) where applicable.
- 5.147 The relevant Participant must submit Generator Unit Commercial Offer Data and Technical Offer Data net of Unit Load and independent of the related Demand, in respect of Generation at an Autoproducer Site.

DEMAND SIDE UNITS

- 5.148 Subject to paragraph 5.151 below, a Party may register a Demand Side Unit associated with a Demand Site or Demand Sites.
- 5.149 A Party is not obliged to register any Demand Side Unit with any Demand Site.
- 5.150 Subject to the terms of the Grid Code, a single Demand Side Unit may be associated with a number of Demand Sites provided that those Demand Sites comprise one single Supplier Unit and that those Demand Sites are within the same Currency Zone. The combined Demand Side Unit shall for all purposes under the Code be treated as a single Demand Side Unit.
- 5.151 To qualify for registration as a Demand Side Unit, a Demand Site must meet and continue to meet each of the following criteria:
1. the Demand Site shall house a final customer or consumer;
 2. the Demand Site shall have the technical and operational capability to deliver Demand Reduction in response to Dispatch Instructions from the System Operator in accordance with the relevant Grid Code or Distribution Code;
 3. the Demand Site shall have appropriate equipment to permit real-time monitoring of delivery by the System Operator; and
 4. the Demand Site shall have a Maximum Import Capacity and shall not have a Maximum Export Capacity.
- 5.152 For each Demand Side Unit, a Party (or Applicant as applicable) shall register as part of a single Trading Site in accordance with the provisions set out in paragraphs 2.60 to 2.64:
1. the Demand Side Unit;
 2. a single Supplier Unit which is a Trading Site Supplier Unit, with which the Demand Reduction is associated;
 3. a Netting Generator Unit; and
 4. no other Unit.
- 5.153 The Netting Generator Unit shall not be associated with any physical meter and shall be classified as an Autonomous Generator Unit in all respects except as set out below.
- 5.154 Each Demand Side Unit shall be classified as a Predictable Price Maker Generator Unit.
- 5.155 Participants shall submit Commercial Offer Data and Technical Offer Data in accordance with the provisions of Appendix I of the Code, for each of their Demand Side Units in respect of its offered Demand Reduction.
- 5.156 As part of the Technical Offer Data for a Demand Side Unit, the Forecast Availability Profile of each Demand Side Unit for each Trading Period in the associated Trading Day shall be set by the relevant Participant to be equal to the offered level of Demand Reduction.
- 5.157 The Market Operator shall set the Combined Loss Adjustment Factor (CLAF_{uh}) for each Demand Side Unit to be equal to 1.

Offering and Scheduling

- 5.158 Appendix I “Offer Data” lists the required Data Records which must be included in Commercial Offer Data for Demand Side Units. No other Commercial Offer Data Records shall be submitted for these Units.
- 5.159 Participants must not submit Commercial Offer Data for a Demand Side Unit which includes No Load Costs or Start Up Costs.
- 5.160 Participants must submit Commercial Offer Data for each Demand Side Unit for a particular Gate Window which includes a single Shut Down Cost.
- 5.161 For the purposes of calculations under this Code the Market Operator shall calculate each value of Start Up Cost (SUC_{uh}) for each Demand Side Unit *u* from the relevant Accepted value of Shut Down Cost for the relevant Trading Period *h* for that Demand Side Unit. The Market Operator shall set all values of No Load Cost (NLC_{uh}) for Demand Side Units *u* to be zero for all Trading Periods *h*.

Technical Offer Data

- 5.162 Appendix I “Offer Data” lists the required Data Records which must be included within Technical Offer Data for Demand Side Units. No other Technical Offer Data Records shall be submitted for these Units.

Quantities

- 5.163 The Market Operator shall calculate the Net Demand (ND_{vh}) at the Trading Site Supplier Unit *v* with which the Demand Reduction is associated in Trading Period *h* as follows:

$$ND_{vh} = MD_{vh}$$

Where

1. MD_{vh} is the Metered Demand for Trading Site Supplier Unit *v* in Trading Period *h*.

- 5.163A The Market Operator shall calculate the Settlement Net Demand (SND_{vh}) for the Trading Site Supplier Unit *v* with which the Demand Reduction is associated in Trading Period *h* in accordance with paragraph 4.92E.

- 5.164 The Market Operator shall set the Market Schedule Quantity (MSQ_{uh}) at the Netting Generator Unit *u'* for Trading Period *h* to be equal to the negative of the Dispatch Quantity at the Demand Side Unit *u* as follows:

$$MSQ_{u'h} = -DQ_{uh}.$$

Where

1. DQ_{uh} is the Dispatch Quantity for Demand Side Unit *u* in Trading Period *h*.

- 5.165 The Market Operator shall calculate the Dispatch Quantity (DQ_{u'h}) and the Metered Generation (MG_{u'h}) at the Netting Generator Unit *u'* for Trading Period *h* as follows:

$$DQ_{u'h} = MSQ_{u'h}$$

$$MG_{u'h} = MSQ_{u'h} \times TPD$$

Where

1. MSQu'h is the Market Schedule Quantity at Netting Generator Unit u' for Trading Period h;
2. TPD is the Trading Period Duration.

Compliance with Dispatch Instructions

- 5.166 The relevant Participant shall deliver Demand Reduction at the Demand Site in accordance with any Dispatch Instruction which is in line with the Outturn Availability and the relevant parts of its Technical Offer Data.
- 5.167 For each Demand Side Unit u in Trading Period h, the Market Operator shall set the Metered Generation (MGuh) to equal the Dispatch Quantity:

$$MGuh = DQuh \times TPD$$

Where

1. DQuh is Dispatch Quantity for Generator Unit u in Trading Period h;
2. TPD is the Trading Period Duration.

GENERATOR UNITS UNDER TEST

- 5.168 The relevant System Operator may grant Generator Units the status of Under Test for a limited period under the terms of the relevant Grid Code.
- 5.169 The Market Operator shall not grant the status of Under Test for the purposes of this Code to Autonomous Generator Units, Pumped Storage Units, Demand Side Units, Interconnector Units or Interconnector Residual Capacity Units.
- 5.170 In order for a Generator Unit to apply for Under Test status under this Code, a Participant shall submit a "Generator Unit Under Test Notice" which shall comprise a Unit Under Test Start Date and a Unit Under Test End Date as specified in Appendix F "Other Communications" and in accordance with Agreed Procedure 4 "Transaction Submission and Validation". The submission of this data shall constitute an application by the Participant for Under Test status.
- 5.171 The Market Operator shall award the Generator Unit Under Test status under this Code for the period between the Unit Under Test Start Date and the Unit Under Test End Date, subject to verification with the relevant System Operator in accordance with Appendix J "Market Operator and System Operator Data Transactions" that the Generator Unit shall be Under Test under the terms of the relevant Grid Code at all times starting on the Unit Under Test Starting Trading Day and ending on the Unit Under Test Ending Trading Day.

Commercial Offer Data for Generator Units Under Test

- 5.172 The relevant Participant shall include a Nomination Profile (as described in paragraphs 5.12 to 5.14) within their Commercial Offer Data for a Generator Unit Under Test, in accordance with the provisions of Appendix I. The Nominated Quantities within the Nomination Profile shall reflect the desired pattern of operation.
- 5.173 The relevant Participant shall not include within the Commercial Offer Data for a Generator Unit Under Test, Price Quantity Pairs, Start Up Costs, No Load Costs or Shut Down Costs.

- 5.174 The relevant Participant shall submit, as part of the Commercial Offer Data for each Trading Day, for a Generator Unit u that is Under Test, a Decremental Price ($DECP_{uh}$) for each Trading Period h , for the relevant Trading Day and each value of Decremental Price so submitted shall be equal to zero.

Testing Tariffs

- 5.175 The relevant System Operator shall make a report to the Regulatory Authorities proposing values for the Testing Tariffs at least four months before the start of the Year to which they shall apply. The System Operator's report must set out the justification for the specific values proposed. Such a report may, and shall if so requested by the Regulatory Authorities, include alternative values from those proposed and must set out the arguments for and against such alternatives.
- 5.176 Each System Operator shall provide to the Market Operator at least two months prior to the start of each Year or within 5 Working Days of approval by the Regulatory Authorities whichever is the later the Testing Tariff Data Transaction, which comprises a complete set of Testing Tariffs that have been approved by the Regulatory Authorities for each Generator Unit (other than Demand Side Units) that is registered within its Currency Zone, for each Trading Period in the Year, in accordance with Appendix K "Market Data Transactions".
- 5.177 The Market Operator shall publish the approved value(s) for each parameter within 5 Working Days of receipt of the Regulatory Authorities' determination or two months before the start of the Year to which they shall apply whichever is the later.
- 5.178 The System Operator may update these tariffs within the Year to which they apply subject to the prior approval of the Regulatory Authorities. If the tariffs are so updated, the System Operator shall provide the updated Testing Tariff Data Transaction to the Market Operator within 5 Working Days of approval by the Regulatory Authorities.
- 5.179 The Market Operator will publish each Year the schedule of Testing Tariffs and the detailed tariff methodology and periodically in the event that the Tariffs are updated within a Year.

Charges for Generator Units Under Test

- 5.180 The Market Operator shall calculate the Testing Charge applicable to each Generator Unit u Under Test for each Trading Period h ($TCHARGE_{uh}$) as follows:

$$TCHARGE_{uh} = \text{Max}\{MGLF_{uh}, 0\} \times TTARIFF_{uh}$$

Where

1. $TTARIFF_{uh}$ is the Testing Tariff applicable to Generator Unit Under Test u in Trading Period h , as set out in the schedule of Testing Tariffs;
2. $MGLF_{uh}$ is the Loss-Adjusted Metered Generation for the Generator Unit Under Test u for Trading Period h .

Settlement of Generator Units Under Test

- 5.181 The Market Operator shall calculate the Market Schedule Quantity for Generator Unit u in Trading Period h (MSQ_{uh}) from the Dispatch Quantity as follows:

$$MSQ_{uh} = DQ_{uh}$$

Where

1. DQ_{uh} is Dispatch Quantity for Generator Unit u in Trading Period h .
- 5.182 The Market Operator shall calculate the value of Constraint Payments ($CONP_{uh}$) for each Generator Unit u that is Under Test in a Trading Period h to be zero.
- 5.183 For the purposes of Uninstructed Imbalances as set out in paragraph 4.151 for Generator Units Under Test, the Market Operator shall deem the value of Dispatch Offer Price (DOP_{uh}) to be equal to System Marginal Price (SMP_h).
- 5.184 The Market Operator shall calculate the Eligible Availability (EA_{uh}) for use in the calculation of Capacity Payments for Generator Units Under Test as follows:

$$EA_{uh} = \text{Min} \left\{ \frac{MG_{uh}}{TPD}, DQ_{uh} \right\}$$

Where

2. MG_{uh} is Metered Generation for Generator Unit u for Trading Period h ;
3. TPD is the Trading Period Duration;
4. DQ_{uh} is Dispatch Quantity for Generator Unit u for Trading Period h .

Aggregated Generator Units

- 5.185 The Party (or Applicant as applicable) that owns or ultimately controls an Aggregated Generator must comply with the relevant provisions of the Grid Code relating to Aggregated Generators
- 5.186 To qualify for registration as a Aggregated Generator Unit, the Aggregated Generator Unit must meet and continue to meet each of the following criteria:
1. The Aggregated Generator Unit shall not include any Generator located on a Generation Site with Non-Firm Access;
 2. All Generators included within the Aggregated Generator Unit shall be located on Generation Sites within the same Currency Zone;
 3. All Generators included within the Aggregated Generator Unit shall not be registered as or part of any other Generator Unit;
 4. All Generators included within the Aggregated Generator and the relevant Generator Aggregator are compliant with the relevant provisions of the Grid Code;
 5. All Generators within the Aggregated Generator Unit shall be explicitly identified in the Generator Aggregator System Operator Agreement; and

6. The Aggregated Generator Unit remains registered as either Predictable Price Taker, Predictable Price Maker, Variable Price Maker, or Variable Price Taker and fulfils all requirements for being registered as same.
- 5.187 For each Aggregated Generator Unit, a Party (or Applicant as applicable) shall record an Associated Supplier Unit to the Trading Site in accordance with the provisions set out in paragraph 2.64
 - 5.188 No Aggregated Generator Unit may be registered as part of a Trading Site that contains a Trading Site Supplier Unit
 - 5.189 Each Party (or Applicant as applicable) that registers an Aggregated Generator Unit must have Interval Metering, installed by the Meter Data Provider responsible for installing, commissioning and maintaining such meters at the Generators contained within the Aggregated Generator Unit to meter Active Power Generation of those Generators
 - 5.190 Each Party (or Applicant as applicable) that registers an Aggregated Generator Unit requesting, or whose Generator Unit is registered with, a Unit Classification other than Autonomous Generator Unit must have appropriate equipment installed to permit real-time monitoring of the Output of those Generators
 - 5.191 The Party (or Applicant as applicable) that has registered the Aggregated Generator Unit shall poll, or procure the polling of, those Meters and make available, or procure the making available of, a single set of Meter Data representing Meter Data for the Aggregated Generator Unit, by a method agreed between the relevant Meter Data Provider and the relevant Party (or Applicant as applicable) in a sufficiently timely manner to the responsible Meter Data Provider so that the Meter Data Provider's obligations under Appendix L "Meter Data Transactions" may be met
 - 5.192 In the event that Meter Data for Aggregated Generator Units is unavailable according to the provisions of paragraph 5.191, the relevant Meter Data Provider shall provide estimated or substituted data as per the Metering Code
 - 5.193 If a Participant submits a change to an Aggregated Generator Unit's Maximum Generation or Registered Capacity under Agreed Procedure 4 "Transaction Submission and Validation" that is related to a change in the number of Generators within the Aggregated Generator Unit, the Participant must first submit an update to the Aggregated Generator Unit's Participation Notice which records the change in the number of Generators in the Generator Aggregator System Operator Agreement, under Agreed Procedure 1 "Participant and Unit Registration and Deregistration
 - 5.194 The Party (or Applicant as applicable) that is registering the Aggregated Generator Unit must have provided evidence to the Market Operator that it owns or legally controls all Generators that comprise the Aggregated Generator Unit
 - 5.195 An Aggregated Generator may be registered as an Aggregated Generator Unit in accordance with the participation procedure in paragraphs 2.30-2.52 provided that:
 1. The Generator Aggregator has obtained the prior consent of the Regulatory Authorities to the registration of the relevant Aggregated Generator Unit; and

2. The Generator Aggregator has entered into an agreement with the relevant Regulatory Authority, whereby the Generator Aggregator agrees to comply with the same obligations in relation to participation in the Single Electricity Market as a licensed generator would be required to comply with
- 5.196 The Market Operator shall Deregister any Generator Unit that is an Aggregated Generator Unit where the relevant Regulatory Authority terminates the agreement entered into with the relevant Generator Aggregator pursuant to paragraph 5.195.2 following the failure by the relevant Generator Aggregator to remedy a breach of that agreement
- 5.197 The Market Operator shall Deregister any Generator Unit that is an Aggregated Generator Unit where that Unit comprises less than two Generators.

6. FINANCIAL AND SETTLEMENT

GENERAL

Settlement Items

- 6.1 The Market Operator shall carry out or procure settlements in accordance with the Code of the following amounts:
1. Trading Payments due to Participants in respect of their registered Generator Units excluding any Interconnector Residual Capacity Units for each Billing Period;
 2. Trading Charges payable by Participants in respect of their registered Supplier Units for each Billing Period;
 3. Capacity Payments due to Participants in respect of their registered Generator Units for each Capacity Period;
 4. Capacity Charges payable by Participants in respect of their registered Supplier Units for each Capacity Period;
 5. Charges due to or payable by Participants for Currency Cost for the relevant Billing Period;
 6. Charges due to or payable by Participants for Currency Cost for the relevant Capacity Period;
 7. Charges to Participants in respect of their registered Generator Units for Unsecured Bad Energy Debt;
 8. Charges to Participants in respect of their registered Generator Units for Unsecured Bad Capacity Debt;
 9. Settlement Reallocations due to or payable by Participants for each relevant Billing Period;
 10. Settlement Reallocations due to or payable by Participants for each relevant Capacity Period;
 11. Fixed Market Operator Charges payable by Participants in respect of their registered Generator Units and registered Supplier Units for each Year or period to which the Fixed Market Operator Charge relates;
 12. Variable Market Operator Charges payable by Participants in respect of their Supplier Units for each Billing Period; and
 13. Interconnector Residual Capacity Unit Payments due to Participants in respect of their registered Interconnector Residual Capacity Unit for each Capacity Period.
- 6.2 All of the payments and charges set out in paragraph 6.1 shall be calculated in accordance with the Code and, except where otherwise stated, shall exclude VAT.

Currency

- 6.3 All Settlement information and cash flows shall be calculated in euro (€).
- 6.4 All payments in respect of Settlements, including Resettlements, will be in euro (€) or pounds sterling (£) depending on the Currency Zone of the Unit(s) in respect of which the Settlement (or Resettlement) is taking place).

- 6.5 The Market Operator shall, in relation to each Trading Day, publish a Trading Day Exchange Rate between euro (€) and pounds sterling (£) at 08:00 on the preceding Trading Day.
- 6.6 For each Participant using pounds sterling as the Settlement Currency, all Settlement calculations on a Settlement Day or a Billing Period basis shall be included in Settlement Statements after being converted by the Market Operator to pounds sterling using the relevant Trading Day Exchange Rate.
- 6.7 In relation to the conversion between pounds sterling and euro for any Accession Fee or Participation Fee the Market Operator shall apply the Annual Capacity Exchange Rate.
- 6.8 In relation to the Fixed Market Operator Charge, the Market Operator shall apply the Trading Day Exchange Rate relating to that Trading Day commencing at 06:00 on the day the Invoice.
- 6.9 In relation to the Variable Market Operator Charge, the Market Operator shall apply the Trading Day Exchange Rate relating to the relevant Trading Period.
- 6.10 All data values that are submitted as part of Commercial Offer Data or SO Interconnector Import Price or SO Interconnector Export Price which are expressed in pounds sterling shall be converted by the Market Operator to euro using the relevant Trading Day Exchange Rate, and the resulting euro value shall be used for all calculations within this Code.
- 6.11 For each Participant using pounds sterling as the Settlement Currency, all Settlement calculations on a Capacity Period basis shall be included in Settlement Statements after being converted to pounds sterling using the relevant Annual Capacity Exchange Rate.
- 6.12 The Market Operator shall endeavour to manage the Currency Costs insofar as is practicable within the Pool.
- 6.13 The Currency Costs shall be calculated in the manner described in Agreed Procedure 15 "Invoicing" and shall be due to, or payable by, all Participants in the respective Billing and Capacity Periods in proportion to their gross financial participation in the Pool as set out in paragraph 6.136 and 6.139.

Banking Arrangements

- 6.14 The Market Operator shall, through its contract with the SEM Bank, administer the banking services required pursuant to the Code for Participants. The Market Operator and each Participant shall, in each case in relation to those banking arrangements that it requires in order to comply with the Code, procure, use, make available and administer such banking arrangements in accordance with Agreed Procedure 17 "Banking and Participant Payments".
- 6.15 The SEM Bank shall be a bank which must:
1. hold a Banking Licence in Ireland under Section 9 of the Central Bank Act 1971 (Ireland) or be authorised by the Financial Services Authority to take deposits, under the Banking Act 1987 (Northern Ireland) or be otherwise authorised to provide banking services in Ireland or the United Kingdom; and
either:
 2. be a Clearing Bank in either Jurisdiction with:

- a. a long term debt rating of not less than A (Standard & Poors) or A2 (Moody's Investors Service Inc.); or
- b. Total Balance Sheet Assets of not less than €1,000 million;

or

- 3. be an international bank that is approved by the relevant regulatory authority and which has a branch in the relevant location (Dublin and/or Belfast) and complies with paragraph 6.15.2.b.

6.16 The Market Operator shall establish and operate in accordance with the Code:

- 1. a euro SEM Trading Clearing Account at a branch of the SEM Bank in Ireland; and
- 2. a pounds sterling SEM Trading Clearing Account at a branch of the SEM Bank in Northern Ireland,

to and from which all Trading Payments calculated in accordance with the Code are to be made.

Each SEM Trading Clearing Account shall be an interest bearing account.

6.17 The Market Operator shall establish and operate in accordance with the Code:

- 1. a euro SEM Capacity Clearing Account at a branch of the SEM Bank in Ireland; and
- 2. a pounds sterling SEM Capacity Clearing Account at a branch of the SEM Bank in Northern Ireland,

to and from which all Capacity Payments calculated in accordance with the Code are to be made.

Each SEM Capacity Clearing Account shall be an interest bearing account.

6.17A The Market Operator shall, through its contract with the SEM Bank, establish and operate in accordance with the Code:

- 1. a sterling SEM Trading Clearing Deposit Account corresponding with the sterling SEM Trading Clearing Account;
- 2. a sterling SEM Capacity Clearing Deposit Account corresponding with the sterling SEM Capacity Clearing Account;
- 3. sterling SEM Collateral Deposit Accounts corresponding with each of the sterling SEM Collateral Reserve Accounts

to which all sums standing to the balance of each such SEM Trading Clearing Account and SEM Capacity Clearing Account and SEMO Collateral Reserve Accounts shall be transferred immediately and from which all such sums shall be retransferred to the respective SEM Bank accounts on a timely basis to meet outgoing transactions to meet the requirements of the Code.

6.17B Each SEM Deposit Account shall be an interest bearing account and shall be opened and maintained at the SEM Bank in Ireland.

- 6.18 Any Interest received on the SEM Trading Clearing Accounts, the SEM Capacity Clearing Accounts, the SEM Trading Clearing Deposit Account and the SEM Capacity Clearing Deposit Account shall accrue to the Market Operator and shall not therefore be part of those accounts for the purposes the trusts established under this section 6. The Market Operator shall take such Interest into account in proposing to the Regulatory Authorities any Market Operator Charge or component thereof.

Provision of Cash Collateral

- 6.19 A Participant may at any time provide a cash deposit as part of its Required Credit Cover as permitted pursuant to paragraph 6.162. Where a Participant decides to provide such a cash deposit, then the Participant shall instruct the Market Operator to establish and maintain a SEM Collateral Reserve Account with the SEM Bank in each Currency Zone in which the Participant has a registered Unit as applicable and a SEM Collateral Deposit Account at the SEM Bank in Ireland so that the relevant cash deposit shall be paid into such SEM Collateral Reserve Account. Each SEM Collateral Reserve Account shall be an interest bearing account. If a Participant chooses to provide a cash deposit as part of its Required Credit Cover, then it must provide to the Market Operator such documents and in such form as the Market Operator may require from time to time in order to establish and maintain the SEM Collateral Reserve Account.
- 6.20 The SEM Collateral Reserve Account and SEM Collateral Deposit Account in relation to each relevant Participant shall, from time to time in accordance with Paragraph 6.17A contain the cash element of that Participant's Posted Credit Cover on the following terms:
1. the SEM Collateral Reserve Account and SEM Collateral Deposit Account shall be in the sole name of the Market Operator with the designation "SEM Collateral Reserve Account/SEM Collateral Deposit Account relating to [Insert Participant Details]";
 2. the Participant and the Market Operator shall have irrevocably instructed the SEM Bank to make payment against the sole instruction of the Market Operator in accordance with the Code and the Bank Mandate. The Code shall take precedence over the Bank Mandate; and
 3. to give effect to the provisions of the Code in relation to SEM Collateral Reserve Accounts and SEM Collateral Deposit Accounts, with effect from the time of payment into the relevant SEM Collateral Reserve Account or SEM Collateral Deposit Account, the relevant Participant thereby charges all sums paid into and accruing on those accounts by way of first fixed charge over cash at the SEM Bank in favour of the Market Operator as agent and trustee for it and the SEM Creditors to secure the relevant Participant's payment obligations under the Code, subject always to the provisions of paragraphs 6.32 to 6.36 inclusive.
- 6.21 Where, at any time, a Participant (or Applicant, as applicable) wishes the Market Operator to establish a SEM Collateral Reserve Account and SEM Collateral Deposit Account on its behalf for the purposes of paragraph 6.19 and, where appropriate, having regard to the legal form, jurisdiction of incorporation or registration of the relevant Party and the location of the proposed SEM Collateral Reserve Account and SEM Collateral Deposit Account, to ensure the enforceability of the charge created under paragraph

6.20.3, the Participant (or Applicant, as applicable) shall complete and sign the particulars of charge in respect of such SEM Collateral Reserve Account, SEM Collateral Deposit Account and SEM Collateral Reserve Assets for registration of the charge with the relevant companies registry or other appropriate body in the appropriate jurisdiction or jurisdictions and the Participant shall do all such things and execute all such documents as necessary to facilitate such registrations (if any) within such timelines as may be specified by the Market Operator, having regard to any applicable time limit for the registration of such a charge. Without prejudice to the foregoing, the Market Operator shall, unless the relevant Participant otherwise does so, register the prescribed particulars with regard to the establishment of each SEM Collateral Reserve Account and SEM Collateral Deposit Account pursuant to Article 402 Companies (Northern Ireland) Order 1986 and/or section 395 of the Companies Act 1985 (United Kingdom) and/or section 99 of the Companies Act 1963 (Ireland), as appropriate, and/or at such other registry or registries as may be appropriate.

- 6.22 The SEM Trading Clearing Accounts and the SEM Capacity Clearing Accounts shall be established and maintained in the name of the Market Operator. The cash in and rights relating to each SEM Trading Clearing Accounts, the SEM Capacity Clearing Accounts and each SEM Collateral Reserve Account and SEM Collateral Deposit Account opened and any balance in any of the accounts shall be held on trust by the Market Operator without obligation to invest in accordance with the provisions of this section 6. Subject to the provisions of this Section 6, the Market Operator shall not commingle any funds standing to the credit of the SEM Trading Clearing Accounts, the SEM Capacity Clearing Accounts or any SEM Collateral Reserve Account or SEM Collateral Deposit Account with its own personal or any other funds. This is without prejudice to the Market Operator's rights to transfer funds between the euro and pounds sterling SEM Trading Clearing Accounts and SEM Capacity Clearing Accounts respectively for the purposes of Settlement and Resettlement or the provisions of Paragraph 6.17A. The Market Operator shall be entitled to transfer funds between the SEM Trading Clearing Accounts and the SEM Capacity Clearing Accounts as necessary in order to correct any manifest errors in payments by Participants.
- 6.23 Notwithstanding paragraph 6.22, the Market Operator shall hold the trusts as provided for in this Section 6 subject to its entitlement to make payments into and out of the SEM Trading Clearing Accounts and the SEM Capacity Clearing Accounts for the purpose of settling any Balancing Costs.
- 6.24 Except as expressly provided for in this Code, no Party or Participant shall enter into any arrangements which assign or charge or purport to assign or charge any interest any Party or Participant may have in any SEM Trading Clearing Account, SEM Capacity Clearing Account, SEM Collateral Reserve Account or SEM Deposit Account.
- 6.25 The Market Operator shall procure that an electronic funds transfer (EFT) facility with the SEM Bank is provided to enable it to make all payments to Participants under the Code. Payments shall only be made by the Market Operator and Participants in the Pool through an EFT facility.
- 6.26 The EFT facilities procured by the Market Operator shall be consistent with standard banking practice and the methods and procedures described in Agreed Procedure 17 "Banking and Participant Payments".

- 6.27 In procuring the establishment of the EFT facility, the Market Operator shall use its reasonable endeavours to ensure that the use of the EFT facility does not impose unreasonable restrictions on the Participants' normal banking arrangements.
- 6.28 Each Party (or Applicant, as applicable) shall give to the Market Operator in accordance with the registration requirements set out in Section 2 details of the bank account or bank accounts to which the Market Operator is instructed to make payments pursuant to the Code to such Party's Participant(s), and shall provide to the Market Operator such further information in relation to such bank account or bank accounts as the Market Operator may reasonably request. Each Party shall establish and maintain such a bank account at a bank in each Currency Zone in which its Participant has a registered Unit as applicable. Where a Party or Participant changes the bank account or bank accounts to which payments are made pursuant to the Code, it shall inform the Market Operator and provide details of the new bank account or bank accounts. The Market Operator shall not be responsible for any loss to any Party or Participant where the Market Operator has not been informed by the relevant Party or Participant of any change in bank account details.
- 6.29 The Market Operator shall maintain detailed ledger accounts of all funds held in the SEM Trading Clearing Accounts, SEM Capacity Clearing Accounts, SEM Collateral Reserve Accounts, SEM Deposit Accounts and all other bank accounts held by it at the SEM Bank showing all monies paid in and paid out in respect of each Participant and, where requested by a Participant or its Party, the Market Operator shall provide full details of all such payments and funds in relation to such Participant only and shall keep all information in respect of each Participant confidential. Notwithstanding the foregoing, the Market Operator shall be entitled to disclose any information or data in relation to any SEM Trading Clearing Account, SEM Capacity Clearing Account SEM Collateral Reserve Account or SEM Deposit Account held at the SEM Bank to the Market Auditor or relevant Revenue Authority where required or where otherwise required by law.

Establishment of Trusts

- 6.30 The Market Operator shall hold all funds in the SEM Trading Clearing Accounts, the SEM Capacity Clearing Accounts, SEM Trading Clearing Deposit Account and such rights (including, without limitation, all rights of action) as shall from time to time be vested in it with regard to payments due and owing by Participants or with regard to the provision of Credit Cover by each Participant including:
1. all monies from time to time standing to the credit of each SEM Trading Clearing Account, SEM Capacity Clearing Account, SEM Trading Clearing Deposit Account and SEM Capacity Clearing Deposit Account relating to any Trading Period;
 2. all rights of the Market Operator to call for and enforce payment of amounts owing under the Code (including, for the avoidance of doubt, any Shortfall or Unsecured Bad Debt) or to make a Credit Call;
 3. the Letters of Credit and all rights to, and monies representing, any proceeds therefrom up to the amount of any applicable Shortfall; and
 4. any interest receivable in respect of any amounts due pursuant to the Code relating to any Trading Period,

on trust for SEM Creditors in accordance with their individual respective proportionate entitlements as they arise in accordance with the Code (or to the extent that any Credit Cover shall relate to any Variable Market Operator Charge, on trust for the Market Operator in accordance with the Code). Upon termination of the said trusts, any residual balance after satisfaction of the entitlement of all SEM Creditors shall be held for all Participants in accordance with their individual respective proportionate entitlements as they arise in accordance with the Code.

6.31 The respective rights of the SEM Creditors to the assets held by the Market Operator on trust in the SEM Trading Clearing Accounts, SEM Capacity Clearing Accounts, SEM Trading Clearing Deposit Account and SEM Capacity Clearing Deposit Account as set out in paragraphs 6.16, 6.17 and 6.17A respectively and as provided for in paragraph 6.30 shall be determined in accordance with the Code and in accordance with the following principles:

1. the extent of each SEM Creditor's individual rights shall be deemed to consist of the aggregate of the claims (to the extent not paid or otherwise settled) of such SEM Creditor in respect of each Trading Period; and
2. the assets referred to in paragraph 6.30 above shall be deemed to consist of a series of funds, each fund representing the rights or monies owed, paid, held or otherwise attributable to each Trading Period in relation to Trading Payments and Capacity Payments.

The Market Operator shall not be obliged to segregate moneys into separate funds.

6.32 The Market Operator shall hold the SEM Collateral Reserve Assets in respect of each Participant in respect of which the Market Operator establishes and maintains a SEM Collateral Reserve Account and a SEM Collateral Deposit Account in accordance with the Code on trust as follows:

1. at any time when no amounts owed by any such Participant are overdue, on trust to repay (subject always to and in accordance with paragraphs 6.33 to 6.35 inclusive, 6.50 and 6.51 to 6.68 as appropriate) to that Participant the monies, together with any interest accrued on such monies, held in the relevant SEM Collateral Reserve Account as part of that Participant's Posted Credit Cover; and
2. with automatic effect as soon as any amount owed by a Participant becomes overdue and becomes a Shortfall (excluding any Market Operator Charge), such amount of the monies deposited in the relevant SEM Collateral Reserve Account by such Participant as is equal to the amount of the Shortfall and any applicable Interest (or Default Interest as applicable) in respect of the relevant Participant on trust for the SEM Creditors on the same basis as set out in paragraph 6.30 above and the balance (if any) shall be held in trust in respect of the Participant as provided for in paragraph 6.32.1 subject to paragraph 6.32.3 where applicable; and
3. with automatic effect as soon as any Variable Market Operator Charge owed by a Participant becomes overdue and where there is no Shortfall or Unsecured Bad Debt in respect of that Participant at that time or, if there is such Shortfall or Unsecured Bad Debt only after the SEM Collateral Reserve Assets have been applied to meet the Shortfall or Unsecured Bad Debt in full, such amount of the monies

then held in the relevant SEM Collateral Reserve Account (or SEM Collateral Deposit Account) as is available up to the amount of the Variable Market Operator Charge outstanding and any applicable Interest on trust for the Market Operator in accordance with the Code and the balance (if any) shall be held on trust as provided for in paragraph 6.32.1

- 6.33 Each Participant which has funds remitted by it for the credit of a relevant SEM Collateral Reserve Account (or SEM Collateral Deposit Account) agrees that none of the remittances shall be repayable (or capable of being repaid) to it or its Party, except where provided otherwise in accordance with the provisions of the Code, until Deregistration of the Participant's Unit(s) becomes effective in accordance with the Code and, in particular, subject to paragraph 2.273, and the Participant has paid in full all amounts actually or contingently owed by the relevant Participant to any SEM Creditor or the Market Operator pursuant to the Code.
- 6.34 Each Participant with a SEM Collateral Reserve Account and SEM Collateral Deposit Account undertakes not to seek withdrawal of any funds to which it may otherwise be entitled in the relevant SEM Collateral Reserve Account and SEM Collateral Deposit Account except in the circumstances permitted by paragraph 6.35. The Market Operator shall reject any purported notice of withdrawal not complying with this paragraph 6.34, the Code or the Bank Mandate. The Code shall take precedence over the Bank Mandate.
- 6.35 Notwithstanding paragraphs 6.33 and 6.34, if a Participant is not in default in respect of any amount owed to a SEM Creditor, then:
1. the Market Operator shall transfer quarterly to the relevant Participant the interest credited to the relevant SEM Collateral Reserve Account and SEM Collateral Deposit Account unless the Participant requests otherwise;
 2. the Market Operator shall transfer to such Participant within 2 Working Days after a written request from such Participant (exclusive of the day of request) any amount of the balance which exceeds the amount which such Participant has agreed to maintain in the relevant SEM Collateral Reserve Account from time to time in accordance with this Section 6, the Code and the Bank Mandate, provided that the Participant at all times maintains its Required Credit Cover. The Code shall take precedence over the Bank Mandate;
 3. the Participant shall be entitled to change the composition of its Posted Credit Cover in satisfying the Required Credit Cover provided any reduction in any amount standing to the credit of the relevant SEM Collateral Reserve Account does not result in a breach of the Required Credit Cover.
 4. the Market Operator shall transfer from the relevant Collateral Reserve Account an amount specified by the Participant, in order to make payment on any outstanding Invoice for such Participant, within one Working Day after a written request from such Participant (exclusive of the day of the request) providing that such Participant at all times maintains its Required Credit Cover.
- 6.36 Except as expressly provided for in the Code, each Party and Participant waives any right it might otherwise have to set off against any obligation owed to the Market Operator, the SEM Bank or any other Party or

Participant any claims such Party or Participant may have to or in respect of any monies standing to the credit of the relevant SEM Trading Clearing Account, SEM Capacity Clearing Account, SEM Collateral Reserve Account or SEM Deposit Accounts as applicable.

- 6.37 The provisions of section 10(2)(c) of the Trustee Act, 1893 shall not apply to any change in the identity of the Market Operator.
- 6.38 No Party or Participant shall have any claim against the Market Operator for breach of trust or fiduciary duty by the Market Operator under the Code except in the case of reckless or wilful misconduct.

DESCRIPTION OF TIMELINES

Settlement Day

- 6.39 All Settlement of Trading Payments and Trading Charges are based on a Settlement Day.
- 6.40 The terminology "SD+xWD" means during the Working Day which ends x Working Days after the end of the Settlement Day.

Billing Period

- 6.41 All Trading Payments and Trading Charges shall be aggregated on a Billing Period basis which is defined as one Week commencing at 00:00 on Sunday.
- 6.42 The terminology "BP+xWD" means during the Working Day which ends x Working Days after the end of the Billing Period.
- 6.43 The terminology "BP+xM" means during the last Month which ends x Months after the end of the Billing Period.

Capacity Period

- 6.44 All Capacity Payments and Capacity Charges shall be aggregated on a Capacity Period basis which is defined as one Month commencing at 00:00 on the first day of the Month.
- 6.45 The terminology "CP+xWD" means during the Working Day which ends x Working Days after the end of the Capacity Period.
- 6.46 For the purposes of this Section 6, the terminology "CP+xM" means during the Month which ends x Months after the end of the Capacity Period.

Settlement Calendar

- 6.47 The Market Operator shall publish, four months prior to the start of each Year, a Settlement Calendar for all days in the coming Year which shall include the following information:
1. details of Non-Working Days;
 2. details of any week day that is not a Week Day
 3. details of:
 - a. when Ex-Post Indicative Settlement Statements are due (for each type of Settlement Statement);
 - b. when Initial Settlement Statements are due (for each type of Settlement Statement);

- c. each Invoice issue date (for each type of Invoice);
- d. the Invoice Due Date (for each type of Invoice);
- e. the Self Billing Invoice issue date (for each type of Self Billing Invoice);
- f. the Self Billing Invoice Due Date (for each type of Self Billing Invoice);
- g. the Timetabled M+4 Settlement Reruns for relevant Settlement Periods; and
- h. the Timetabled M+13 Settlement Reruns for relevant Settlement Periods and
- i. the deadlines by which the Meter Data Providers must provide Meter Data to facilitate the Timetabled M+4 and M+13 Settlement Runs following the timing principles set out in Agreed Procedure 16 “Meter Data Provision”.

Invoices, Self Billing Invoices and Debit Notes

6.48 The Market Operator shall produce and issue Invoices and Self Billing Invoices for Trading Payments and Trading Charges in accordance with Appendix G “Invoices and Settlement Statements” and the following:

- 1. Ex-Post Indicative Settlement Statements for Trading Payments and Trading Charges shall, in respect of each Settlement Day in a Billing Period, be produced and issued to all Participants in respect of their Units by 17:00 on Settlement Day + 1WD;
- 2. the Data Verification Period for Trading Payments and Trading Charges commences at the time of issue of the Market Schedule Quantity from the Ex-Post Indicative Market Schedule and ends at 17:00 on Settlement Day + 4WD;
- 3. Initial Settlement Statements shall be issued to all Participants in respect of their Units by 12:00 on Settlement Day + 5WD;
- 4. Invoices and Self Billing Invoices for Trading Payments and Charges shall be issued to all Participants in respect of their Units by 12:00 on BP+5 WD;
- 5. Make Whole Payments shall be calculated on a Billing Period basis as part of Settlement for the last day of the Billing Period; and
- 6. Payments and charges in respect of Settlement Reallocations shall be calculated as part of Settlement for the last day of the Billing Period.

6.49 The Market Operator shall produce and issue Invoices and Self Billing Invoices for Capacity Payments and Capacity Charges in accordance with Appendix G “Invoices and Settlement Statements” and the following:

- 1. Ex-Post Indicative Settlement Statements for Capacity Payments and Capacity Charges shall, in respect of each Capacity Period, be produced and issued to all Participants in respect of their Units by 17:00 on CP+3WD;
- 2. The Data Verification Period for Capacity Payments and Capacity Charges commences at the time of issue of the Ex-Post Indicative Settlement Statements and ends at 17:00 on CP+6WD; and

3. Initial Settlement Statements, Invoices and Self Billing Invoices for Capacity Payments and Capacity Charges shall, in respect of each Capacity Period, be produced and issued to all Participants in respect of their Units by 12:00 on CP+7WD.
- 6.50 Payment shall be in accordance with the following:
1. each Ex-Post Indicative Settlement Statement, Initial Settlement Statement, Invoice and Self Billing Invoice shall be based on the data then available to the Market Operator at the time of its production;
 2. each Invoice and Self Billing Invoice shall include the amount of all applicable charges and payments and shall include any applicable VAT charges;
 3. each Debit Note (where applicable) shall include the amount of the Unsecured Bad Debt as set out in paragraph 6.56 and 6.57 as applicable and shall include any applicable VAT charges;
 4. any invoiced Participant shall pay each Invoice in full without deduction, set-off or counterclaim (except as otherwise expressly provided for in the Code) by paying the amount due into the relevant SEM Trading Clearing Account or relevant SEM Capacity Clearing Account as applicable for full value by the Invoice Due Date; the Invoice Due Date is 12:00, 3 Working Days after the date of the Invoice; and
 5. the Market Operator shall, subject to the provisions of the Code, pay each Self Billing Invoice less any applicable Debit Note to any Participant who is a SEM Creditor by paying the amount due from the SEM Trading Clearing Account or SEM Capacity Clearing Account as applicable to the SEM Creditor's designated bank account or bank accounts for full value by the Self Billing Invoice Due Date. The Self Billing Invoice Due Date is 17:00, 4 Working Days after the date of the Self Billing Invoice.
- 6.50A The Market Operator shall issue Invoices and Self Billing Invoices on the date appearing on the relevant Invoice or Self Billing Invoice as appropriate.
- 6.50B Without prejudice to paragraph 6.50.4 a Participant may exercise the option to make an aggregate payment in accordance with Agreed Procedure 17 "Banking and Participant Payments".
- 6.51 If any Invoiced Participant fails to pay an Invoice in full in accordance with paragraph 6.50.4, then the Participant has a Shortfall and the Market Operator shall forthwith make a Credit Call on the Participant's Posted Credit Cover for payment of the Shortfall, subject to the De Minimis Level for Letter of Credit Draw Down provisions in Paragraph 3.3 of Agreed Procedure 15. The Market Operator shall identify the Settlement Period to which the Shortfall relates in making any Credit Call. Default Interest shall accrue on any Shortfall and Unsecured Bad Debt in accordance with the Code.
- 6.52 If the Market Operator fails to pay pursuant to the Code (except as otherwise provided for in the Code) the full amount owing pursuant to a Self Billing Invoice for full value by the Self Billing Invoice Due Date, then Default Interest shall accrue on the amount outstanding in accordance with the Code.

- 6.53 If any Participant fails to pay its Variable Market Operator Charge in accordance with the Code, the Market Operator shall be entitled, subject to the De Minimis Level for Letter of Credit Draw Down provisions in Paragraph 3.3 of Agreed Procedure 15, to make a Credit Call against the Posted Credit Cover of that Participant for payment of the amount of the overdue Variable Market Operator Charge. The Market Operator shall ensure that any amounts recovered relating to the Variable Market Operator Charge and any Interest thereon are not paid into or commingled or combined in any way with the SEM Trading Clearing Accounts or the SEM Capacity Clearing Accounts and shall deposit the funds recovered as a result of such a Credit Call in the relevant Market Operator Charge Account. Any unpaid Market Operator Charge shall not and shall never be treated as a Shortfall or an Unsecured Bad Debt under the Code. The Market Operator shall only be entitled to make a Credit Call in relation to overdue Variable Market Operator Charge where there is no Shortfall or Unsecured Bad Debt in respect of that Participant at that time or, if there is such Shortfall or Unsecured Bad Debt, only after the relevant Participant's Posted Credit Cover has been applied to meet the Shortfall or Unsecured Bad Debt in full.
- 6.54 Despite the making of a Credit Call by the Market Operator, if the Participant meets any Shortfall either through its own funds, its Posted Credit Cover, or a combination of the foregoing by 12:00 on the next Working Day after the Invoice Due Date then Settlement shall continue to proceed in accordance with the Code.
- 6.55 If the Shortfall is not paid in full by 12:00 on the next Working Day after the Invoice Due Date, then, subject to the De Minimis Level for Letter of Credit Draw Down provisions in Paragraph 3.3 of Agreed Procedure 15:
1. the amount of the Shortfall shall become an Unsecured Bad Debt for the purposes of this Code;
 2. the Market Operator shall, where practicable, withhold, deduct or set off payment of any amount due pursuant to the Code to the Defaulting Participant until the amount of the Unsecured Bad Debt and any applicable Default Interest has been recovered in full; and
 3. paragraphs 6.56 to 6.62 shall apply as appropriate.
- 6.56 The Shortfall or the Unsecured Bad Debt as applicable shall be a debt owing by the Defaulting Participant to the Market Operator as trustee and agent for all Participants beneficially interested therein as provided for in the Code and affected thereby pro-rated according to their individual respective proportionate entitlements in the Shortfall or the Unsecured Bad Debt concerned and on the trusts provided for in paragraph 6.30.
- 6.57 Where a Participant has an Unsecured Bad Debt relating to any Trading Period(s) then, without prejudice to the Market Operator's rights or obligations under the Code and notwithstanding any other provisions of the Code, the Market Operator shall procure that each Self Billing Invoice relating to the Trading Period(s) affected by such Unsecured Bad Debt shall be subject to the calculation of an adjustment by a reduction in the amount payable to each affected SEM Creditor pro-rated in accordance with the individual respective proportionate entitlement of each such SEM Creditor (excepting any Defaulting Participant, which would otherwise be a SEM Creditor, and subject to paragraph 6.55.2 until the Unsecured Bad Debt and any applicable Default Interest has been recovered in full and any Self Billing Invoices issued to it whether or not relating to the Trading Periods

concerned shall, until such event, be subject to the calculation of an adjustment by such amount or amounts up to the amount of the Unsecured Bad Debt and any applicable Default Interest, and relevant Debit Notes shall be issued to it) for payment of the relevant Unsecured Bad Debt, in accordance with the Code. The Market Operator shall issue the appropriate adjustments to the Self Billing Invoices in the form of a Debit Note to each of the applicable SEM Creditors ("Reduced Participants") and the Defaulting Participant within the timeframe of making the payment. The Market Operator shall make payments to each Participant for the amount of the Self Billing Invoice less the applicable Debit Note in accordance with paragraph 6.50.

- 6.58 In the event that, for any Participant (an "Excess Participant"), the amount of the Debit Note would exceed the amount of the applicable Self Billing Invoice (a "Debit Note Excess"), the Market Operator will make no payment to the Excess Participant in respect of that Settlement Period. In addition, the Excess Participant shall, within 2 Working Days of the receipt of the relevant Debit Note, make a payment to the relevant SEM Trading Clearing Account or SEM Capacity Clearing Account as applicable for the amount of the Debit Note Excess. The Market Operator shall calculate further reductions in the payments to each SEM Creditor (other than the Excess Participant) by the amount of the Debit Note Excess applied pro-rata to their respective proportionate entitlements. The Market Operator shall issue a Debit Note to each SEM Creditor showing the original reduction resulting from the Unsecured Bad Debt and, in respect of each SEM Creditor other than the Excess Participant, the relevant proportion of the Debit Note Excess. In the event that upon receipt of an Excess Debit Note, a further Participant or Participants become Excess Participants, then the Market Operator shall repeat the process of calculation of reduction, and the resultant Debit Notes shall show the resultant reductions for each relevant SEM Creditor, until the amount due in respect of each Self Billing Invoice net of a Debit Note or Excess Debit Note is positive. Any Debit Note Excess which remains unpaid after the second Working Day shall be treated as a Shortfall in accordance with paragraph 6.55.
- 6.59 All Parties agree that the Market Operator as trustee and agent shall be entitled and irrevocably authorise the Market Operator, subject to paragraph 6.60 to take all necessary action against a Participant (or its Party where legally necessary) with an Unsecured Bad Debt to recover any Unsecured Bad Debt on behalf of SEM Creditors consequently incurring loss and to deal with any recovered monies in accordance with the Code. Any such action of the Market Operator to recover the Unsecured Bad Debt shall not be subject to the Dispute Resolution Process.
- 6.60 The Market Operator shall consult the Modifications Committee in relation to any plans for the pursuit of any Unsecured Bad Debt. The Market Operator shall take into account the views of the Modifications Committee as to the most appropriate action to take against a Party in respect of the Unsecured Bad Debt of any of its Participants.
- 6.61 Where the Market Operator partially or fully recovers any Unsecured Bad Debt, the Market Operator shall procure the payment of any such monies into the relevant SEM Trading Clearing Account or SEM Capacity Clearing Account as applicable. Then the Market Operator shall issue an appropriate Self Billing Invoice to each Reduced Participant for an amount pro-rated to the individual respective proportionate entitlement of each Reduced Participant in the amount of the relevant Unsecured Bad Debt recovered

relating to the Trading Periods concerned with the issue of the Self Billing Invoices for the then next immediate Billing Period or Capacity Period (excepting, where the Unsecured Bad Debt and any applicable Default Interest has not been fully recovered, the Defaulting Participant, which would otherwise be a SEM Creditor, subject to paragraph 6.55.2 until the Unsecured Bad Debt and any applicable Default Interest has been recovered in full). The Market Operator shall pay each such Self Billing Invoice in accordance with the Code.

- 6.62 Paragraphs 6.152 to 6.153 shall apply in relation to the recovery of any Unsecured Bad Energy Debt. Paragraphs 6.154 to 6.155 shall apply in relation to the recovery of Unsecured Bad Capacity Debt.
- 6.63 If any payments made by the Market Operator pursuant to any Self Billing Invoice and any Debit Note or otherwise pursuant to the Code to any Participant do not correspond exactly with their respective payment entitlements established in accordance with the Code, then (and the Parties and Participants agree and consent to the actions of the Market Operator as set out as follows):
1. in the case of overpayment by the Market Operator, the Participant receiving any such overpayment shall pay back the difference between the amount of the payment received and the actual amount due to the Market Operator on becoming aware of the overpayment or, in any event, in accordance with the Code on the issue of a notice by the Market Operator to the Participant concerned in respect of the relevant amount. Any Participant receiving any overpayment shall be obliged to notify the Market Operator of this on becoming aware of such overpayment detailing, where possible, the amount and date of the overpayment and details of any Self Billing Invoice and any Debit Note pursuant to which it was made. As soon as the Market Operator becomes aware of the overpayment, the Market Operator shall issue an overpayment notice for the relevant amount and the Participant shall pay the amount set out in the overpayment notice as if it were an Invoice in accordance with the Code;
 2. in the case of underpayment to any Participant by the Market Operator not otherwise permitted pursuant to any other provision of the Code, the Market Operator shall pay the difference between the amount of the payment received and the actual amount due, with Default Interest on that difference, to the Participant concerned on becoming aware of the underpayment or on being notified of the underpayment by the Participant concerned. The Market Operator shall also issue an underpayment notice to the Participant concerned setting out the relevant amount with Default Interest from the date of the underpayment until the date of payment of the sum set out in the underpayment notice as if such notice were a Self Billing Invoice issued in accordance with the Code. Any Participant receiving any underpayment shall notify the Market Operator of this on becoming aware of such detailing, where possible, the amount and date of the underpayment and details of any Self Billing Invoice or Debit Note pursuant to which it was made.
- 6.64 If any payments made by any Participant pursuant to any Invoice or otherwise pursuant to the Code do not correspond exactly with their respective payment obligations established in accordance with the Code,

then (and the Parties and Participants agree and consent to the actions of the Market Operator as set out as follows):

1. in the case of overpayment by the relevant Participant, the Market Operator, unless otherwise restricted from doing so pursuant to the Code, shall pay back the difference between the amount of the payment remitted and the actual amount due with Interest on that difference to the relevant Participant on becoming aware of the overpayment or on being notified of the overpayment by the Participant concerned (except where the Participant is a Defaulting Participant and the Market Operator invokes paragraph 6.55.2). The Market Operator shall then issue an overpayment notice to the Participant concerned setting out the relevant amount with Interest from the date of the overpayment until the date of payment of the relevant Self Billing Invoice and pay to the Participant the sum set out in the overpayment notice as if such notice were a Self Billing Invoice issued in accordance with the Code. Any Participant making any overpayment shall notify the Market Operator of this on becoming aware of such overpayment detailing, where possible, the amount and date of the overpayment and details of any Invoice pursuant to which it was made. The Market Operator shall notify any Participant making an overpayment on becoming aware of such detailing, where possible, the amount and date of the overpayment and details of any Invoice pursuant to which it was made and issue an overpayment notice for the relevant amount with Interest and shall pay the sum set out in the overpayment notice as if such notice were a Self Billing Invoice issued in accordance with the Code; and
 2. in the case of underpayment by any Participant to the Market Operator, paragraphs 6.51 to 6.62 shall apply.
- 6.65 Any Participant making any underpayment or anticipating that it will be making an underpayment in respect of any Invoice shall notify the Market Operator of this on becoming aware that full payment of any Invoice will not be made by the Invoice Due Date detailing, where possible, the amount and date of the underpayment and details of any Invoice to which it relates.
- 6.66 Subject to paragraphs 6.33, 6.55, 6.57, 6.61, 6.63 and 6.64, all payments under this Section 6 shall be made on the basis that a Participant shall only be entitled to claim reimbursement of an overpayment made by it pursuant to the Code if, and then only to the extent that, the aggregate amounts paid by the Participant in respect of the relevant Payment Due Date exceed the total amounts payable by that Participant to SEM Creditors in respect of that Payment Due Date together with all amounts (if any) overdue from that Participant in respect of Settlement Periods prior to the relevant Payment Due Date.
- 6.67 Notwithstanding paragraph 6.30, if:
1. a payment is received by the Market Operator under a Letter of Credit after a sum has been withdrawn from an SEM Collateral Reserve Account (where applicable) to make good (in whole or in part) a Shortfall or Unsecured Bad Debt (or any overdue Variable Market Operator Charge where applicable); and
 2. the aggregate of the amounts paid out of that SEM Collateral Reserve Account and paid under the Letter of Credit in respect of a relevant

Participant exceeds the Shortfall or Unsecured Bad Debt (or any overdue Variable Market Operator Charge where applicable),

then any excess paid over the Shortfall or Unsecured Bad Debt (or any overdue Variable Market Operator Charge where applicable) shall be remitted with any applicable Interest by the Market Operator to the relevant Participant's bank account or bank accounts.

- 6.68 Where payments in respect of one or more Settlement Period(s) are fully or partially outstanding, any payments made shall be, and shall be deemed to be, settled according to the following priority:
1. first, in or towards settlement of amounts outstanding under the Code in respect of Timetabled Settlement Reruns (with the longest outstanding Settlement Period to which a Timetabled Settlement Rerun relates being settled first); and
 2. secondly, in or towards settlement of amounts outstanding under the Code for Settlement with the longest outstanding Settlement being settled first.

Settlement Reruns

- 6.69 The objective of all Settlement Reruns is to adjust the financial positions of Participants to reflect any differences between data used for Settlement and any updated data received.
- 6.70 There will be two Timetabled Settlement Reruns for each Billing Period. The first Timetabled Settlement Rerun shall take place in the fourth month after the Billing Period (BP+4M) and the second Timetabled Settlement Rerun shall take place in the 13th month after the Billing Period (BP+13M). The Market Operator shall publish the precise date of these in advance in the Settlement Calendar.
- 6.71 There will be two Timetabled Settlement Reruns for each Capacity Period. The first Timetabled Settlement Rerun shall take place in the fourth month after the Capacity Period (CP+4M) and the second Timetabled Settlement Rerun shall take place in the 13th month after the Capacity Period (CP+13M). The Market Operator shall publish the precise date of these in advance in the Settlement Calendar.
- 6.72 The Market Operator shall issue Settlement Rerun Statements to Participants for each of their registered Units in the event of any Settlement Rerun arising from a Settlement Query, Data Query or Settlement Dispute.
- 6.73 Each Settlement Rerun Statement will be in the same format as the Initial Settlement Statement. The Settlement Rerun Statement must show the data from the previous Settlement Statement where unchanged and the appropriate updated data otherwise.
- 6.74 The Market Operator shall be entitled to undertake Settlement Reruns as provided for in the Code in addition to the Timetabled Settlement Reruns.
- 6.75 When a Settlement Rerun results in any change to any amount payable under the Code, the Market Operator shall issue adjusted Invoices and Self Billing Invoices and payment shall be made in accordance with paragraph 6.50.
- 6.76 Intentionally blank
- 6.77 The Settlement Recalculation Threshold shall be proposed by the Market Operator from time to time and approved by the Regulatory Authorities. The

Market Operator shall publish the approved value of the Settlement Recalculation Threshold.

QUERIES TO SETTLEMENT DATA

Data Verification Period

- 6.78 Subject to paragraph 6.78A, a Participant or an External Data Provider may raise a Data Query in respect of any Settlement Item or other elements of data which have an impact on the Settlement Items included in the Ex-Post Indicative Settlement Statement by giving notice to the Market Operator during the Data Verification Period and will use reasonable endeavours to raise any such Data Query as early as possible within the Data Verification Period before the production and issue of the Initial Settlement Statement.
- 6.78A A Participant or External Data Provider may not raise a Data Query in respect of any Settlement Item or other elements of data relating to any Trading Period prior to the Meter Validation Date of the relevant Generator Unit. Subsequent to the Meter Validation Date, a Data Query may be raised in respect of data relating to these Trading Periods.
- 6.79 The duration of the Data Verification Period is set out in paragraph 6.48.2 for Trading Payments and Trading Charges and is set out in paragraph 6.49.2 for Capacity Payments and Capacity Charges.

Data Queries

- 6.80 The Market Operator shall use reasonable endeavours to resolve all Data Queries within 3 Working Days of the issue of the Ex-Post Indicative Settlement Statement.
- 6.81 The Market Operator must resolve a Data Query within 10 Working Days after the Data Query is filed (subject to the provisions of paragraph 6.86). Where the Market Operator requests any assistance from any Participant to resolve a Data Query, that Participant shall promptly assist the Market Operator in dealing with the Data Query concerned in order to facilitate the Market Operator in meeting that timetable.
- 6.82 The Market Operator shall procure that (i) SMP and Market Schedule Quantities will be recalculated for the relevant Trading Day(s), and (ii) a Settlement Rerun shall then be undertaken in the event that the Market Operator in resolving a Data Query determines that:
1. Commercial Offer Data or Technical Offer Data has been applied incorrectly; or
 2. Actual Availability or Dispatch Quantity has been calculated incorrectly and that the correct application or calculation of any such amount would require it to change by more than the Settlement Recalculation Threshold.
- 6.83 The Market Operator shall procure that (i) SMP and Market Schedule Quantities will be recalculated for the relevant Trading Day(s), and (ii) a Settlement Rerun shall then be undertaken in the event that the Market Operator in resolving a Data Query determines that:
1. Meter Data has been applied incorrectly; or
 2. Market Schedule Quantity has been calculated incorrectly,
- and that the correct application or calculation of any such amount would require it to change by more than the Settlement Recalculation Threshold.

- 6.84 The Market Operator shall procure that the Ex-Post Loss of Load Probability Φ shall be recalculated in the event that the Market Operator in resolving a Data Query determines that Metered Generation has been applied incorrectly, and that the correct application would require it to change by more than the Settlement Recalculation Threshold.
- 6.85 The Market Operator shall procure that Capacity Payments and Capacity Charges shall be recalculated in the event that the Market Operator in resolving a Data Query determines that:
1. Commercial Offer Data or Technical Offer Data has been applied incorrectly; or
 2. any of Eligible Availability, Dispatch Quantity, Market Schedule Quantity, SMP or Ex-Post Loss of Load Probability Φ has been calculated incorrectly.
- 6.86 If the Market Operator does not resolve the Data Query within the period set out in paragraph 6.81, then it shall be deemed to give rise to a Settlement Dispute unless the Party concerned agrees to give the Market Operator more time, such period not exceeding 10 Working Days, to resolve the Data Query.
- 6.87 Intentionally Blank.
- 6.88 Any change to Settlement resulting from the resolution by the Market Operator of a Data Query that was not processed prior to the production of the Initial Settlement Statement shall fall into one of the two following categories:
1. Change to Settlement Items with Low Materiality;
 2. Change to Settlement Items with High Materiality.
- 6.88A The Market Operator shall calculate the materiality of a change to Settlement Items, or other elements of data which have an impact on the Settlement Items, arising from the resolution of a Data Query or a Settlement Query by reference to a single Energy Settlement Statement, Capacity Settlement Statement or Statement of Market Operator Charges as appropriate.
- 6.89 In the event that there is a change to Settlement Items with Low Materiality, the Market Operator shall procure that the revised corrected input data shall be used for the relevant Settlement Period and Settlement shall then take place on the next Timetabled Settlement Rerun.
- 6.90 Intentionally blank
- 6.91 Intentionally Blank.
- 6.92 In the event that there is a change to Settlement Items with High Materiality, the Market Operator shall procure that the revised corrected input data shall be corrected for the relevant Settlement Period and an additional Settlement Rerun for that Settlement Period shall then be performed within one month of the resolution of the data query.
- 6.92A In the event that there is a change to Settlement Items with High Materiality, the Market Operator shall notify, within one Working Day, the External Data Providers required to submit the revised corrected input data.

Settlement Queries

- 6.93 Before raising a Settlement Dispute in respect of any of the matters set out in paragraphs 6.94 and 6.95, a Participant must raise a Settlement Query in respect of those matters.
- 6.94 Subject to paragraph 6.101A, a Participant or an External Data Provider may raise a Settlement Query in respect of the application of Metered Generation or the calculation of any of the following amounts:
1. Metered Demand;
 2. Net Demand;
 3. Settlement Net Demand
 4. Eligible Availability;
 5. Actual Availability;
 6. Dispatch Quantities;
 7. Currency Costs;
 8. Interest amounts
- .9.or in respect of Discovered Errors.
- 6.95 Notwithstanding any other provision of the Code, a Participant may raise a Settlement Query in the event of any difference between a Settlement Item on the Ex-Post Indicative Settlement Statement and the same item on the Initial Settlement Statement, without the Participant having filed a Data Query in relation to that Settlement Item.
- 6.96 Any changes to Settlement resulting from a Settlement Query on an Initial Settlement Statement, on an Invoice or on a Self Billing Invoice, shall be placed into one of the two following categories:
1. Change to Settlement Items with Low Materiality;
 2. Change to Settlement Items with High Materiality.
- 6.97 In the event that there is a change to Settlement Items with Low Materiality, the Market Operator shall procure that the revised corrected data will be used for the relevant Settlement Period for which Final Settlement has not occurred, and Settlement shall then take place on the next Timetabled Settlement Rerun.
- 6.98 The Market Operator shall calculate the materiality of a change to Settlement Items arising from the resolution of a Settlement Query by reference to a single Energy Settlement Statement, Capacity Settlement Statement or statement of Market Operator Charges.
- 6.99 In the event that there is a change to Settlement Items with Low Materiality resolved after the final Timetabled Settlement Rerun, the Market Operator shall procure that an additional Settlement Rerun for the relevant Settlement Period shall then be performed.
- 6.100 In the event that there is a change to Settlement Items with High Materiality, the Market Operator shall procure that the revised corrected data shall be used for the relevant Settlement Period and a Settlement Rerun for that Settlement Period shall then be performed.

- 6.100A In the event that there is a change to Settlement Items with High Materiality, the Market Operator shall notify, within one Working Day, the External Data Providers required to submit the revised corrected data.
- 6.101 A Participant or an External Data Provider may raise a Settlement Query at any time prior to 17:00 on the twentieth Working Day after the last Timetabled Settlement Rerun or prior to 17:00 on the fifth Working Day after any other Settlement rerun.
- 6.101A A Participant or an External Data Provider may not raise a Settlement Query with respect to Metered Generation data or any calculations relating to any Settlement Period prior to the Meter Validation Date of the relevant Generator Unit. Subsequent to the Meter Validation Date, a Settlement Query may be raised in respect of data relating to these Settlement Periods.
- 6.102 The Market Operator must resolve a Settlement Query within one month after the Settlement Query is filed with it. If the Market Operator does not resolve the Settlement Query within that period, then it shall be deemed to give rise to a Settlement Dispute unless the Party concerned agrees to give the Market Operator more time (not exceeding 10 Working Days) to resolve the Settlement Query.

Settlement Disputes

- 6.103 Subject to paragraph 6.93, a Participant may only raise a Settlement Dispute in respect of an Initial Settlement Statement or an Invoice or a Self Billing Invoice insofar as it relates to Trading Payments and Trading Charges after the Initial Settlement Statements for Trading Payments and Trading Charges are issued to relevant Participants.
- 6.104 Subject to paragraph 6.93, a Participant may only raise a Settlement Dispute in respect of capacity, after the Initial Settlement Statements or an Invoice or a Self Billing Invoice for Capacity Payments and Capacity Charges are issued to relevant Participants.
- 6.105 A Settlement Dispute shall also arise where the Market Operator has not resolved a Data Query within the period provided for pursuant to paragraph 6.86 or where the Market Operator has not resolved a Settlement Query within the period provided for pursuant to paragraph 6.102.
- 6.106 The Market Operator shall procure that (i) SMP and Market Schedule Quantities shall be recalculated, and (ii) a Settlement Rerun will then be undertaken in the event that as a result of an Upheld Dispute it is determined that:
1. Commercial Offer Data or Technical Offer Data has been applied incorrectly; or
 2. Actual Availability or Dispatch Quantity has been calculated incorrectly.
- 6.107 The Market Operator shall procure that (i) SMP and Market Schedule Quantities shall be recalculated, and (ii) a Settlement Rerun will then be undertaken in the event that as a result of an Upheld Dispute it is determined that:
1. Metered Generation has been applied incorrectly; or
 2. Market Schedule Quantity has been calculated incorrectly,
- and that the correct application or calculation of any such amount would require it to change by more than the Settlement Recalculation Threshold.

- 6.108 The Market Operator shall procure that Capacity Payments and Capacity Charges shall be recalculated in the event that as a result of an Upheld Dispute it is determined that the Metered Generation has been applied incorrectly, and that the correct application would require it to change by more than the Settlement Recalculation Threshold.
- 6.109 The Market Operator shall procure that Capacity Payments and Capacity Charges shall be recalculated in the event that as a result of an Upheld Dispute it is determined that:
1. Commercial Offer Data or Technical Offer Data has been applied incorrectly; or
 2. any of Eligible Availability, Dispatch Quantity, Market Schedule Quantity, Net Demand, Settlement Net Demand, SMP or Ex-Post Loss of Load Probability Φ has been calculated incorrectly.
- 6.110 Upheld Disputes shall be placed into one of two categories:
1. Upheld Dispute with Low Materiality; or
 2. Upheld Dispute with High Materiality.
- 6.110A The Market Operator shall calculate the materiality of a change to Settlement Items arising from the resolution of a Settlement Dispute by reference to a single Energy Settlement Statement, Capacity Settlement Statement or statement of Market Operator Charges.
- 6.111 In the event of an Upheld Dispute with Low Materiality, the Market Operator shall procure that the revised corrected data shall be used for the relevant Settlement Period for which Final Settlement has not occurred, and Settlement shall then take place on the next Timetabled Settlement Rerun.
- 6.112 In the event of an Upheld Dispute with Low Materiality after the final Timetabled Settlement Rerun, the Market Operator shall procure that an additional Settlement Rerun for the relevant Settlement Period shall then be performed within the timeframe directed by a Competent Authority (which shall for these purposes include the Dispute Resolution Board) as a result of the Dispute Resolution Process.
- 6.113 In the event of an Upheld Dispute with High Materiality, the Market Operator shall procure that the revised corrected data will be used for the relevant Settlement Day and an additional Settlement Rerun for the relevant Settlement Period shall then be performed within the timeframe directed by a Competent Authority (which shall for these purposes include the Dispute Resolution Board) as a result of the Dispute Resolution Process.

CONSEQUENCES

- 6.114 Any payment due under the Code by any Party or Participant shall continue to be due and payable in accordance with its terms (including as to timing) notwithstanding (i) any Data Queries, Settlement Queries or Settlement Disputes in respect of such payments or (ii) any Shortfall, Unsecured Bad Debt, Default, Suspension, Deregistration or Termination arising in relation to any such Party or Participant.
- 6.115 Where the resolution of a Data Query, Settlement Query or Settlement Dispute requires a Settlement Rerun, the Market Operator will procure the carrying out of a Settlement Rerun in relation to the Settlement Period that is the subject of the Data Query, Settlement Query or Settlement Dispute.

- 6.116 Where the resolution of a Settlement Query or Settlement Dispute raised by a Participant requires a Settlement Rerun, the Market Operator shall apply the result of that Settlement Rerun to all Participants.

DAILY CALCULATION OF PAYMENTS FOR GENERATOR UNITS

- 6.117 The Market Operator shall calculate the applicable daily payments in respect of Generator Units in accordance with the following paragraphs.

Payments for Energy

- 6.118 The Total Energy Payments for Energy (ENPUud) for Generator Unit u for Settlement Day d shall be calculated as follows:

$$ENPUud = \sum_{h \text{ in } d} ENPUh$$

Where

1. ENPUh is the Energy Payment due for Generator Unit u for Trading Period h;
2. $\sum_{h \text{ in } d}$ is a summation over all Trading Periods h in Settlement Day d.

Payments for Constraints

- 6.119 The Constraint Payments (CONPUud) for Generator Unit u for Settlement Day d shall be calculated as follows:

$$CONPUud = \sum_{h \text{ in } d} CONPUh$$

Where

1. CONPUh is the Constraint Payment made for Generator Unit u for Trading Period h;
2. $\sum_{h \text{ in } d}$ is a summation over all Trading Periods h in Settlement Day d.

Payments for Uninstructed Imbalances

- 6.120 The Total Uninstructed Imbalance Payments (UNIMPUud) made for Generator Unit u for Settlement Day d shall be calculated as follows:

$$UNIMPUud = \sum_{h \text{ in } d} UNIMPUh$$

Where

1. UNIMPUh is the Uninstructed Imbalance Payment for Generator Unit u in Trading Period h;
2. $\sum_{h \text{ in } d}$ is a summation over all Trading Periods h in Settlement Day d.

Testing Charges

- 6.121 The Testing Charges (TCHARGEUud) for Generator Unit u for Settlement Day d shall be calculated as follows:

$$TCHARGE_{Uud} = \sum_{h \text{ in } d} TCHARGE_{Uh}$$

Where

1. $TCHARGE_{Uh}$ is the Testing Charge for a Generator Unit u in Trading Period h ;
2. $\sum_{h \text{ in } d}$ is a summation over all Trading Periods h in Settlement Day d .

Payments for Generator Units on a Daily Basis

- 6.122 The Total Payments ($DAYPU_{ud}$) made for Generator Unit u for Settlement Day d shall be calculated as follows:

$$DAYPU_{ud} = ENPU_{ud} + CONPU_{ud} + UNIMPU_{ud} - TCHARGE_{Uud}$$

Where

1. $ENPU_{ud}$ is the Total Energy Payment made for Generator Unit u for Settlement Day d ;
 2. $CONPU_{ud}$ is the Constraint Payment made for Generator Unit u for Settlement Day d ;
 3. $UNIMPU_{ud}$ is the Total Uninstructed Imbalance Payment made for Generator Unit u for Settlement Day d ;
 4. $TCHARGE_{Uud}$ is the Testing Charge for each Generator Unit u for Settlement Day d .
- 6.123 The Total Payment ($DAYPDd$) made for all Generator Units other than Interconnector Residual Capacity Units for Settlement Day d shall be calculated as follows:

$$DAYPDd = \sum_{u^*} DAYPU_{ud}$$

Where

1. $DAYPU_{ud}$ is the Total Payments made for Generator Unit u for Settlement Day d ;
2. \sum_{u^*} is a summation over all Generator Units excluding any Interconnector Residual Capacity Units.

Invoice payments for energy in respect of Generator Units

- 6.124 The Invoice Energy Payments (IEP_{pb}) to Participant p for its registered Generator Units except any Interconnector Residual Capacity Units for Billing Period b shall be calculated as follows:

$$IEP_{pb} = \sum_{u^* \text{ in } p} \sum_{d \text{ in } b} DAYPU_{ud} + \sum_{u^* \text{ in } p} MWP_{ub} - \sum_{a \text{ in } p} \sum_{d \text{ in } b} \sum_{h \text{ in } d} SSREA_{aph}$$

Where

1. $DAYPU_{ud}$ is the Total Payments excluding Capacity Payments made for Generator Unit u for Settlement Day d ;

2. SSREA_{ph} is the Settlement Reallocation Energy Amount for Participant p for its registered Generator Units for Trading Period h defined in Settlement Reallocation Agreement a;
3. MW_{Pub} is the Make Whole Payment for Generator Unit u in Billing Period b;
4. $\sum_{u^* \text{ in } p}$ is a summation over all Generator Units u excluding any Interconnector Residual Capacity Units registered to Participant p;
5. $\sum_{a \text{ in } p}$ is a summation over all Settlement Reallocation Agreements a registered to Participant p in respect of its registered Generator Units;
6. $\sum_{d \text{ in } b}$ is a summation over Settlement Days d in Billing Period b;
7. $\sum_{h \text{ in } d}$ is a summation over Trading Periods h in Settlement Day d.

DAILY CALCULATION OF CHARGES FOR SUPPLIER UNITS

- 6.125 The Market Operator shall calculate the charges for Supplier Units as set out in the following paragraphs, detailing the component of charges for Supplier Units to be calculated on a daily basis but not including non-daily charges (Capacity Payments).

Charges for Energy

- 6.126 The Total Energy Charges for Energy (ENC_{Vvd}) for Supplier Unit v for Settlement Day d shall be calculated as follows:

$$ENC_{Vvd} = \sum_{h \text{ in } d} ENC_{vh}$$

Where

1. ENC_{vh} is the Energy Charge for Supplier Unit v for Trading Period h;
2. $\sum_{h \text{ in } d}$ is a summation over all Trading Periods h in Settlement Day d.

Charges for Imperfections

- 6.127 The Total Imperfections Charges (IMPC_{Vvd}) for Supplier Unit v for Settlement Day d shall be calculated as follows:

$$IMPC_{Vvd} = \sum_{h \text{ in } d} IMPC_{vh}$$

Where

1. IMPC_{vh} is the Imperfections Charge for Supplier Unit v for Trading Period h;
2. $\sum_{h \text{ in } d}$ is a summation over all Trading Periods h in Settlement Day d.

Charges for Supplier Units on a Daily Basis

- 6.128 The Total Charges (DAYCVvd) for Supplier Unit v for Settlement Day d shall be calculated as follows:

$$DAYCVvd = ENCVvd + IMPCVvd$$

Where

1. ENCVvd is the Total Energy Charge for Supplier Unit v for Settlement Day d;
2. IMPCVvd is the Total Imperfections Charge for Supplier Unit v for Settlement Day d.

- 6.129 The Total Charge (DAYCDd) made for all Supplier Units for Settlement Day d shall be calculated as follows:

$$DAYCDd = \sum_v DAYCVvd$$

Where

1. DAYCVvd is the Total Charges for Supplier Unit v for Settlement Day d;
2. \sum_v is a summation over all Supplier Units v.

Invoice Calculations for Energy in Respect of Supplier Units

- 6.130 The Invoice Energy Charges (IECpb) to Participant p for its registered Supplier Units in Billing Period b shall be calculated as follows:

$$IECpb = \sum_{v \in p} \sum_{d \in b} DAYCVvd - \sum_{a \in p} \sum_{d \in b} \sum_{h \in d} SSREAaph$$

Where

1. DAYCVvd is the Total Charges excluding Capacity Charges for Supplier Unit v for Settlement Day d;
2. SSREAaph is the Settlement Reallocation Energy Amount for Participant p for its registered Supplier Units for Trading Period h defined in Settlement Reallocation Agreement a;
3. $\sum_{a \in p}$ is a summation over all Settlement Reallocation Agreements a registered to Participant p for its registered Supplier Units;
4. $\sum_{v \in p}$ is a summation over all Supplier Units v registered to Participant p;
5. $\sum_{d \in b}$ is a summation over Settlement Days d in Billing Period b;
6. $\sum_{h \in d}$ is a summation over Trading Periods h in Settlement Day d.

Invoice Calculations for Capacity in Respect of Generator Units

- 6.131 The Market Operator shall calculate the Invoiced Capacity Payments (ICP_{pc}) to Participant p for its registered Generator Units for Capacity Period c as follows:

$$ICP_{pc} = \sum_{u \text{ in } p} CPP_{uc} - \sum_{a \text{ in } p} \sum_{d \text{ in } c} \sum_{h \text{ in } d} SSRCA_{aph}$$

Where

1. CPP_{uc} is the Capacity Period Payment for a Generator Unit u in Capacity Period c;
2. SSRCA_{aph} is the Settlement Reallocation Capacity Amount for Participant p for its registered Generator Units for Trading Period h defined in Settlement Reallocation Agreement a;
3. $\sum_{u \text{ in } p}$ is a summation over all Generator Units u registered to Participant p;
4. $\sum_{a \text{ in } p}$ is a summation over all Settlement Reallocation Agreements a registered to Participant p for its registered Generator Units;
5. $\sum_{d \text{ in } c}$ is a summation over Settlement Days d in Capacity Period c;
6. $\sum_{h \text{ in } d}$ is a summation over Trading Periods h in Settlement Day d.

Invoice Calculations for Interconnector Residual Capacity Unit

- 6.132 The Market Operator shall calculate the Interconnector Residual Capacity Unit Payments (IRCUP_{pc}) for each relevant Participant p for its registered Interconnector Residual Capacity Units for Capacity Period c as follows:

$$IRCUP_{pc} = \sum_{u' \text{ in } p} \sum_{d \text{ in } c} DAYPU_{u'd} - \sum_{u' \text{ in } p} CPP_{u'c}$$

Where

1. DAYPU_{u'd} is the Total Payments excluding Capacity Payments made for Interconnector Residual Capacity Unit u' for Settlement Day d;
2. CPP_{u'c} is the Capacity Period Payment for Interconnector Residual Capacity Unit u' in Capacity Period c;
3. $\sum_{d \text{ in } c}$ is a summation over Settlement Days d in Capacity Period c;
4. $\sum_{u' \text{ in } p}$ is a summation over all Interconnector Residual Capacity Units u' registered to Participant p;

Invoice Calculations for Capacity in Respect of Supplier Units

- 6.133 The Market Operator shall calculate the Invoiced Capacity Charges (ICC_{pc}) to Participant p for its registered Supplier Units for Capacity Period c as follows:

$$ICC_{pc} = \sum_{v \text{ in } p} CPC_{vc} - \sum_{a \text{ in } p} \sum_{d \text{ in } c} \sum_{h \text{ in } d} SSRCA_{aph}$$

Where

1. CPC_{vc} is the Capacity Charge for a Supplier Unit v in Capacity Period c ;
2. $SSRCA_{aph}$ is the Settlement Reallocation Capacity Amount for Participant p for its registered Supplier Units for Trading Period h defined in Settlement Reallocation Agreement a ;
3. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units v registered to Participant p ;
4. $\sum_{a \text{ in } p}$ is a summation over all Settlement Reallocation Agreements a registered to Participant p for its registered Supplier Units;
5. $\sum_{d \text{ in } c}$ is a summation over Settlement Days d in Capacity Period c ;
6. $\sum_{h \text{ in } d}$ is a summation over Trading Periods h in Settlement Day d .

RECOVERY OF THE BILLING PERIOD CURRENCY COST

- 6.134 The Market Operator shall calculate the recovery of the Billing Period Currency Cost (BPCd) according to the provisions set out in the paragraphs below.
- 6.135 The Market Operator shall produce the Initial Settlement Statements applying the Trading Day Exchange Rate for the relevant Trading Day for the Participants trading in pounds sterling.
- 6.136 The Billing Period Currency Charge (BPCCSpb) to Participant p in respect of its Supplier Units for the relevant Billing Period b shall be calculated as follows:

if $\sum_{d \text{ in } b} (DAYPDd + DAYCDd) \neq 0$ *then*

$$BPCCSpb = \frac{BPCb}{\sum_{d \text{ in } b} (DAYPDd + DAYCDd)} \times \sum_{d \text{ in } b} \sum_{v \text{ in } p} DAYCVvd$$

else $BPCCSpb = 0$

Where

1. $BPCb$ is the Billing Period Currency Cost for the relevant Billing Period b as set out in more detail in Agreed Procedure 15 "Invoicing";
2. $DAYPDd$ is the Total Payment made for all Generator Units for Settlement Day d excluding Interconnector Residual Capacity Units;
3. $DAYCDd$ is the Total Charge for all Supplier Units for Settlement Day d ;

4. DAYCVvd is the Total Charges for Supplier Unit v for Settlement Day d;
5. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units v registered to Participant p;
6. $\sum_{d \text{ in } b}$ is a summation over Settlement Days d in Billing Period b.

6.136A The Billing Period Currency Charge (BPCCGpb) to Participant p in respect of its Generator Units for the relevant Billing Period b shall be calculated as follows:

if $\sum_{d \text{ in } b} (DAYPDd + DAYCDd) \neq 0$ then

$$BPCCGpb = \frac{BPCb}{\sum_{d \text{ in } b} (DAYPDd + DAYCDd)} \times \sum_{d \text{ in } b} \sum_{u^* \text{ in } p} DAYPUud$$

else BPCCGpb=0

Where

1. BPCb is the Billing Period Currency Cost for the relevant Billing Period b as set out in more detail in Agreed Procedure 15 “Invoicing”;
2. DAYPDd is the Total Payment made for all Generator Units for Settlement Day d;
3. DAYCDd is the Total Charge for all Supplier Units for Settlement Day d;
4. DAYPUud is the Total Payments, excluding Capacity Payments, made for Generator Unit u for Settlement Day d;
5. $\sum_{u^* \text{ in } p}$ is a summation over all Generator Units excluding any Interconnector Residual Capacity Units registered to Participant p;
6. $\sum_{d \text{ in } b}$ is a summation over Settlement Days d in Billing Period b.

RECOVERY OF THE CAPACITY PERIOD CURRENCY COST

- 6.137 The recovery of the Capacity Period Currency Cost (CAPCc) shall be calculated according to the provisions set out in the paragraphs below.
- 6.138 The Market Operator shall produce the Initial Settlement Statements applying the Annual Capacity Exchange Rate for the relevant Trading Day for the Participants trading in pounds sterling (£).
- 6.139 The Capacity Period Currency Charge (CAPCCSpC) to Participant p in respect of its Supplier Units for the relevant Capacity Period c shall be calculated as follows:

$$\begin{aligned}
& \text{if } \sum_p \left(\sum_{u \text{ in } p} CPP_{uc} + \sum_{v \text{ in } p} CPC_{vc} \right) \neq 0 \text{ then} \\
& \quad CAPCCSp_c = \left(\frac{CAPC_c}{\sum_p \left(\sum_{u \text{ in } p} CPP_{uc} + \sum_{v \text{ in } p} CPC_{vc} \right)} \right) \times \left(\sum_{v \text{ in } p} CPC_{vc} \right) \\
& \text{else } CAPCCSp_c = 0
\end{aligned}$$

Where

1. CAPC_c is the Capacity Period Currency Cost for the relevant Capacity Period c as set out in more detail in Agreed Procedure 15 “Invoicing”;
2. CPP_{uc} is the Capacity Payment for a Generator Unit u for Capacity Period c;
3. CPC_{vc} is the Capacity Charge for a Supplier Unit v for Capacity Period c;
4. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units v registered to Participant p;
5. $\sum_{u \text{ in } p}$ is a summation over all Generator Units u registered to Participant p;
6. \sum_p is a summation over all Participants p.

6.139A The Capacity Period Currency Charge (CAPCCG_{pc}) to Participant p for the relevant Capacity Period c shall be calculated as follows:

$$\begin{aligned}
& \text{if } \sum_p \left(\sum_{u \text{ in } p} CPP_{uc} + \sum_{v \text{ in } p} CPC_{vc} \right) \neq 0 \text{ then} \\
& \quad CAPCCGp_c = \left(\frac{CAPC_c}{\sum_p \left(\sum_{u \text{ in } p} CPP_{uc} + \sum_{v \text{ in } p} CPC_{vc} \right)} \right) \times \left(\sum_{u \text{ in } p} CPP_{uc} \right) \\
& \text{else } CAPCCGp_c = 0
\end{aligned}$$

Where

1. CAPC_c is the Capacity Period Currency Cost for the relevant Capacity Period c as set out in more detail in Agreed Procedure 15 “Invoicing”;
2. CPP_{uc} is the Capacity Payment for a Generator Unit u for Capacity Period c;
3. CPC_{vc} is the Capacity Charge for a Supplier Unit v for Capacity Period c;

4. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units v registered to Participant p ;
5. $\sum_{u \text{ in } p}$ is a summation over all Generator Units u registered to Participant p ;
6. \sum_p is a summation over all Participants p .

MARKET OPERATOR BALANCING COST

- 6.140 The Market Operator shall balance Energy Payments and Energy Charges and Constraints Payments and Imperfection Charge receipts and VAT receipts and payments for each Billing Period, through the Balancing Cost.
- 6.141 The Balancing Cost (BCb) for each Billing Period b (which can be either positive or negative and if negative becomes a payment to the Market Operator) shall be calculated as follows:

$$BCb = \left(\sum_{d \text{ in } b} (DAYPDd - DAYCDd) + \sum_u MWPub \right) + VATpayments - VATreceipts$$

Where

1. MWPub is the Make Whole Payment for Generator Unit u in Billing Period b ;
 2. DAYPDd is the Total Payment made to all Generator Units in respect of Settlement Day d excluding Interconnector Residual Capacity Units;
 3. DAYCDd is the Total Charge on all Supplier Units in respect of Settlement Day d ;
 4. $\sum_{d \text{ in } b}$ is a summation over Settlement Days d in Billing Period b ;
 5. \sum_u is a summation over all Generator Units u ;
 6. VATpayments is the VAT included in all Self Billing Invoices (less Debit Notes) in respect of the relevant Billing Period paid by the Market Operator.
 7. VATreceipts is the VAT included in all Invoices in respect of the relevant Billing Period issued by the Market Operator.
- 6.142 The Balancing Cost (CBCc) for each Capacity Period c (which can be either positive or negative and, if negative becomes a payment to the Market Operator) shall be calculated as follows;

$$CBCc = \sum_{u^*} CPPuc - \sum_v CPCvc + \sum_{u'} \sum_{d \text{ in } c} DAYPUu'd + VATpayments - VATreceipts$$

Where

1. CPPuc is the Capacity Period Payment for Generator Unit u in Capacity Period c ;
2. CPCvc is the Capacity Period Charge for Supplier Unit v in Capacity Period c ;

3. DAYPUu'd is the Total Payment, excluding Capacity Payments, made to Interconnector Residual Capacity Unit u' in respect of Settlement Day d;
4. $\sum_{d \text{ in } c}$ is a summation over Settlement Days d in Capacity Period c;
5. \sum_{u^*} is a summation over all Generator Units u excluding any Interconnector Residual Capacity Units;
6. $\sum_{u'}$ is a summation over all Interconnector Residual Capacity Units u';
7. \sum_v is a summation over all Supplier Units v;
8. VATpayments is the VAT included in all Self Billing Invoices (less Debit Notes) in respect of the relevant Capacity Period paid by the Market Operator;
9. VATreceipts is the VAT included in all Invoices in respect of the relevant Capacity Period issued by the Market Operator.

MARKET OPERATOR CHARGE

- 6.143 The Market Operator Charge shall comprise (i) a Fixed Market Operator Generator Charge, and a Fixed Market Operator Supplier Charge, applicable to Participants as appropriate, and (ii) a Variable Market Operator Charge applicable to all Participants in respect of their Supplier Units as appropriate. The Fixed Market Operator Generator Charge shall be a charge applied in respect of every Generator Unit, which may be different for each Generator Unit and the Fixed Market Operator Supplier Charge shall be a charge applied in respect of every Supplier Unit, which may be different for each Supplier Unit (either "the Fixed Market Operator Charge" as applicable). The Variable Market Operator Charge shall be a charge in respect of each unit of Settlement Net Demand at Supplier Units, and is based on a Variable Market Operator Price expressed in euro/MWh.
- 6.144 The Market Operator shall issue the applicable Variable Market Operator Charge Invoice to each Participant in respect of each Billing Period during the Year or the period to which the Variable Market Operator Charge relates or at such other frequency as the Market Operator shall decide.
- 6.145 The Market Operator shall establish and maintain with the SEM Bank within the relevant Jurisdiction a euro bank account at a branch of the SEM Bank in Ireland and a pounds sterling bank account at a branch of the SEM Bank in Northern Ireland in its name and each called "the Market Operator Charge Account". Participants shall make all payments due pursuant to the issue of the Fixed Market Operator Charge Invoices and Variable Market Operator Charge Invoices to the relevant Market Operator Charge Account according to the Currency Zone of its registered Units. Each Market Operator Charge Account shall be an interest bearing account.
- 6.146 Each Participant shall pay the Fixed Market Operator Charge including any applicable VAT within 5 working days of the issue of the Fixed Market Operator Charge Invoice.

- 6.147 Each Participant shall pay the Variable Market Operator Charge including any applicable VAT within 5 working days of the issue of the Variable Market Operator Charge Invoice.
- 6.148 Interest shall accrue on any overdue payments in accordance with paragraphs 6.157.

Fixed Market Operator Charge to All Participants

- 6.149 The Market Operator shall calculate the Invoiced Fixed Market Operator Annual Charge in respect of Supplier Units ($IMOACV_{py}$) and Generator Units ($IMOACU_{py}$) to Participant p for Year y in respect of its Units as follows:

$$IMOACV_{py} = \sum_{v \text{ in } p} MOAVC_{vy}$$

$$IMOACU_{py} = \sum_{u \text{ in } p} MOAUC_{uy}$$

Where

1. $MOAVC_{vy}$ is the Fixed Market Operator Charge (Supplier Unit) for Year y for a Supplier Unit v ;
 2. $MOAUC_{uy}$ is the Fixed Market Operator Charge (Generator Unit) for Year y for a Generator Unit u ;
 3. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units v registered to Participant p ;
 4. $\sum_{u \text{ in } p}$ is a summation over all Generator Units u registered to Participant p .
- 6.150 The Market Operator shall issue the applicable Fixed Market Operator Charge Invoice or Invoices to each Participant monthly in arrears for each Year or such other period to which the Fixed Market Operator Charge relates or at such other frequency as the Market Operator shall decide.

Variable Market Operator Charge

- 6.151 The Market Operator shall calculate the Variable Market Operator Charge ($VMOC_{pb}$) for Participant p in respect of its Supplier Units in Billing Period b as follows:

$$VMOC_{pb} = VMOP_y \times \max \left\{ \left[\sum_{v \text{ in } p} \sum_{h \text{ in } b} SNDLF_{vh} \right], 0 \right\}$$

Where

1. $VMOP_y$ is the Variable Market Operator Price for Year y ;
2. $SNDLF_{vh}$ is the Loss Adjusted Settlement Net Demand from Supplier Unit v for Trading Period h ;
3. $\sum_{h \text{ in } b}$ is a summation over Trading Periods h for Billing Period b ;

4. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units v registered to Participant p.

RECOVERY OF UNSECURED BAD ENERGY DEBT

- 6.152 The Market Operator shall procure that any amount of Unsecured Bad Energy Debt is charged to all Participants (other than that those whose Default has given rise to the relevant Unsecured Bad Debt) as set out below.
- 6.153 The Unsecured Bad Debt Energy Charge (UBDECpb) to Participant p for Billing Period b for its registered Generator Units shall be calculated as follows:

$$\begin{aligned}
 & \text{if } \left(\sum_p \left[\text{Max} \left\{ \sum_{u^* \text{ in } p} \left(\text{MWPub} + \sum_{d \text{ in } b} \text{DAYPUud} \right) 0 \right\} \right] \neq 0 \right) \text{ then} \\
 & \quad \text{UBDECpb} = \left(\frac{\text{UBEDb}}{\sum_p \left[\text{Max} \left\{ \sum_{u^* \text{ in } p} \left(\text{MWPub} + \sum_{d \text{ in } b} \text{DAYPUud} \right) 0 \right\} \right]} \right) \times \\
 & \quad \text{Max} \left\{ \sum_{u^* \text{ in } p} \left(\text{MWPub} + \sum_{d \text{ in } b} \text{DAYPUud} \right) 0 \right\} \\
 & \text{else UBDECpb} = 0
 \end{aligned}$$

Where

1. UBEDb is the actual amount of Unsecured Bad Energy Debt for a Billing Period b;
2. DAYPUud is the Total Payments made to Generator Unit u for Settlement Day d and is zero for any Generator Unit registered to a Defaulting Participant;
3. MWPub is the Make Whole Payment in respect of Generator Unit u in Billing Period b and is zero for any Generator Unit registered to a Defaulting Participant;
4. $\sum_{u^* \text{ in } p}$ is a summation over all Generator Units u excluding any Interconnector Residual Capacity Units registered to Participant p;
5. $\sum_{d \text{ in } b}$ is a summation over Settlement Days d for Billing Period b;
6. \sum_p is a summation over all Participants.

RECOVERY OF UNSECURED BAD CAPACITY DEBT

- 6.154 The Market Operator shall procure that the Unsecured Bad Capacity Debt is charged on Participants (other than that those whose Default has given rise to the relevant Unsecured Bad Debt) as set out below.

- 6.155 The Unsecured Bad Debt Capacity Charge (UBDCC_{pc}) to Participant p in Capacity Period c for its registered Generator Units shall be calculated as follows:

$$\begin{aligned}
 & \text{if } \left[\sum_p \left(\text{Max} \left\{ \left(\sum_{u \text{ in } p} \text{CPP}_{uc} \right), 0 \right\} \right) \neq 0 \right] \text{ then} \\
 & \quad \text{UBDCC}_{pc} = \left(\frac{\text{UBCD}_c}{\sum_p \left(\text{Max} \left\{ \left(\sum_{u \text{ in } p} \text{CPP}_{uc} \right), 0 \right\} \right)} \right) \times \text{Max} \left\{ \left(\sum_{u \text{ in } p} \text{CPP}_{uc} \right), 0 \right\} \\
 & \text{else } \text{UBDCC}_{pc} = 0
 \end{aligned}$$

Where

1. UBCD_c is the actual amount of Unsecured Bad Capacity Debt for a Capacity Period c;
2. CPP_{uc} is the Capacity Payment for a Generator Unit u for Capacity Period c and is zero for any Generator Unit registered to a Defaulting Participant;
3. $\sum_{u \text{ in } p}$ is a summation over all Generator Units u registered to Participant p;
4. \sum_p is a summation over all Participants p.

RECOVERY OF UNPAID MARKET OPERATOR CHARGE

- 6.156 Save as provided for otherwise in paragraphs 6.32 and 6.53, the Market Operator's claim against any Participant relating to any overdue Market Operator Charge shall rank *pari passu* with the claims of any other Party for any Shortfall or Unsecured Bad Debt.

INTEREST PAYMENT

- 6.157 Where any payment under the Code is overdue, except for Unsecured Bad Debt as provided for in paragraph 6.158, interest, as set out in Agreed Procedure 15 "Invoicing" shall accrue from the relevant Payment Due Date until the date of actual payment in full of the overdue amount by remittances for full value, such interest to accrue daily and both before and after any judgment.
- 6.158 Where the overdue amount is Unsecured Bad Debt, Default Interest shall accrue from the relevant Payment Due Date until the date of actual payment in full of the Unsecured Bad Debt by remittances for full value, such Default Interest to accrue daily and both before and after any judgment.
- 6.159 Where any Self Billing Invoice or Invoice must be re-issued due to a Settlement Rerun then interest as set out in Agreed Procedure 15, "Invoicing", shall apply on the difference between the amount received or paid pursuant to the relevant prior Settlement and the amount due or payable pursuant to the Settlement Rerun accruing from the Payment Due Date applicable to the relevant prior Settlement up until the date of the issue

of the applicable Self Billing Invoice or Invoice. Where any Interest is payable pursuant to paragraphs 6.63.2 or 6.64.1, then the Interest shall apply on the amount as specified therein.

CREDIT COVER

- 6.160 Each Participant shall comply with its obligation to provide the Required Credit Cover calculated in relation to it and notified to it by the Market Operator in accordance with the Code.
- 6.161 The Market Operator shall calculate the Required Credit Cover for each Participant as provided for pursuant to the provisions set out in paragraphs 6.186-6.232 and as provided for pursuant to Agreed Procedure 9 "Management of Credit Cover and Credit Default".
- 6.162 Each Participant must maintain its Credit Cover with a Credit Cover Provider. The acceptable forms of Credit Cover which Participants can post are:
1. an irrevocable standby Letter of Credit which:
 - a. shall be issued by a Credit Cover Provider fulfilling the Bank Eligibility Requirements set out in paragraph 6.163 below;
 - b. shall be in the form attached in Appendix A "Standard Letter of Credit"; and shall be for a minimum duration of 12 months. At least 60 calendar days before expiry of the current letter of credit the Participant must put a replacement letter of credit in place, with an effective date starting from the date following the date of expiry of the current letter of credit; and,
 - c. shall be capable of being paid out for Same Day Value following a Credit Call;and/or:
 2. a cash held deposit in a SEM Collateral Reserve Account as provided for in paragraph 6.19.
- 6.163 A Credit Cover Provider shall be a Bank which must:
1. hold a Banking Licence in Ireland under Section 9 of the Central Bank Act 1971 (Ireland) or be authorised by the Financial Services Authority to take deposits, under the Banking Act 1987 (Northern Ireland) or be otherwise authorised to provide banking services in Ireland or the United Kingdom; and
- either,
2. be a Clearing Bank in either Jurisdiction with:
 - a. a long term debt rating of not less than A (Standard & Poors) or A2 (Moody's Investors Service Inc.); or
 - b. Total Balance Sheet Assets of not less than €1,000 million,
- or
3. be an international bank that is authorised or approved by the relevant regulatory authority or is otherwise eligible to provide banking services in the Jurisdictions and which has a branch in the relevant location (Dublin and/or Belfast) and complies with paragraph 6.163.2.b.

- 6.164 If a bank is a subsidiary, then its parent company must have a credit rating of not less than A (or AA) (Standard & Poors) or A2 (or AA2) (Moody's Investors Service Inc.) or Total Balance Sheet Assets of not less than €10,000 million.
- 6.165 If a Participant's Credit Cover Provider is no longer qualified to issue or hold Credit Cover, the Participant shall re-post its Required Credit Cover with a Bank or a subsidiary of a Bank that satisfies the requirements in paragraph 6.163 within 10 Working Days of the Participant's Credit Cover Provider ceasing to be qualified. This period shall not form part of the Settlement Risk Period.
- 6.166 Each Participant shall post the Required Credit Cover in its designated Currency.
- 6.167 For each New Participant and Adjusted Participant using pounds sterling as the Settlement Currency, the Market Operator shall convert the Required Credit Cover into pounds sterling using the Trading Day Exchange Rate applicable to the Trading Day that commences at 06:00 on the day on which the calculation of Required Credit Cover is performed.
- 6.168 The Market Operator shall, before accepting a Letter of Credit tendered by a Participant as a part of that Participant's Posted Credit Cover, validate that Letter of Credit in accordance with Agreed Procedure 9 "Management of Credit Cover and Credit Default" to ensure compliance with paragraphs 6.162 to 6.163.
- 6.169 Without prejudice to a Participant's obligation to maintain the Required Credit Cover under paragraph 6.160 in accordance with the conditions set out in paragraphs 6.162 to 6.163, where the Market Operator becomes aware that a Participant's Letter of Credit or Credit Cover Provider fails or ceases to comply with such requirements, the Market Operator shall inform the relevant Participant or Participants as soon as reasonably practicable.
- 6.170 If the Market Operator, following a Credit Call, draws down any amounts from the Participant's Posted Credit Cover, such that the Posted Credit Cover no longer meets the Participant's notified Required Credit Cover, the Participant shall within 2 Working Days fully re-establish the Required Credit Cover and shall notify the Market Operator on doing this.
- 6.171 Credit Cover is subject to the following conditions:
1. a Participant's Posted Credit Cover shall be available for draw down by the Market Operator making a Credit Call on a Participant's Credit Cover Provider as provided for in the Code and shall continue to remain in place until such time as all amounts due in respect of the Participant concerned under the Code have been paid in full;
 2. the Market Operator, but not any Party or Participant, has the right to deduct from or set off against a Participant any outstanding claims and liabilities of that Participant against any amounts owing pursuant to any Invoice under the Code relating to that Participant without the prior consent of any such Participant concerned;
 3. the Participant cannot reduce the amount of the Posted Credit Cover below the Required Credit Cover calculated by the Market Operator and notified to the Participant in accordance with the Code;
 4. a Participant shall notify the Market Operator at least one Working Day in advance of any change to its Posted Credit Cover;

5. without prejudice to paragraph 6.171.6, in the event of Termination of a Party or a Participant or Suspension or Deregistration of a Participant's Units, the Participant's then applicable Required Credit Cover shall remain in place in accordance with the Code until all amounts due by the Participant concerned under the Code have been paid in full, and further subject to the Fixed Credit Requirement specified in the relevant Termination Order, Voluntary Termination Consent Order or Deregistration Consent Order as applicable;
 6. in the event of the Deregistration of any of a Party's Units, the relevant Participant shall maintain the Fixed Credit Requirement in respect of that Unit for a period of 14 months from the date of Deregistration of each Unit.
- 6.172 The Market Operator shall calculate the level of Required Credit Cover in accordance with the Code to cover a Participant's actual and potential payment liabilities in respect of its Units and participation in the Pool (including, for the avoidance of doubt, the Variable Market Operator Charge) at any time. A Participant's Required Credit Cover shall be calculated to cover:
1. its Actual Exposure (credit exposure resulting from Invoices that have been issued but not yet paid, and from amounts in Settlement Statements for which no Invoice has been issued); and
 2. its Undefined Potential Exposure which, for the avoidance of doubt is the potential exposure resulting from accrued obligations that have not yet been included in any Settlement Statement and future obligations which would be likely to accrue during the minimum period before which Suspension of a Participant's Units could take effect, which period shall be determined as the Supplier Suspension Delay Period.
- 6.173 The Market Operator shall determine:
1. the Actual Exposure Period relevant for Billing Period payments and charges (the period from the issuing of the last Invoice for energy to the end of the most recent Trading Period included in any Settlement Statement relating to Billing Period charges);
 2. the Actual Exposure Period relevant for Capacity Period payments and charges (the period from the issuing of the last Invoice for Capacity to the end of the most recent Trading Period included in any Settlement Statement relating to Capacity Period charges);
 3. the Undefined Exposure Period relevant for Billing Period payments and charges (the period from the end of the most recent Trading Period included in any Settlement Statement relating to Billing Period charges, until the time at which the Participant can be removed from incurring further liability as determined from the Supplier Suspension Delay Period or, where that time is not on a Working Day, the next Working Day thereafter); and
 4. the Undefined Exposure Period relevant for Capacity Period payments and charges (the period from the end of the most recent Trading Period included in any Settlement Statement relating to Capacity Period charges, until the time at which the Participant can be removed from incurring further liability as determined from the Supplier Suspension Delay Period—or, where that time is not a Working Day, the next Working Day thereafter).

PARAMETERS FOR THE DETERMINATION OF REQUIRED CREDIT COVER

- 6.174 The Market Operator shall make a report to the Regulatory Authorities at least 4 months before the start of the Year proposing the following parameters relating to the calculation of the Required Credit Cover, for application in the following Year:
1. the Fixed Credit Requirement;
 2. the Historical Assessment Period for the Billing Period;
 3. the Historical Assessment Period for the Capacity Period;
 4. the Analysis Percentile Parameter;
 5. the Credit Cover Adjustment Trigger; and
 6. Intentionally blank.
- 6.175 The Market Operator's report must set out any relevant research or analysis carried out by the Market Operator and the justification for the specific values proposed. Such a report may, and shall if so requested by the Regulatory Authorities, include alternative values from those proposed and must set out the arguments for and against such alternatives.
- 6.176 The Market Operator shall publish the approved value(s) for each parameter within 5 Working Days of receipt of the Regulatory Authorities' determination or two months before the start of the Year to which they shall apply whichever is the later.

MONITORING OF CREDIT COVER

- 6.177 The Market Operator shall recalculate the Required Credit Cover, as provided for in paragraphs 6.186 to 6.232 and Agreed Procedure 9 "Management of Credit Cover and Credit Default", for each Participant every Working Day and shall send to each Participant its recalculation of that Participant's Required Credit Cover by 17:00 on that Working Day.
- 6.178 The Market Operator shall base the daily calculation of the Required Credit Cover on the available data for the Settlement Risk Period up to the Settlement Day on which the calculations are made.
- 6.179 Where the daily recalculation of Required Credit Cover determines that additional Credit Cover is necessary, the Market Operator shall issue to the relevant Participant by 17:00 on the same Working Day a Credit Cover Increase Notice specifying the amount of additional Credit Cover required to be posted to satisfy its Required Credit Cover. The Participant shall post the additional necessary Credit Cover by 17:00 on the second Working Day thereafter.
- 6.180 If a Participant has been issued with a Credit Cover Increase Notice in accordance with paragraph 6.179, it may meet the terms of the Credit Cover Increase Notice by taking any combination of the following steps:
1. taking steps to increase its Posted Credit Cover; or
 2. paying an outstanding Invoice early; or
 3. entering into an appropriate Settlement Reallocation Agreement.
- 6.181 The Market Operator shall provide the Participant with a Warning Notice on any Working Day when its Warning Limit is reached and the ratio of

Required Credit Cover to Posted Credit Cover has changed from the previous Working Day. Each Participant shall be entitled to specify its own Warning Limit. However the default Warning Limit for all Participants shall be 75%. Any Participant may require the Market Operator to set a lower or higher Warning Limit for it.

- 6.182 Where a Participant reasonably expects that, compared with time-weighted average of metered quantities across all of the four most recent Billing Periods, the forecasted averaged metered quantities with respect to its Supplier Units in any of the next four Billing Periods will increase or decrease by more in absolute terms than the Credit Cover Adjustment Trigger, , or the forecasted averaged metered quantities with respect to its Generator Units in any of the next four Billing Periods will increase or decrease in absolute terms by more than the Credit Cover Adjustment Trigger, then it shall inform the Market Operator as soon as reasonably possible. Such a Participant shall be an Adjusted Participant.
- 6.183 Each Adjusted Participant shall provide such additional information to the Market Operator as provided for pursuant to Agreed Procedure 9 “Management of Credit Cover and Credit Default” to enable the Market Operator to calculate revised values of Required Credit Cover in accordance with this Section 6.

CALCULATIONS FOR REQUIRED CREDIT COVER

- 6.184 For the purposes of Credit Cover monitoring and calculations:
1. a Participant is a New Participant from the commencement of their participation; and,
 2. a Participant ceases to be a New Participant when the length of time between the commencement of their participation and the last Trading Period covered in the most recent Settlement Statement issued for that Participant is greater than the length of time covered by the Historical Assessment Period.
- 6.185 A Participant is an Adjusted Participant where the Participant notifies the Market Operator of a change in circumstances pursuant to paragraph 6.182. A Participant ceases to be an Adjusted Participant when the length of time between their notification as set out in paragraph 6.182 and the last Trading Period covered in the most recent Settlement Statement issued for that Participant is greater than the length of time covered by the Historical Assessment Period.

Calculations for the Actual Exposure Period in respect of Supplier Units

- 6.186 The Market Operator shall calculate the Actual Supplier Exposure (ASE_{pf}) for Participant p in respect of its Supplier Units for the Actual Exposure Period f as follows:

$$ASE_{pf} = \left(\sum_{bin f} (IEC_{pb} + VMOC_{pb} + BPCCS_{pb}) + \sum_{cin f} (ICC_{pc} + CAPCCS_{pc}) \right) + \left(\sum_{din p} \left(\sum_{vin p} DAYCV_{vd} - \sum_{ain p} \sum_{hind} SSREA_{aph} \right) \right) + \left(\sum_{din q} \left(\sum_{vin p} CC_{vh} - \sum_{ain p} \sum_{hind} SSRCA_{aph} \right) \right)$$

Where:

1. IECpb is the Invoice Energy Charge for Participant p for its registered Supplier Units in Billing Period b applicable if the relevant Billing Period Invoice is issued but not paid;
2. VMOCpb is the Variable Market Operator Charge for Participant p in Billing Period b for its registered Supplier Units applicable if the relevant Billing Period Invoice is issued but not paid;
3. BPCCSpb is the Billing Period Currency Charge to Participant p in respect of its Supplier Units for the relevant Billing Period b;
4. ICCpc is the Invoiced Capacity Charge for Participant p for its registered Supplier Units for Capacity Period c applicable if the relevant Capacity Period Invoice is issued but not paid;
5. CAPCCSpc is the Capacity Period Currency Charge to Participant p in respect of its Supplier Units for the relevant Capacity Period c
6. DAYCVvd is the Total Charges on Supplier Unit v for Settlement Day d;
7. SSREAaph is the Settlement Reallocation Energy Amount for Participant p for its registered Supplier Units for Trading Period h defined in Settlement Reallocation Agreement a;
8. CCvh is the Capacity Charge for Supplier Unit v in Trading Period h;
9. SSRCAaph is the Settlement Reallocation Capacity Amount for Participant p for its registered Supplier Units for Trading Period h defined in Settlement Reallocation Agreement a;
10. $\sum_{b \text{ in } f}$ is a summation over all Billing Periods b that are invoiced but not paid in Actual Exposure Period f;
11. $\sum_{c \text{ in } f}$ is a summation over all Capacity Periods c that are invoiced but not paid in Actual Exposure Period f;
12. $\sum_{d \text{ in } p}$ is a summation over all Settlement Days d of the un-invoiced Billing Period π ;
13. $\sum_{h \text{ in } d}$ is a summation over Trading Periods h in Settlement Day d;
14. $\sum_{a \text{ in } p}$ is a summation over all Settlement Reallocation Agreements registered to Participant p in respect of its registered Supplier Units;
15. $\sum_{d \text{ in } q}$ is a summation over all Settlement Days d of the un-invoiced Capacity Period q;
16. $\sum_{v \text{ in } p}$ is a summation over Supplier Units registered to Participant p.

Calculations for the Actual Exposure Period in respect of Generator Units

- 6.187 The Market Operator shall calculate the Actual Generator Exposure (AGE_{pf}) for Participant p in respect of its Generator Units in the Actual Exposure Period f as follows:

$$AGE_{pf} = \left(\sum_{b \in f} (IEP_{pb} + BPCCG_{pb}) + \sum_{c \in f} (ICP_{pc} + CAPCCG_{pc}) \right) + \left(\sum_{d \in p} \left(\sum_{u \in p} DAYPU_{ud} - \sum_{a \in p} \sum_{h \in d} SSREA_{aph} \right) \right) + \left(\sum_{d \in q} \left(\sum_{u \in p} \sum_{h \in d} CP_{uh} - \sum_{a \in p} \sum_{h \in d} SSRCA_{aph} \right) \right)$$

Where:

1. IEP_{pb} is the Invoice Energy Payment for Energy to Participant p for its registered Generator Units in Billing Period b applicable if the relevant Billing Period Invoice is issued but not paid;
2. BPCCG_{pb} The Billing Period Currency Charge to Participant p for the relevant Billing Period b;
3. ICP_{pc} is the Invoiced Capacity Payment to Participant p for its registered Generator Units for Capacity Period c applicable if the relevant Capacity Period Invoice is issued but not paid;
4. CAPCCG_{pc} is the Capacity Period Currency Charge to Participant p for the relevant Capacity Period c
5. DAYPU_{ud} is the Total Payments to Generator Unit u for Settlement Day d;
6. SSREA_{aph} is the Settlement Reallocation Energy Amount for Participant p for its registered Generator Units for Trading Period h defined in Settlement Reallocation Agreement a;
7. CP_{uh} is the Capacity Payment for Generator Unit u in Trading Period h;
8. SSRCA_{aph} is the Settlement Reallocation Capacity Amount for Participant p for its registered Supplier Units for Trading Period h defined in Settlement Reallocation Agreement a;
9. $\sum_{b \in f}$ is a summation over all Billing Periods b that are invoiced but not paid in Actual Exposure Period f;
10. $\sum_{c \in f}$ is a summation over all Capacity Periods c that are invoiced but not paid in Actual Exposure Period f;
11. $\sum_{d \in p}$ is a summation over all Settlement Days d of the un-invoiced Billing Period π ;
12. $\sum_{h \in d}$ is a summation over Trading Periods h in Settlement Day d;

13. $\sum_{a \in p}$ is a summation of all Settlement Reallocation Agreements a registered to Participant p in respect of its registered Generator Units;
14. $\sum_{d \in q}$ is a summation over all Settlement Days d of the un-invoiced Capacity Period q;
15. $\sum_{u \in p}$ is a summation over all Generator Units registered to Participant p.

CALCULATIONS OF REQUIRED CREDIT COVER FOR THE UNDEFINED EXPOSURE PERIOD

- 6.188 The Market Operator shall undertake the following calculations leading to the determination of Participants' Undefined Exposure which calculations are dependent on whether a Participant is a New Participant or an Adjusted Participant or a Standard Participant.
- 6.189 The Undefined Exposure for each New Participant or Adjusted Participant shall be based on the product of its Credit Assessment Volume and the Credit Assessment Price.
- 6.190 The Market Operator shall calculate the Credit Assessment Price as set out in the following paragraphs.

Calculation of the Estimated Energy Price

- 6.191 The sum of the System Marginal Prices (USMP_g) for each Trading Period h in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$USMP_g = \sum_{d \in g} \sum_{h \in d} SMP_h$$

Where

1. SMP_h is the System Marginal Price for Trading Period h;
 2. $\sum_{d \in g}$ is a summation over all Settlement Days d in Historical Assessment Period for Billing Periods γ relevant to the Working Day of calculation;
 3. $\sum_{h \in d}$ is a summation over Trading Periods h in Settlement Day d.
- 6.192 The count of all System Marginal Prices (SMPHAP_g) in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$SMPHAP_g = Count \left(SMP_h : \forall_{h \in g} \right)$$

Where

1. SMP_h is the System Marginal Price for Trading Period h;

2. $Count\left(SMP_h: \forall_{h \in g}\right)$ is the count of all System Marginal Prices in the Historical Assessment Period for Billing Periods γ ;

6.193 The mean value of System Marginal Prices (UMSMP_g) in the Historical Assessment Period for Billing Periods to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$UMSMP_g = \frac{USMP_g}{SMPHAP_g}$$

Where

1. USMP_g is the sum of all SMP values in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g ;
2. SMPHAP_g is the count of all System Marginal Prices in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g .

6.194 The standard deviation of the System Marginal Price (SDSMP_g) in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$SDSMP_g = \sqrt{\frac{SMPHAP_g \sum_{m=1}^{m=SMPHAP_g} (SMP_m)^2 - \left(\sum_{m=1}^{m=SMPHAP_g} SMP_m \right)^2}{SMPHAP_g \times (SMPHAP_g - 1)}}$$

Where

1. SMPHAP_g is the count of all System Marginal Prices in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g ;
2. SMP _{μ} is the value of SMP within the Historical Assessment Period n ;
3. $\sum_{m=1}^{m=SMPHAP_g}$ is the sum over all the values of System Marginal Price in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g ;
4. μ is a variable used as a counter over all the Trading Periods h within the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g .

6.195 The Estimated Energy Price (EEP_g) for Undefined Exposure Period g shall be calculated as follows:

$$EEP_g = UMSMP_g + AnPP(SDSMP_g)$$

Where

1. UMSMP_g is the mean value of System Marginal Prices in the Historical Assessment Period for Billing Periods γ applied for the Undefined Exposure Period g ;
2. AnPP is the Analysis Percentile Parameter function in effect to determine the amount that must be added to the mean value in order

that the required percentage of values shall fall below that value. The details of this function are defined in Agreed Procedure 9 “Management of Credit Cover and Credit Default”;

3. SDSMP_g is the standard deviation of the values of System Marginal Prices in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g .

Calculations of the Estimated Capacity Price

- 6.196 The sum of the Capacity Payments Demand Prices (UCPDP_g) in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$UCPDP_g = \sum_{d \text{ in } r} \sum_{h \text{ in } d} CPDP_h$$

Where

1. CPDP_h is the Capacity Payments Demand Price for Trading Period h ;
2. $\sum_{d \text{ in } r}$ is a summation over all Settlement Days d in the Historical Assessment Period for Capacity Periods p ;
3. $\sum_{h \text{ in } d}$ is a summation over Trading Periods h in Settlement Day d .

- 6.197 The count of all Capacity Payments Demand Prices (CPDPHAP_g) in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$CPDPHAP_g = \text{Count} \left(CPDP_h : \forall_{h \text{ in } r} \right)$$

Where

1. CPDP_h is the Capacity Payments Demand Price for Trading Period h ;
2. $\text{Count} \left(CPDP_h : \forall_{h \text{ in } r} \right)$ is the count of all the Capacity Payments Demand Prices in the Historical Assessment Period for Capacity Periods p .

- 6.198 The mean value of the Capacity Payments Demand Prices (UMCPDP_g) in the Historical Assessment Period for Capacity Periods to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$UMCPDP_g = \frac{UCPDP_g}{CPDPHAP_g}$$

Where

1. CPDPHAP_g is the count of all Capacity Payments Demand Prices in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g ;
2. UCPDP_g is the sum of all Capacity Payments Demand Prices in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g .

- 6.199 The standard deviation of the Capacity Payments Demand Prices (SDCPDP_g) in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g shall be calculated as follows:

$$SDCPDP_g = \sqrt{\frac{CPDPHAP_g \sum_{m=1}^{m=CPDPHAP_g} (CPDPM)^2 - \left(\sum_{m=1}^{m=CPDPHAP_g} CPDPM \right)^2}{CPDPHAP_g \times (CPDPHAP_g - 1)}}$$

Where

1. CPDPHAP_g is the count of all Capacity Payments Demand Prices in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g ;
 2. CPDP _{μ} is the value of Capacity Payments Demand Price within the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g ;
 3. $\sum_{m=1}^{m=CPDPHAP_g}$ is the sum over all the values of System Marginal Price in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g ;
 4. μ is a variable used as a counter over all the Trading Periods h within the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g .
- 6.200 The Estimated Capacity Price (ECP_g) for the Undefined Exposure Period g shall be calculated as follows:

$$ECP_g = UMCPDP_g + AnPP(SDCPDP_g)$$

Where

1. UMCPDP_g is the average Capacity Payments Demand Price in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g ;
 2. AnPP is the Analysis Percentile Parameter function in effect to determine the amount that must be added to the mean value in order that the required percentage of values shall fall below that value. The details of this function are defined in Agreed Procedure 9 "Management of Credit Cover and Credit Default";
 3. SDCPDP_g is the standard deviation of the values of Capacity Payments Demand Prices in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g .
- 6.201 The Credit Assessment Price for Billing Periods (CAPB_g) for the Undefined Exposure Period g shall be calculated as follows:

if the Undefined Exposure Period g contains two Years

$$CAPB_g = (EEP_g + \text{Max}\{VMOP(y), VMOP(y-1)\} + \text{Max}\{IMP(y), IMP(y-1)\})$$

else

$$CAPB_g = (EEP_g + VMOP(y) + IMP(y))$$

Where:

1. EEP_g is the Estimated Energy Price for Undefined Exposure Period for Billing Periods *g*;
2. VMOP_y is the Variable Market Operator Price for the Year set by the Regulatory Authorities;
3. IMP_y is the Imperfections Price for the Year *y*.

Calculations for the Undefined Exposure Period for a New or Adjusted Participant in respect of its Supplier Units

- 6.202 The Credit Assessment Volume for a New Participant or Adjusted Participant *p* (CAVS_{ph}) shall be a forecast of Demand in respect of a New or Adjusted Participant's Supplier Units based upon information provided by the Participant in accordance with paragraph 6.183 and used in the calculation of the Participant's Required Credit Cover.
- 6.203 The Undefined Potential Exposure (UPES_{pd}) for each New Participant or Adjusted Participant *p* in respect of its Supplier Units for the Undefined Exposure Period for Billing Periods *g* and the Undefined Exposure Period for Capacity Periods *θ* calculated for the relevant Settlement Day *d* shall be calculated as follows:

$$UPES_{pd} = \left(CAPB_g \times \sum_{h \in g} CAVS_{ph} \right) + \left(ECP_{\theta} \times \sum_{h \in \theta} CAVS_{ph} \right)$$

Where

1. CAPB_g is the Credit Assessment Price for the Undefined Exposure Period *g*;
2. CAVS_{ph} is the Credit Assessment Volume for each New Participant or Adjusted Participant for the Trading Period *h*;
3. ECP_θ is the Estimated Capacity Price for the Undefined Exposure Period for Capacity Periods *θ*;
4. $\sum_{h \in g}$ is a summation over Trading Periods *h* in Undefined Exposure Period for Billing Periods *g*;
5. $\sum_{h \in \theta}$ is a summation over Trading Periods *h* in Undefined Exposure Period for Capacity Periods *θ*.

Calculations for the Undefined Exposure Period for a New or Adjusted Participant in respect of its Generator Units

- 6.204 The Credit Assessment Volume for a New Participant or Adjusted Participant *p* (CAVG_{ph}) shall be a forecast of Output in respect of the Participant's Generator Units based upon information provided by the Participant in accordance with paragraph 6.183 and used in the calculation of the Participant's Required Credit Cover.
- 6.205 The Undefined Exposure (UPEG_{pd}) for each New Participant or Adjusted Participant *p* in respect of its Generator Units for the Undefined Exposure Period for Billing Periods *g* and the Undefined Exposure Period for Capacity Periods *θ* calculated for the relevant Settlement Day *d* shall be calculated as follows:

$$UPEGpd = \left(CAPBg \times \sum_{hin g} CAVGph \right) + \left(ECPq \times \sum_{hin q} CAVGph \right)$$

Where

1. CAPBg is the Credit Assessment Price for the Undefined Exposure Period g;
2. CAVGph is the Credit Assessment Volume for each New Participant or Adjusted Participant for the Trading Period h;
3. ECPθ is the Estimated Capacity Price for the Undefined Exposure Period for Capacity Periods θ;
4. $\sum_{hin g}$ is a summation over Trading Periods h in Undefined Exposure Period for Billing Periods g;
5. $\sum_{hin q}$ is a summation over Trading Periods h in Undefined Exposure Period for Capacity Periods θ.

Calculations for the Undefined Exposure Period for a Standard Participant in respect of its Supplier Units

- 6.206 The Market Operator shall procure that, where the Participant is a Standard Participant, the Participant's Undefined Exposure in respect of its Supplier Units shall be calculated as one calculation for the Billing Period values and one calculation for the Capacity Period values according to the procedures set out in the following paragraphs.

Calculations of the count of Undefined Exposure Periods in the relevant Historical Assessment Periods

- 6.207 The count of Undefined Exposure Periods that is to be used in the summation of the Billing Period payments and charges for the Undefined Exposure Period for Billing Periods g (BPHAPg) in the Historical Assessment Period for Billing Periods γ shall be calculated as follows:

$$BPHAPg = (\gamma - UEPBDg) + 1$$

Where

1. γ is the number of days in the Historical Assessment Period for Billing Periods relevant to the Working Day of this calculation;
 2. UEPBDg is the number of days in the Undefined Exposure Period for Billing Periods g relevant to the Working Day of this calculation.
- 6.208 The count of Undefined Exposure Periods that is to be used in the summation of Capacity Period payment and charges (CPHAPg) in the Undefined Exposure Period for Capacity Periods g in the Historical Assessment Period for Capacity Periods ρ shall be calculated as follows:

$$CPHAPg = (\rho - UEPCDg) + 1$$

Where

1. ρ is the number of days in the Historical Assessment Period for Capacity Periods relevant to the Working Day of this calculation;

2. UEPCD_g is the number of days in the Undefined Exposure Period for Capacity Periods relevant to the Working Day of this calculation.

Calculations in respect of Billing Period Charges

- 6.209 The Market Operator shall calculate the Billing Period Settlement Sum (BSVS_pg_w) for Participant p in respect of its Supplier Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period w in the Historical Assessment Period for Billing Periods as follows:

for each Undefined Exposure Period w in the Historical Assessment Period defined by BPHAP_g

$$BSVS_{pgw} = \sum_{d \in w} \left(\sum_{v \in p} DAYCV_{vd} \right) + \left(VMOP_y \times \sum_{v \in p} \sum_{h \in p} SNDLF_{vh} \right) + BPCCS_{pb}$$

Where

1. DAYCV_{vd} is the Total Charges on Supplier Unit v for Settlement Day d;
 2. VMOP_y is the Variable Market Operator Price for Year y;
 3. SNDLF_{vh} is the Loss Adjusted Settlement Net Demand from Supplier Unit v for Trading Period h;
 4. BPCCS_{pb} is the Billing Period Currency Charge to Participant p in respect of its Supplier Units for the relevant Billing Period b as calculated on day d;
 5. $\sum_{d \in w}$ is a summation over all Settlement Days d in Undefined Exposure Period w;
 6. $\sum_{h \in d}$ is a summation over Trading Periods h in Settlement Day d;
 7. $\sum_{v \in p}$ is a summation over all Supplier Units registered to Participant p.
- 6.210 The mean of the Billing Period Settlement Sum (BXS_VS_pg) for Participant p in respect of its Supplier Units to be applied for the Undefined Exposure Period g for all Undefined Exposure Periods w in the Historical Assessment Period for Billing Periods shall be calculated as follows:

$$BXS_{VSp}g = \frac{\sum_{w=1}^{w=BPHAP_g} BSVS_{pgw}}{BPHAP_g}$$

Where

1. BPHAP_g is the count of Undefined Exposure Periods that will be used in the summation of the Billing Period payments and charges in the Historical Assessment Period for Billing Periods for the relevant Undefined Exposure Period g;
2. BSVS_pg_w is the Billing Period Settlement Sum for Participant p in respect of its Supplier Units for the Undefined Exposure Period g for each Undefined Exposure Period w in the Historical Assessment Period for Billing Periods.

- 6.211 The standard deviation of the Billing Period Settlement Sums (BSDSVSp_g) for Participant p in respect of its Supplier Units to be applied for Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Billing Periods shall be calculated as follows:

$$BSDSVSp_g = \sqrt{\frac{BPHAP_g \sum_{w=1}^{w=BPHAP_g} (BSVSp_g w)^2 - \left(\sum_{w=1}^{w=BPHAP_g} BSVSp_g w \right)^2}{BPHAP_g \times (BPHAP_g - 1)}}$$

Where

1. BPHAP_g is the count of Undefined Exposure Periods that will be used in the summation of the Billing Period payments and charges in the Historical Assessment Period for Billing Periods for the relevant Undefined Exposure Period g;
2. BSVSp_gω is the Billing Period Settlement Sum for Participant p in respect of its Supplier Units for the Undefined Exposure Period g for each Undefined Exposure Period ω in the Historical Assessment Period for Billing Periods;
3. $\sum_{w=1}^{w=BPHAP_g}$ is the sum over all the Billing Period Settlement Sums for the Undefined Exposure Periods ω.

- 6.212 The Billing Period Undefined Potential Exposure (BUPESp_g) to be applied for Participant p in respect of its Supplier Units for the Undefined Exposure Period g shall be calculated as follows:

$$BUPESp_g = (BXSVP_g + AnPP(BSDSVSp_g))$$

Where

1. BXSVP_g is the mean of the Billing Period Settlement Sums for Participant p in respect of its Supplier Units to be applied for the Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Billing Periods;
2. AnPP is the Analysis Percentile Parameter function in effect to determine the amount that must be added to the mean value in order that the required percentage of values shall fall below that value. The details of this function are defined in Agreed Procedure 9 "Management of Credit Cover and Credit Default";
3. BSDSVSp_g is the standard deviation of the Billing Period Settlement Sums for Participant p in respect of its Supplier Units to be applied for Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Billing Periods.

Calculations in respect of Capacity Charges

- 6.213 The Market Operator shall procure that the Capacity Period Settlement Sum (CSVSp_gω) for Participant p in respect of its Supplier Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period ω in the Historical Assessment Period for Capacity Periods p shall be calculated as follows:

for each Undefined Exposure Period w in the Historical Assessment Period defined by $CPHAP_g$

$$CSVSp_g w = \sum_{d \text{ in } w} \left(\sum_{v \text{ in } p} \sum_{h \text{ in } d} CCvh + CAPCCSp_c \right)$$

Where

1. $CCvh$ is the Capacity Charge for Supplier Unit v in Trading Period h ;
2. $CAPCCSp_c$ is the Capacity Period Currency Charge to Participant p in respect of its Supplier Units for the relevant Capacity Period c as calculated on day d ;
3. $\sum_{d \text{ in } w}$ is a summation over all Settlement Days d in Undefined Exposure Period;
4. $\sum_{h \text{ in } d}$ is a summation over Trading Periods h in Settlement Day d ;
5. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units registered to Participant p .

- 6.214 The mean of the Capacity Period Settlement Sum ($CXSVSp_g$) for Participant p in respect of its Supplier Units to be applied for the Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods shall be calculated as follows:

$$CXSVSp_g = \frac{\left(\sum_{w=1}^{w=CPHAP_g} CSVSp_g w \right)}{CPHAP_g}$$

Where

1. $CPHAP_g$ is the count of Undefined Exposure Periods that will be used in the summation of the Capacity Period payment and charges in the Historical Assessment Period for Capacity Periods for the relevant Undefined Exposure Period g ;
2. $CSVSp_g w$ is the Capacity Period Settlement Sum for Participant p in respect of its Supplier Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period w in the Historical Assessment Period for Capacity Periods;
3. $\sum_{w=1}^{w=CPHAP_g}$ is the sum across all the Undefined Exposure Periods.

- 6.215 The Capacity Period standard deviation ($CSDSVSp_g$) for Participant p in respect of its Supplier Units to be applied for Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods shall be calculated as follows:

$$CSDSVSp_g = \sqrt{\frac{CPHAP_g \sum_{w=1}^{w=CPHAP_g} (CSVSp_g w)^2 - \left(\sum_{w=1}^{w=CPHAP_g} CSVSp_g w \right)^2}{CPHAP_g \times (CPHAP_g - 1)}}$$

Where

1. CPHAP_g is the count of Undefined Exposure Periods that will be used in the summation of the Capacity Period payment and charges in the Historical Assessment Period for Capacity Periods for the relevant Undefined Exposure Period *g*;
2. CSVSp_g*w* is the sum of Capacity charges for Participant *p* in respect of its Supplier Units to be applied for the Undefined Exposure Period *g* for each Undefined Exposure Period *w* in the Historical Assessment Period for Capacity Periods;
3. $\sum_{w=1}^{w=CPHAP_g}$ is the sum over all values of the Capacity Period Settlement Sums for the Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods *p*.

- 6.216 The Capacity Period Undefined Potential Exposure (CUPESp_g) in the Historical Assessment Period for Capacity Periods *p* to be applied for Participant *p* in respect of its Supplier Units for the Undefined Exposure Period *g* shall be calculated as follows:

$$CUPESp_g = (CXSVSp_g + AnPP(CSDSVSp_g))$$

Where

1. CXSVSp_g is the mean of the Capacity Period Settlement Sums for Participant *p* in respect of its Supplier Units to be applied for the Undefined Exposure Period *g* for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods;
2. AnPP is the Analysis Percentile Parameter function in effect to determine the amount that must be added to the mean value in order that the required percentage of values shall fall below that value. The details of this function are defined in Agreed Procedure 9 "Management of Credit Cover and Credit Default";
3. CSDSVSp_g is the standard deviation of the Capacity Period Settlement Sums for Participant *p* in respect of its Supplier Units to be applied for Undefined Exposure Period *g* for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods.

- 6.217 Intentionally blank.

Total Undefined Exposure for a Standard Participant in respect of its Supplier Units

- 6.218 The Market Operator shall calculate the Undefined Potential Exposure (UPESp_g) in the Historical Assessment Periods to be applied for Undefined Exposure Period *g* for Participant *p* in respect of its Supplier Units as follows:

$$UPESp_g = BUPESp_g + CUPESp_g$$

Where

1. BUPESpg is the Billing Period Undefined Potential Exposure in the Historical Assessment Period for Billing Periods γ to be applied for Undefined Exposure Period g for Participant p in respect of its Supplier Units;
2. CUPESpg is the Capacity Period Undefined Potential Exposure in the Historical Assessment Period for Capacity Periods p to be applied for Undefined Exposure Period g for Participant p in respect of its Supplier Units.

Calculations for the Undefined Exposure Period for a Standard Participant in respect of its Generator Units

- 6.219 The Market Operator shall procure that, where the Participant is a Standard Participant, the Participant's Undefined Exposure in respect of its Generator Units will be calculated according to the procedures set out in the following paragraphs.

Calculations in respect of Billing Period Payments

- 6.220 The Billing Period Settlement Sum (BSVUp $g\omega$) for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period ω in the Historical Assessment Period for Billing Periods shall be calculated as follows:

for each Undefined Exposure Period ω in the Historical Assessment Period defined by BPSHAP g

$$BSVUpg\omega = \sum_{d \text{ in } \omega} \left(\sum_{u \text{ in } p} DAYPU_{ud} + BPCCG_{pb} \right)$$

Where

1. DAYPU ud is the Total Payments on Generator Unit u for Settlement Day d ;
 2. The Billing Period Currency Charge (BPCCG pb) to Participant p in respect of its Generator Units for the relevant Billing Period b as calculated on day d ;
 3. $\sum_{d \text{ in } \omega}$ is a summation over all Settlement Days d in Undefined Exposure Period ω ;
 4. $\sum_{u \text{ in } p}$ is a summation over all Generator Units registered to Participant p .
- 6.221 The mean of Billing Period Settlement Sum (BXSUP g) for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Billing Periods shall be calculated as follows:

$$BXSUVpg = \frac{\left(\sum_{w=1}^{w=BPHAPg} BSVUpgw \right)}{BPHAPg}$$

Where

1. BPHAPg is the count of Undefined Exposure Periods that will be used in the summation of the Billing Period payment and charges in the Historical Assessment Period for Billing Periods for the relevant Undefined Exposure Period g;
2. BSVUpgw is the Billing Period Settlement Sum for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period ω in the Historical Assessment Period for Billing Periods;
3. $\sum_{w=1}^{w=BPHAPg}$ is the sum across all the Undefined Exposure Periods..

- 6.222 The standard deviation of the Billing Period Settlement Sums (BSDSVUpg) for Participant p in respect of its Generator Units to be applied for Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Billing Periods shall be calculated as follows:

$$BSDSVUpg = \sqrt{\frac{BPHAPg \sum_{w=1}^{w=BPHAPg} (BSVUpgw)^2 - \left(\sum_{w=1}^{w=BPHAPg} BSVUpgw \right)^2}{BPHAPg \times (BPHAPg - 1)}}$$

Where

1. BPHAPg is the count of Undefined Exposure Periods that will be used in the summation of the Billing Period payments and charges in the Historical Assessment Period for Billing Periods for the relevant Undefined Exposure Period g;
2. BSVUpgw is the Billing Period Settlement Sum for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period ω in the Historical Assessment Period for Billing Periods;
3. $\sum_{w=1}^{w=BPHAPg}$ is the sum over all values of the Capacity Period Settlement Sums in for the Undefined Exposure Periods ω.

- 6.223 The Billing Period Undefined Potential Exposure (BUPEGpg) in the Historical Assessment Period for Billing Periods γ to be applied for Undefined Exposure Period g for Participant p in respect of its Generator Units shall be calculated as follows:

$$BUPEGpg = (BXSUVpg + AnPP(BSDSVUpg))$$

Where

1. BXSUVpg is the mean of the Billing Period Settlement Sums for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Billing Periods;

2. AnPP is the Analysis Percentile Parameter function in effect to determine the amount that must be added to the mean value in order that the required percentage of values shall fall below that value. The details of this function are defined in Agreed Procedure 9 "Management of Credit Cover and Credit Default";
3. BSDSVUp_g is the standard deviation of the Billing Period Settlement Sums for Participant p in respect of its Supplier Units to be applied for Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Billing Periods.

Calculations in respect of Capacity Payments

- 6.224 The Capacity Period Settlement Sum (CSVUp_gw) for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period w in the Historical Assessment Period for Capacity Periods p shall be calculated as follows:

for each Undefined Exposure Period w in the Historical Assessment Period defined by CPHAP_g

$$CSVUp_{gw} = \sum_{d \text{ in } w} \left(\sum_{u \text{ in } p} \sum_{h \text{ in } d} CP_{uh} + CAPCCG_{pc} \right)$$

Where

1. CP_{uh} is the Capacity Payment for Generator Unit u in Trading Period h;
 2. CAPCCG_{pc} is the Capacity Period Currency Charge to Participant p in respect of its Generator Units for the relevant Capacity Period c as calculated on day d;
 3. $\sum_{d \text{ in } w}$ is a summation over all Settlement Days d in Undefined Exposure Period w;
 4. $\sum_{h \text{ in } d}$ is a summation over Trading Periods h in Settlement Day d;
 5. $\sum_{u \text{ in } p}$ is a summation over all Generator Units registered to Participant p.
- 6.225 The mean of Capacity Period Settlement Sum (CXSVUp_g) for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods shall be calculated as follows:

$$CXSVUp_g = \frac{\sum_{w=1}^{w=CPHAP_g} CSVUp_{gw}}{CPHAP_g}$$

Where

1. CSVUp_{gw} is the Capacity Period Settlement Sum for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period ω in the Historical Assessment Period for Capacity Periods;
2. CPHAP_g is the count of Undefined Exposure Periods that will be used in the summation of the Capacity Period payment and charges in the Historical Assessment Period for Billing Periods for the relevant Undefined Exposure Period g;
 $w = CPHAP_g$
3. $\sum_{w=1}$ is the sum across all the Undefined Exposure Periods.

6.226 The Capacity Period standard deviation (CSDSVUp_g) for Participant p in respect of its Generator Units to be applied for Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods shall be calculated as follows:

$$CSDSVUp_g = \sqrt{\frac{CPHAP_g \sum_{w=1}^{w=CPHAP_g} (CSVUp_{gw})^2 - \left(\sum_{w=1}^{w=CPHAP_g} CSVUp_{gw} \right)^2}{CPHAP_g \times (CPHAP_g - 1)}}$$

Where

1. CSVUp_{gw} is the sum of Capacity Charges for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for each Undefined Exposure Period ω in the Historical Assessment Period for Capacity Periods;
2. CPHAP_g is the count of Undefined Exposure Periods that will be used in the summation of the Capacity Period payments and charges in the Historical Assessment Period for Capacity Periods for the relevant Undefined Exposure Period g;
3. $\sum_{w=1}^{w=CPHAP_g}$ is the sum over all values of the Capacity Period Settlement Sums for the Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods p.

6.227 The Capacity Period Undefined Potential Exposure (CUPEGp_g) for Participant p in respect of its Generator Units shall be calculated as follows:

$$CUPEGp_g = (CXSVUp_g + AnPP(CSDSVUp_g))$$

Where

1. CXSVUp_g is the mean of the Capacity Period Settlement Sums for Participant p in respect of its Generator Units to be applied for the Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods;
2. AnPP is the Analysis Percentile Parameter function in effect to determine the amount that must be added to the mean value in order that the required percentage of values shall fall below that value. The details of this function are defined in Agreed Procedure 9 "Management of Credit Cover and Credit Default";
3. CSDSVUp_g is the Capacity standard deviation of the Capacity Period Settlement Sums for Participant p in respect of its Generator Units to

be applied for Undefined Exposure Period g for all Undefined Exposure Periods in the Historical Assessment Period for Capacity Periods.

Total Undefined Exposure for a Standard Participant in respect of its Generator Units

- 6.228 The Undefined Potential Exposure ($UPEGpg$) in the Historical Assessment Periods to be applied for the Undefined Exposure Period g for Participant p in respect of its Generator Units shall be calculated as follows:

$$UPEGpg = BUPEGpg + CUPEGpg$$

Where

1. $BUPEGpg$ is the Billing Period Undefined Potential Exposure in the Historical Assessment Period for Billing Periods γ to be applied for the Undefined Exposure Period g for Participant p in the Billing Period in respect of its Generator Units;
2. $CUPEGpg$ is the Capacity Period Undefined Potential Exposure in the Historical Assessment Period for Capacity Periods p to be applied for the Undefined Exposure Period g for Participant p in respect of its Generator Units.

CALCULATIONS OF REQUIRED CREDIT COVER FOR PARTICIPANTS

- 6.229 The Market Operator shall procure that the Required Credit Cover ($RCCSpr$) for each Participant p in respect of its Supplier Units in respect of the Settlement Risk Period r shall be calculated as follows:

$$RCCSpr = ASEpf + UPESpg - \sum_{a \text{ in } p} \sum_{h \text{ in } g} (SSREAaph + SSRCAaph) + VATpr$$

Where:

1. $ASEpf$ is the Actual Supplier Exposure for Participant p in respect of its Supplier Units for the Actual Exposure Period f ;
2. $UPESpg$ is the Undefined Potential Exposure in the Historical Assessment Periods to be applied for the Undefined Exposure Period g for Participant p in respect of its Supplier Units;
3. $SSREAaph$ is the Settlement Reallocation Energy Amount for Participant p for its registered Supplier Units for Trading Period h defined in Settlement Reallocation Agreement a ;
4. $SSRCAaph$ is the Settlement Reallocation Capacity Amount for Participant p for its registered Supplier Units for Trading Period h defined in Settlement Reallocation Agreement a ;
5. $VATpr$ is the applicable VAT charge for the Participant p in respect of its Supplier Units in Settlement Risk Period r ;
6. $\sum_{a \text{ in } p}$ is a summation of all Settlement Reallocation Agreements a registered to Participant p in respect of its registered Units;

7. $\sum_{h \text{ in } g}$ is a summation over all Trading Periods h in Undefined Exposure Period g comprising the Undefined Exposure Periods for both Billing Periods and Capacity Periods.

6.230 The Market Operator shall procure that the Required Credit Cover (RCCGpr) for each Participant p in respect of its Generator Units in respect of the Settlement Risk Period r shall be calculated as follows:

$$RCCGpr = \left(\left(AGE_{pf} + UPEG_{pg} - \sum_{a \text{ in } p} \sum_{h \text{ in } g} (SSREA_{aph} + SSRCA_{aph}) \right) \times (-1) \right) + VAT_{pr}$$

Where:

1. AGE_{pf} is the Actual Generator Exposure for Participant p in respect of its Generator Units for the Actual Exposure Period f;
2. UPEG_{pg} is the Undefined Potential Exposure in the Historical Assessment Periods to be applied for the Undefined Exposure Period g for Participant p in respect of its Generator Units;
3. SSREA_{aph} is the Settlement Reallocation Energy Amount for Participant p for its registered Generator Units for Trading Period h defined in Settlement Reallocation Agreement a;
4. SSRCA_{aph} is the Settlement Reallocation Capacity Amount for Participant p for its registered Generator Units for Trading Period h defined in Settlement Reallocation Agreement a;
5. VAT_{pr} is the applicable VAT charge for the Participant p in respect of its Generator Units in Settlement Risk Period r;
6. $\sum_{a \text{ in } p}$ is a summation of all Settlement Reallocation Agreements a registered to Participant p in respect of its registered Units;
7. $\sum_{h \text{ in } g}$ is a summation over all Trading Periods h in Undefined Exposure Period g comprising the Undefined Exposure Periods for both Billing Periods and Capacity Periods.

6.231 A Participant shall always post at a minimum the Fixed Credit Requirement as Required Credit Cover in respect of its Generator Units.

6.232 The Market Operator shall calculate the Required Credit Cover (RCCpr) for each Participant p in respect of its Units in respect of the Settlement Risk Period r as follows:

$$RCCpr = \max \{ 0, RCCS_{pr} + RCCG_{pr} \} + \sum_{v \text{ in } p} FCRS_y + \sum_{u \text{ in } p} FCRG_y$$

Where

1. RCCS_{pr} is the Required Credit Cover for each Participant p in respect of its Supplier Units in respect of the Settlement Risk Period r;
2. RCCG_{pr} is the Required Credit Cover for each Participant p in respect of its Generator Units in respect of the Settlement Risk Period r;

3. FCRSy is the Fixed Credit Requirement for Year y for a Participant in respect of each of its Supplier Units;
4. FCRGy is the Fixed Credit Requirement for Year y for a Participant in respect of each of its Generator Units;
5. $\sum_{v \text{ in } p}$ is a summation over all Supplier Units registered to Participant p;
6. $\sum_{u \text{ in } p}$ is a summation over all Generator Units registered to Participant p.

CALLING IN CREDIT COVER

- 6.233 Where the Market Operator exercises its right to make a Credit Call on a Participant's Posted Credit Cover in accordance with the Code, the Market Operator:
1. shall be entitled to draw down on the Letter of Credit or the SEM Collateral Reserve Account (where applicable) in whatever order, proportion or combination it decides, subject to the De Minimus Level for Letter of Credit Draw Down provisions in Paragraph 3.3 of Agreed Procedure 15:
 2. shall, as soon as reasonably practicable and notwithstanding any other provisions of the Code relating to Notices, notify the Participant in writing, using a rapid means of communication such as email or fax, that it has made the Credit Call on the Participant's Credit Cover Provider or Credit Cover Providers as applicable; and
 3. shall as soon as reasonably practicable after making such a Credit Call and issuing the notice under paragraph 6.233.2, notify the Participant of the amount of Shortfall, the sums called from the Participant's SEM Collateral Reserve Account (if any) and Letters of Credit (if any) and the Settlement Period(s) concerned.
- 6.234 Where the Market Operator draws down any amounts from the Participant's Posted Credit Cover, the Participant shall, within 2 Working Days, fully re-establish at minimum the Required Credit Cover as calculated and notified to it in accordance with paragraph 6.177 and comply with paragraph 6.179 and 6.180.

SETTLEMENT REALLOCATION

- 6.235 A Settlement Reallocation Agreement is an agreement between two Participants (which, for the avoidance of doubt, may be the same Participant) and the Market Operator, under which the Market Operator shall credit to the relevant Participant ("the Credited Participant") with positive amounts in respect of one or more Trading Periods within the relevant Settlement Period, in consideration of matching negative amounts which shall be debited against the other relevant Participant ("the Debited Participant") in respect of the same Trading Period(s). Agreed Procedure 10 "Settlement Reallocation" sets out the processes for the requesting of, recording and termination of Settlement Reallocations.
- 6.236 A Settlement Reallocation Agreement only becomes valid where the intended Debited Participant lodges a Settlement Reallocation Request with the Market Operator.

- 6.237 A Debited Participant may lodge a Settlement Reallocation Request in respect of a Credited Participant in a different Currency Zone, but any such request shall specify the amount of the Settlement Reallocation Agreement in the Currency of the Debited Participant's Currency Zone.
- 6.238 A Settlement Reallocation Agreement may be lodged during the period commencing 29 days prior to the relevant Trading Day and ending at 12:00 one Working Day prior to the issue of the invoice on which the Settlement Reallocation is to appear.
- 6.239 Settlement Reallocation Data Transactions shall not be included on the Settlement Statements. The Debited Participant and the Credited Participant will be able to review the relevant Settlement Reallocation Agreements that have been lodged with the Market Operator.
- 6.240 A Participant may lodge a Settlement Reallocation Request in relation to Trading or Capacity Payments.
- 6.241 The amount included in a Settlement Reallocation Agreement for a Trading Payment is:
1. SSREA_ph which is the Settlement Reallocation Energy Amount for Participant p for its registered Units for Trading Period h defined in Settlement Reallocation Agreement a.
- 6.242 The amount included in a Settlement Reallocation Agreement for a Capacity Payment is:
1. SSRCA_ph which is the Settlement Reallocation Capacity Amount for Participant p for its registered Generator Units for Trading Period h defined in Settlement Reallocation Agreement a.
- 6.243 Where the two Participants that are parties to a Settlement Reallocation Agreement have different Currency Zones, and the Market Operator is therefore required pursuant to paragraph 6.6 to convert into another currency any amount that is the subject of such agreement, such conversion will be done using the Trading Day Exchange Rate applicable to the Trading Period to which that amount applies pursuant to paragraph 6.235.
- 6.244 A Participant may not request or enter into a Settlement Reallocation Agreement as a Debited Participant in respect of its registered Generator Units that covers more than the payment, including any appropriate VAT, that it expects to receive under the Code in respect of the relevant Generator Units over the relevant Billing or Capacity Period as set out in Agreed Procedure 10 "Settlement Reallocation".
- 6.245 A Participant may not request or enter into a Settlement Reallocation Agreement as a Debited Participant in respect of its Supplier Units.
- 6.245A The Market Operator shall, as a part of the determination of Settlement for each Billing Period and Capacity Period, determine whether any Participant has, in respect of its Generator Units, entered into Settlement Reallocation Agreements that, in total exceed the Trading Payments or Capacity Payments due to that Participant in respect of those Generator Units for that Billing Period or Capacity Period as applicable. For any such Participant, the Market Operator shall cancel a sufficient quantity of Settlement Reallocation Agreements such that the remaining Settlement Reallocation Agreements do not in total exceed the Trading Payments or Capacity Payments due to that Participant in respect of that Participant's Generator Units for that Billing Period or Capacity Period as applicable. In cancelling any such Settlement

Reallocation Agreements, the Market Operator shall consider the Settlement Reallocation Agreements in the order in which the relevant Settlement Reallocation Requests were lodged with the Market Operator. The Market Operator then shall cancel such Settlement Reallocation Agreements in turn until those remaining in total no longer exceed the calculated Trading Payments or Capacity Payments due to that Participant in respect of its Generator Units for that Billing Period or Capacity Period as applicable.

- 6.246 The Market Operator shall cancel a Settlement Reallocation Agreement if a cancellation request is lodged with the Market Operator on behalf of both Participants (or the same Participant if it is the one Participant only subject to the Settlement Reallocation Agreement) prior to 17:00 on the second Working Day after the end of the first Billing Period or Capacity Period to which the Settlement Reallocation Agreement relates. No cancellation request shall be effective if:
1. the Credited Participant is, at the time of the proposed cancellation, in default of any payment due under the Code; or
 2. its cancellation would cause the Required Credit Cover of the Credited Participant to exceed its Posted Credit Cover.

IMPLEMENTATION OF ADMINISTERED SETTLEMENT

General Principles in the Event of Administered Settlement

- 6.247 In implementing Administered Settlement, the Market Operator shall, insofar as reasonably practicable, adopt a balance between the following principles:
1. make use of all available data, and limit to the maximum extent practicable the use of estimated values;
 2. operate within the Settlement timescales, and be subject to the Settlement Query and Settlement Dispute provisions as set out in Section 6;
 3. seek results which are as close as possible to those which would have been calculated under the normal Settlement processes;
 4. obtain the prior written approval of the Regulatory Authorities for the detailed calculations and methodology used; and
 5. publish details of the calculations and methodology used as soon as practicable thereafter.

Estimation of Data in the Event of Administered Settlement

- 6.248 To the extent necessary, the Market Operator may estimate any Settlement data in the event of Administered Settlement.

Administered Settlement in the Event of MSP Failure

- 6.249 In the event of MSP Failure for a Trading Day, the Market Operator will calculate an Administered Schedule for all Trading Periods for the Trading Day.
- 6.250 An Administered Schedule comprises Administered Prices for each Trading Period and Administered Quantities for each Generator Unit for each Trading Period.

- 6.251 In creating an Administered Schedule, the objective of the Market Operator shall be to reproduce, to the greatest degree practicable, the results that would have been determined by the MSP Software.
- 6.252 The SMP value for each Trading Period in the Trading Day (SMP_h) will be set to equal the relevant Administered Price.
- 6.253 The Market Schedule Quantity value for each Generator Unit for each Trading Period for the Trading Day (MSQ_{uh}) will be set to equal the relevant Administered Quantity value.
- 6.254 All Settlement calculations will be made using these values for SMP and Administered Quantities.
- 6.255 In the event of Administered Settlement resulting from MSP Failure, then once the MSP Failure is corrected, the Market Operator shall procure that Settlement Reruns shall be undertaken as soon as reasonably possible in respect of the relevant Trading Periods and that revised Settlement Statements, Invoices and Self Billing Invoices in respect of the relevant Billing Period or Periods shall be issued to Participants.

Administered Settlement in the event of Electrical System Collapse

- 6.256 In the event of Electrical System Collapse, Administered Settlement will be implemented using values calculated as follows:

$$MSQ_{uh} = \frac{MG_{uh}}{TPD} \quad \text{for all Generator Units } u$$

$$DQ_{uh} = MSQ_{uh} \quad \text{for all Generator Units } u$$

$$EA_{uh} = MSQ_{uh} \quad \text{for all Generator Units } u$$

$$ND_{vh} = MD_{vh} \quad \text{for all Supplier Units } v$$

$$f_h = 0$$

Where

1. MSQ_{uh} is the Market Schedule Quantity for Generator Unit *u* for Trading Period *h*;
 2. MG_{uh} is the Metered Generation for Generator Unit *u* for Trading Period *h* (MWh);
 3. EA_{uh} is the Eligible Availability for Generator Unit *u* for Trading Period *h* (MW of average power);
 4. DQ_{uh} is the Dispatch Quantity for Generator Unit *u* for Trading Period *h* (average MW);
 5. MD_{vh} is the Metered Demand for Supplier Unit *v* for Trading Period *h*;
 6. ND_{vh} is the Net Demand for Supplier Unit *v* for Trading Period *h*;
 7. Φ_h is the Ex-Post Loss of Load Probability;
 8. TPD is the Trading Period Duration (in hours).
- 6.257 In the event of Electrical System Collapse, prior to completing the calculations set out in paragraph 6.256, relevant values of Metered Generation (MG_{uh}) for Interconnector Units, Interconnector Residual

Capacity Units and Interconnector Error Units must first be calculated as specified in paragraphs 5.85 to 5.86.

- 6.258 In the event of Electrical System Collapse, prior to completing the calculations set out in paragraph 6.256, relevant values of Metered Generation (MGuh) for Netting Generator Units and Demand Side Units shall first be set to equal zero.
- 6.259 The Market Operator shall set the System Marginal Price (SMP_h) to equal the highest Market Offer Price (MOP_{uh}) for any Generator Unit for which the Market Schedule Quantity is greater than zero, and shall calculate the Market Offer Price from Commercial Offer Data submitted prior to Electrical System Collapse.

MANAGEMENT OF TAXES AND VAT

- 6.260 The following paragraphs deal with the treatment of VAT for the purposes of the Code and are prepared subject to and in accordance with the terms of the joint letter from Her Majesty's Revenue and Customs and the Revenue Commissioners (together referred to as the "Revenue Authorities") entitled "Agreement with regard to VAT and the operation of the All-Island Electricity Market" (the "VAT Agreement").
- 6.261 Notwithstanding the terms of the VAT Agreement all Participants shall indemnify and keep indemnified the Market Operator, its officers, employees and agents against any liability which the Market Operator may incur as a result of the failure of any Participant to pay or account for any VAT due on any Invoice or Self Billing Invoice (or Debit Note where applicable).
- 6.262 If any Participant shall fail properly to pay or account for any amount of VAT payable or receivable by it, that Participant shall indemnify and keep indemnified each non-defaulting Participant (on an after tax basis, but taking account of any tax relief available to the relevant Participant, as the case may be) against any liability which such non-defaulting Participant or Participants shall incur consequently.
- 6.263 All Invoices and Self Billing Invoices (and Debit Notes where applicable) shall include VAT at the appropriate rate for the Participant concerned as more particularly set out below. Pursuant to the VAT Agreement, Participants shall be entitled to make their VAT returns based on the Invoices and Self Billing Invoices (and Debit Notes) and the Market Operator shall issue a summary document (bi-monthly to Participants in Ireland, and monthly to Participants in Northern Ireland) identifying with respect to that Participant the total value cross-border supplies during the relevant period of two months or one month.
- 6.264 Pursuant to the VAT Agreement, the Market Operator shall prepare Invoices, Self Billing Invoices and, when appropriate Debit Notes including VAT applied at a rate determined in accordance with Agreed Procedure 15 "Invoicing", based upon the Currency Zone of the Generator Units or Supplier Units of the Participant concerned (excluding those invoices which relate only to Fixed Market Operator Charges or Variable Market Operator Charges which shall bear VAT at the applicable rate for the Jurisdiction) Such VAT rates shall be as below.

1. For Supplier Units in the Northern Ireland Currency Zone – the relevant Northern Ireland VAT rate;
2. For Generator Units in the Ireland Currency Zone – the relevant Ireland VAT rate;
3. For Generator Units in the Northern Ireland Currency Zone – an appropriate blended VAT rate calculated as set out in Agreed Procedure 15 “Invoicing”; and
4. For Supplier Units in the Ireland Currency Zone – a second blended VAT rate calculated as set out in Agreed Procedure 15 “Invoicing”.

At the end of each year, the Market Operator ~~may~~ shall compare the estimated transactions and energy flows used to determine the blended VAT rate pursuant to Agreed Procedure 15 “Invoicing” with the actual transactions and energy flows during such year for the purpose of adjusting the rate of VAT applied to reflect such actual transactions and energy flows. The Market Operator ~~may~~ shall then issue debit notes or credit notes, as the case may be, to relevant Participants applying such adjusted rate of VAT to the Invoices and Self Billing Invoices to which the adjustment applies, together with Interest on the difference between the original sum and the sum adjusted by this paragraph, in each case from the due date of payment of the relevant Invoices or Self Billing Invoices until the date when such debit note or credit note is issued. Payment shall be made in respect of such debit notes or credit notes as if they had been Invoices or Self Billing Invoices.

- 6.265 The Market Operator shall retain records of all amounts of VAT included in all Self Billing Invoices, Invoices and Debit Notes together with records of all amounts of electricity transferred between Northern Ireland and Ireland which shall be made available to the Revenue Authorities for the purpose of setting the Blended Rate for subsequent years following the initial period provided for in the VAT Agreement. Such information shall also be provided to the Regulatory Authorities and to Parties.
- 6.266 For the avoidance of doubt, Participants receiving Invoices shall pay the invoiced sum, including VAT to the Market Operator by the Invoice Due Date and the Market Operator shall pay to Participants in receipt of Self Billing Invoices, the sum concerned including VAT by the Self Billing Invoice Due Date, subject only to any deduction or off-set as provided for in the Code.
- 6.267 Any difference between the VAT paid by the Market Operator and the VAT received by the Market Operator in any Settlement Period shall be treated as a component of the Balancing Cost.
- 6.268 The Market Operator shall retain records of all amounts of VAT included in all Self Billing Invoices and all Invoices together with records of all amounts of electricity deemed to be subject to a Cross Border Supply and actually subject to a Cross Border Supply and shall, upon request, make such information available to the Revenue Authorities and shall cooperate in any investigation by the either Revenue Authority relating to the settlement of the Pool or any aspect of it.

7. INTERIM ARRANGEMENTS

GENERAL

Purpose

- 7.1 This Section 7 sets out Interim Provisions, each of which suspends, amends or replaces specified paragraphs or parts of paragraphs, subparagraphs or provisions of other Sections of the Code, or which applies in addition to such paragraphs, subparagraphs or provisions of the Code, for a specified Applicable Interim Period.
- 7.2 Each Party shall comply with each Interim Provision for the relevant Applicable Interim Period, and in relation to any Interim Provision which replaces an Original Provision, shall comply with each such Interim Provision instead of the relevant Original Provision and shall have no liability under the Original Provision for the duration of the Applicable Interim Period.
- 7.3 For each Original Provision and for the duration of the Applicable Interim Period, each reference in the Code to the Original Provision (with the exception of the references to the Original Provision in Section 7 and the Glossary) shall be deemed to be a reference to the relevant Interim Provision.

Interim Provisions

- 7.4 Each of the Interim Provisions set out in the following paragraphs shall have effect for the duration of the relevant Applicable Interim Period, and each Interim Provision which replaces an Original Provision shall have effect in place of that Original Provision until the end of the Applicable Interim Period, from which time that Original Provision shall commence and apply:
- 7.5 Intentionally Blank
- 7.6 Intentionally Blank
- 7.7 Intentionally Blank
- 7.8 Until the date that is the Day1+ Deployment Date, paragraph 3.26 shall be replaced with:
“3.26 Intentionally blank.”
- 7.9 Until the date that is the Day1+ Deployment Date, paragraph 3.35 shall be replaced with:
“3.35 The Market Operator shall in respect of each CMS Data Transaction received by it from Participants prior to the deadlines set out in Appendix I “Offer Data” process the CMS Data Transaction to determine whether it is valid in accordance with Agreed Procedure 4 “Transaction Submission and Validation”. The Market Operator shall validate a Data Transaction if the conditions set out in Agreed Procedure 4 “Transaction Submission and Validation” are satisfied in respect of that Data Transaction and shall reject the Data Transaction if such conditions are not so satisfied.”
- 7.9A Until the date that is 14 months after the Market Start Date, paragraph 4.27 shall be replaced with:

- “4.27 Each Participant shall use reasonable endeavours to ensure that Technical Offer Data (including Default Data) submitted in respect of each of its Generator Units shall be consistent with data which is submitted under the applicable Grid Code in respect of the relevant Unit, provided that Technical Offer Data submitted under this Code must be net of Unit Load and shall not be scaled any Distribution Loss Adjustment Factor.”
- 7.10 Until the date that is 14 months after the Market Start Date, paragraph 4.40 shall be replaced with:
- “4.40 In submitting data relating to any Generator or Supplier Unit that is Distribution Connected, the Distribution System Operator in its role as a Meter Data Provider and all Participants shall provide that all values expressed in MW, MW/min or MWh and that are used in the MSP Software or in Settlement or referred to in Sections 4, 5 or 6 of the Code shall first have been scaled by the appropriate Distribution Loss Adjustment Factor. A System Operator shall not, when submitting any such value that is expressed in this Code to be for submission by a System Operator or Meter Data Provider, scale such value by any Distribution Loss Adjustment Factor.”
- 7.11 Until the date that is 14 months after the Market Start Date, paragraph 4.55 shall be replaced with:
- “4.55 Each System Operator shall submit to the Market Operator, the Dispatch Instructions in respect of each Generator Unit which is Dispatchable, registered within its Currency Zone and may submit an associated Ramp Rate for each Dispatch Instruction. Each System Operator shall submit this information to the Market Operator in accordance with Appendix K “Market Data Transactions”, based on Outturn Data, and the values submitted shall be net of Unit Load.”
- 7.12 Until the date that is the 11th Scheduled Release Deployment Date, paragraph 4.91 shall be replaced with:
- “4.91 For each Jurisdiction e, the Loss-Adjusted Net Demand (NDLFe'h) shall be calculated as follows:

$$NDLFe'h = \sum_{u \in e} MGLFuh - \sum_{v \in e} MDLFvh + NIJleh$$

Where

1. $\sum_{u \in e} MGLFuh$ is the total Metered Generation, Loss-Adjusted, of all Generator Units u within Jurisdiction e excluding Netting Generator Units and Demand Side Units;
2. $\sum_{v \in e} MDLFvh$ is the total Metered Demand, Loss-Adjusted, of all Supplier Units v within Jurisdiction e excluding the Error Supplier Unit;
3. $NIJleh$ is the Net Inter-Jurisdictional Import to Jurisdiction e in Trading Period h,

expressed in MWh, without adjustment for Transmission Losses and Distribution Losses.”

- 7.12A Until the date that is 48 months after the Market Start Date, paragraph 5.36A shall be inserted after paragraph 5.36:

“5.36A All values that are expressed in MW, MW/min or MWh and which are not Loss-Adjusted in relation to an Interconnector, Interconnector Units, Interconnector Residual Capacity Units or Interconnector Error Units shall be applicable at the point of Connection.”

- 7.13 Until the date that is the Day1+ Deployment Date, paragraph 5.39 shall be replaced with:

“5.39 For each Trading Day for each Interconnector, the relevant System Operator shall for that Trading Day calculate the Available Transfer Capacity (consisting of the Maximum Import Available Transfer Capacity and the Maximum Export Available Transfer Capacity) for each Trading Period in the Optimisation Time Horizon and shall submit the resulting values to the Market Operator via the Interconnector Available Transfer Capacity Data Transaction in accordance with Appendix K “Market Data Transactions.”

- 7.13A Until the date that is 48 months after the Market Start Date, paragraph 5.41 shall be replaced with:

“5.41 Maximum Import Available Transfer Capacity shall relate to the physical capability of the Interconnector to deliver energy to the point of Connection, and shall take account of any further restrictions placed by any relevant agreement or the provisions of any Licence in respect of the Interconnector, but shall not otherwise take account of any expected transmission constraints or other aspects of the operation of the Transmission System.”

- 7.13B Until the date that is 48 months after the Market Start Date, paragraph 5.42 shall be replaced with:

“5.42 Maximum Export Available Transfer Capacity shall relate to the physical capability of the Interconnector to off-take energy from the point of Connection, and shall take account of any further restrictions placed by any relevant agreement or the provisions of any Licence in respect of the Interconnector, but shall not otherwise take account of any expected transmission constraints or other aspects of the operation of the Transmission System.”

- 7.14 Until the date that is the Day1+ Deployment Date, paragraph 5.43 shall be replaced with:

“5.43 If, after the submission of Available Transfer Capacity for an Interconnector in accordance with paragraph 5.39, the Available Transfer Capacity for that Interconnector in either direction is changed in any Trading Period within the relevant Optimisation Time Horizon before Gate Closure for the relevant Trading Day, then the Interconnector Administrator shall inform the relevant System Operator of the revised Available Transfer Capacity as soon as practically possible, and the System Operator shall submit revised values of Available Transfer Capacity to the Market Operator by Gate Closure if practically possible.”

- 7.14A Until the date that is 48 months after the Market Start Date, paragraph 5.51 shall be replaced with:
- “5.51 Before Gate Closure for each Trading Day, Interconnector Users shall submit Commercial Offer Data, applicable at the point of Connection, to the Market Operator for that Trading Day in respect of each of their Interconnector Units.”
- 7.15 Until the date that is 12 months after the Market Start Date, paragraph 5.58 shall be replaced with:
- “5.58 For each Trading Day, the Market Operator shall by 11:00 on the day prior to the start of the Trading Day determine Interconnector Unit Nominations for each Interconnector Unit from the Ex-Ante Indicative MSP Software Run based on the Active Interconnector Unit Capacity Holding and Commercial Offer Data such that the following conditions are satisfied:
1. the Ramp Rate for each Interconnector Unit that is implied by the Interconnector Unit Nominations shall not exceed a value of 99999.9 MW/min; and
 2. the implied Ramp Rate for the sum of all Interconnector Units on any Interconnector that is implied by their Interconnector Unit Nominations shall not exceed the Aggregate Interconnector Ramp Rate for that Interconnector at any time,
- and the Market Operator shall by 11:00 on the day prior to the start of the Trading Day submit the Interconnector Unit Nominations to the Interconnector Administrator.”
- 7.16 Until the date that is 12 months after the Market Start Date, paragraph 5.59 shall be replaced with:
- “5.59 Based on the Interconnector Unit Nominations, the Interconnector Administrator shall calculate Modified Interconnector Unit Nominations in accordance with Agreed Procedure 2 “Interconnector Unit Capacity Right Calculation and Dispatch Notifications”. These shall be calculated by the Interconnector Administrator such that the Modified Interconnector Unit Nominations, when considered in aggregate across the relevant Interconnector, are consistent with the Interconnector Technical Data for that Interconnector at all times. The Interconnector Administrator shall by 11:45 on the day prior to the start of the Trading Day submit the Modified Interconnector Unit Nominations to the Market Operator.”
- 7.17 Until the date that is 12 months after the Market Start Date, paragraph 5.63 shall be replaced with:
- “5.63 In the case of the events described in paragraphs 5.61 or 5.62, then the Interconnector Administrator shall recalculate the Modified Interconnector Unit Nominations for each Trading Period in the relevant Optimisation Time Horizon and issue the revised values to each Interconnector User for each of their Interconnector Units as soon as possible, such that the sum of Modified Interconnector Unit Nominations across all relevant Interconnector Units does not exceed in magnitude the revised Available Transfer Capacity in either direction in any Trading Period and such that the value of each Modified Interconnector Unit Nomination must be in the same

direction and must not exceed in absolute magnitude the relevant Interconnector Unit Nomination calculated in accordance with paragraph 5.58, for any Interconnector Unit in any Trading Period. The Interconnector Administrator shall inform the relevant System Operator of the revised Available Transfer Capacity as soon as practically possible, and the System Operator shall submit the revised Available Transfer Capacity values to the Market Operator and the Interconnector Administrator shall submit revised Modified Interconnector Unit Nominations to the Market Operator by 12:00 on the day following the Trading Day.”

- 7.18 Until the date that is 12 months after the Market Start Date, paragraph 5.67 shall be replaced with:

“5.67 Intentionally blank.”

- 7.19 Until the date that is 12 months after the Market Start Date, paragraph 6.73 shall be replaced with:

“6.73 Each Settlement Rerun Statement will be in the same format as the Initial Settlement Statement. The Settlement Rerun Statement must show the data from the previous Settlement Statement where unchanged and the appropriate updated data otherwise.”

- 7.20 Intentionally Blank.

- 7.21 Until the date that is the Day1+ Deployment Date, paragraph 6.177 shall be replaced with:

“6.177 The Market Operator shall recalculate the Required Credit Cover, as provided for in paragraphs 6.186 – 6.229 and Agreed Procedure 9 “Management of Credit Cover and Credit Default”, for each Participant every Working Day and shall send to any Participant which reaches its Warning Limit or which is required to provide additional Credit Cover the results of its recalculation of that Participant’s Required Credit Cover by 17:00 on that Working Day. Without prejudice to the foregoing, the Market Operator shall send to each Participant the results of its recalculation of that Participant’s Required Credit Cover by 17:00 on the day of the preparation of the Invoices for each Billing Period.”

- 7.22 Until the date that is the Day1+ Deployment Date, the following shall be inserted after paragraph 6.201:

“6.201A A Capacity Adjustment Factor (CAF_g) is applied to the Credit Assessment Price for Billing Periods (CAPB_g) to take account of the Undefined Exposure in relation to Capacity Period θ . The Capacity Adjustment Factor for Undefined Exposure Period for Billing Periods g is calculated as follows:

$$CAF_g = \left(\frac{(CAPB_g \times \text{Count}(\text{Days in } g)) + (ECP_\theta \times \text{Count}(\text{Days in } q))}{(CAPB_g \times \text{Count}(\text{Days in } g))} \right)$$

Where

1. CAPB_g is the Credit Assessment Price for the Undefined Exposure Period for Billing Periods g ;
2. ECP _{θ} is the Estimated Capacity Price for the Undefined Exposure Period for Capacity Periods θ ;

3. Count (Days in g) is a count of all the Settlement Days in Undefined Exposure Period for Billing Periods g;
4. Count (Days in θ) is a count of all the Settlement Days in Undefined Exposure Period for Capacity Periods θ."

7.23 Until the date that is the Day1+ Deployment Date, paragraph 6.203 shall be replaced with

"6.203 The Undefined Potential Exposure (UPESpd) for each New or Adjusted Participant p in respect of its Supplier Units for the Undefined Exposure Period for Billing Periods g and the Undefined Exposure Period for Capacity Periods θ calculated for the relevant Settlement Day d is calculated as follows:

$$UPESpd = (CAPBg \times CAFg) \times \sum_{h \text{ in } g} CAVSph$$

Where

1. CAPBg is the Credit Assessment Price for the Undefined Exposure Period for Billing Periods g;
2. CAVSph is the Credit Assessment Volume for the Trading Period h;
3. CAFg is the Capacity Adjustment Factor applicable for Undefined Exposure Period for Billing Periods g;
4. $\sum_{h \text{ in } g}$ is a summation over Trading Periods h in Undefined Exposure Period for Billing Periods g."

7.24 Until the date that is the Day1+ Deployment Date, paragraph 6.205 shall be replaced with:

"6.205 The Undefined Exposure (UPEGpd) for each New or Adjusted Participant in respect of its Generator Units for the Undefined Exposure Period for Billing Periods g and the Undefined Exposure Period for Capacity Periods θ calculated for the relevant Settlement Day d shall be calculated as follows:

$$UPEGpd = (CAPBg \times CAFg) \times \sum_{h \text{ in } g} CAVGph$$

Where

1. CAPBg is the Credit Assessment Price for the Undefined Exposure Period g;
2. CAVGph is the Credit Assessment Volume for the Trading Period h;
3. CAFg is the Capacity Adjustment Factor applicable for Undefined Exposure Period for Billing Periods g;
4. $\sum_{h \text{ in } g}$ is a summation over Trading Periods h in Undefined Exposure Period for Billing Periods g"

7.25 Intentionally Blank

7.26 Intentionally Blank

- 7.26A Until the date that is 42 months after the Market Start Date, Glossary definitions for Connected, Currency Zone, Transmission Connected and Transmission Losses, shall be replaced with:

“Connected means where a Generator Unit or a constituent of a Supplier Unit as applicable is connected to a Transmission System or Distribution System respectively and “Connection” shall be construed accordingly. Interconnector Units, Interconnector Residual Capacity Units and Interconnector Error Units are deemed to be Connected at the opposite end of the relevant Interconnector to the SEM, except where otherwise specified.”;

“Currency Zone means the Jurisdiction in which a Unit is Connected. For the purpose of Interconnector Units, Interconnector Residual Capacity Units and Interconnector Error Units only, the Jurisdiction is the SEM Jurisdiction to which the relevant Interconnector is linked.”;

“Transmission Connected means directly connected electrically to the Transmission System. Interconnector Units, Interconnector Residual Capacity Units and Interconnector Error Units are deemed to be Transmission Connected where the relevant Interconnector is connected to a Transmission System.”;

And

“Transmission Losses means losses that are incurred (or avoided) on the Transmission System (including the estimated losses on any Interconnector that is Connected to the Transmission System) as electricity is transported to (or from) the Trading Boundary from (or to) the relevant point of Connection to the Transmission System for the Generator Unit or Supplier Unit.”

- 7.27 Until the date that is the Day1+ Deployment, the following row in Table E.5 in Appendix E “Data Publication” shall be regarded as “Intentionally Blank”:

Table E.5 – Data publication list part 5: Updated Daily post Gate Closure:

Time	Item / Data Record	Term	Subscript
	Forecast of Ex-Post Loss of Load Probability for each Trading Period in the forthcoming 31 Trading Days	Φ	h

- 7.28 Until the date that is the Day1+ Deployment Date, the following row shall be added to Table E.6 in Appendix E “Data Publication”

Table E.6 – Data publication list part 6: Updated Daily post Trading Day:

Day after Trading Day at 17:00	Capacity Adjustment Factor applicable for Undefined Exposure Period for Billing Periods	CAF	g
15 Days after the Trading Day, by 17:00	Daily Jurisdiction Error Supply MWh	NDLFv'h	h

- 7.29 Intentionally Blank

- 7.30 Until the date that is the Day1+ Deployment Date, paragraphs J.6, J.7 and J.8 of Appendix J “Market Operator and System Operator Data Transactions” shall be replaced with:

“J.6 Intentionally blank.

J.7 Intentionally blank.

J.8 Intentionally blank.”

- 7.31 Until the date that is the Day1+ Deployment Date, paragraphs K.2.16, K.5 and K.6 of Appendix K “Market Data Transactions” shall be replaced with:

“K.2.16 Interconnector Available Transfer Capacity, which is a transaction from the relevant System Operator to the Market Operator.

K.5 Intentionally blank.

K.6 Intentionally blank.”

- 7.32 Until the date that is the Day1+ Deployment Date, the first line of Table K.30 in Appendix K “Market Data Transactions” shall be replaced with:

Sender	Relevant System Operator
--------	--------------------------

- 7.33 Until the date that is 6 weeks after the Market Start Date, paragraph G.13.6 of Appendix G “Invoices and Settlement Statements” shall be replaced with:

“G.13.6 Intentionally blank.”

- 7.34 Until the date that is 6 weeks after the Market Start Date, the following rows in Table E.3 in Appendix E “Data Publication” shall be regarded as “Intentionally Blank”:

Table E.3 – Data publication list part 3: updated Monthly

Time	Item / Data Record	Term	Subscript
Monthly			
By 10:00, at least one Working Day before start of Month	Monthly Load Forecast (Appendix K)	--	--
By 10:00, at least five Working Days before start of Month	Loss of Load Probability for each Trading Period in the relevant Month	λ	h

- 7.35 Until the date that is 6 weeks after the Market Start Date, the following Table E.4 in Appendix E “Data Publication” shall be regarded as “Intentionally Blank”:

Table E.4 – Data publication list part 4: updated daily in advance of Gate Closure

- 7.36 Until the date that is 6 weeks after the Market Start Date, the following Table E.5 in Appendix E “Data Publication” shall be regarded as “Intentionally Blank”:

Table E 5 – Data publication list part 5: updated daily post Gate Closure

- 7.37 Until the date that is 6 weeks after the Market Start Date, the following Table E.6 in Appendix E “Data Publication” shall be regarded as “Intentionally Blank”:

Table E.6 – Data publication list part 6: updated daily post Trading Day

- 7.38 Until the date that is 6 weeks after the Market Start Date, the following Table E.7 in Appendix E “Data Publication” shall be regarded as “Intentionally Blank”:

Table E.7– Data publication list part 7: updated on a Capacity Period basis, post end of Capacity Period

- 7.39 Until the date that is 6 weeks after the Market Start Date, the following rows in Appendix 2: Report Listing (Data Publications) of Agreed Procedure 6 shall be regarded as “Intentionally blank”:

“Monthly Load Forecast and Assumptions”

“Loss of Load Probability for each Trading Period in the relevant Month”

- 7.40 Until the date that is 6 weeks after the Market Start Date, Reports in Appendix 2: Report Listing (Data Publications) with the Classifications D, E, F, G and H shall be regarded as “Intentionally blank”.

- 7.41 Until the date that is 6 weeks after the Market Start Date, paragraphs 3.86 and 3.87 shall be replaced with:

3.86 “Intentionally blank”

3.87 “Intentionally blank”

- 7.42 Until the date that is 6 weeks after the Market Start Date, the paragraph 5.40 on shall be replaced with:

5.40 “Intentionally blank”

- 7.43 Until the date that is 6 weeks after the Market Start Date, the paragraph 6.5 shall be replaced with:

6.5 “Intentionally blank”

- 7.44 Until the date that is the Day1+ Deployment Date, paragraph G.15.5 of Appendix G “Invoices and Settlement Statements” shall be replaced with:

“G.15.5 Net Demand (NDvh).

- 7.45 Until the date that is the Day1+ Deployment Date, paragraph G.17.2 of Appendix G “Invoices and Settlement Statements” shall be replaced with:

“G.17.2 Net Demand (NDvh).

- 7.46 Until the date that is the Day1+ Deployment Date, Section 2.1 of Agreed Procedure 10 shall be replaced by the following:

The general rules for Settlement Reallocation are defined in the “Settlement Reallocation” section of the Code.

The purpose of this document is to detail the procedures that will apply for Settlement Reallocation with regard to requests, agreements and associated transactions.

The Settlement Reallocation process offers significant benefits to Participants in the Single Electricity Market (SEM), in terms of cash flow and credit risk management, allowing Participants to reduce credit cover requirements by offsetting debts and credits and also to reduce circular flows of money.

Settlement Reallocation is a rules-supported financial arrangement between the Market Operator (MO) and a pair of Participants (which may be the

same Participant). Where the Participants are linked by one or more off-market financial commitments, Settlement Reallocation can act to reduce Settlement amounts.

Settlement Reallocation in the SEM consists of five major elements:

Submission of a Settlement Reallocation Request

Assessment of the eligibility of a Settlement Reallocation Agreement for the invoicing process

Inclusion of eligible Settlement Reallocation Agreements in the Invoices/Self Billing Invoices

Inclusion of Settlement Reallocation Agreements in the credit management process

Cancellation of a Settlement Reallocation Agreement (when applicable)

When two Participants have a Settlement Reallocation Agreement in place with the MO, one Participant (called Debited Participant) will effectively transfer an amount in respect of payments due to this Participant from the MO to another Participant (called Credited Participant) through their payments (Trading Payments or Capacity Payments). This amount shall also have an effect on the credit cover calculation of the two Participants.

The Settlement Reallocation Amount is a monetary value based in the currency of the Debited Participant (either Euro, or Pounds Sterling) and defined for a nominated payment type (Trading Payments or Capacity Payments). A Participant may not request or enter into a Settlement Reallocation Agreement as a Debited Participant in respect of its Supplier Units.

Settlement Reallocation Agreements can be posted against an Invoice/Self Billing Invoice relating to either the Energy or Capacity markets.

For each Settlement Reallocation Agreement, the Participants will nominate a Trading Period for reference purposes.

The nominated Trading Period in conjunction with the type of payment (Trading Payments or Capacity Payments) will denote which Settlement Period the Settlement Reallocation Agreement is to be executed against,

In the event that the Credited and Debited Participants are in different Currency Zones, the nominated trading period will denote the Trading Day Exchange Rate for use in Settlement calculations, and

The Settlement Reallocation can be lodged,

up to 29 days before the Trading Day of the nominated Trading Period;

up to one day to 12:00 before the issue of the Invoice/Self Billing Invoice on which the Settlement Reallocation Agreement is to be included (i.e. Settlement Period plus 4 Working Days);

Until the date that is the Day1+ Deployment Date, Section 3.1.2 of Agreed Procedure 10 shall be replaced by the following –

Participants are qualified to submit a Settlement Reallocation Request where:

Both Participants are, at the moment of the Settlement Reallocation Request submission, registered in accordance with Agreed Procedure 1 “Participant and Unit Registration and Deregistration”.

Both Participants are not, at the moment of the Settlement Reallocation Request submission, subject to a Suspension Order or Termination Order.

Both Participants, at the moment of the Settlement Reallocation Request submission, have designated and maintained a Communication Channel for the purpose of their participation in accordance with Agreed Procedure 1 “Participant and Unit Registration and Deregistration” and Agreed Procedure 3 “Communication Channel Qualification”

The MO has effectively allowed both Participants to access the Market Participant Interface in accordance with the Code, Agreed Procedure 3 “Communication Channel Qualification” and Agreed Procedure 11 “Market System Operation, Testing, Upgrading and Support”

The Trading Day of the nominated Trading Period is not greater than 29 Working Days in the future.

There is at least one working day before the issue of the Invoice/Self Billing Invoice on which the Settlement Reallocation Agreement is to be included (i.e. by 12:00 on Settlement Period plus 4 Working Days)”

- 7.47 Until a date that is the Day1+ Deployment Date, the following text should be added to Section 2.2 of Agreed Procedure 4:

“The maximum monetary value that may be submitted for each Settlement Reallocation will be 999999.99 and will be submitted in the relevant currency for the Jurisdiction in which the Participant is registered.”

- 7.48 Until a date that is the 8th Scheduled Release Deployment Date, the Market Operator shall require submission of Validation Technical Offer Data Records, which comprise a subset of the Technical Offer Data Transaction, by 12:00 on the Day prior to Gate Closure, as set out in Agreed Procedure 4 “Transaction Submission and Validation”.

- 7.49 Until the date that is the 8th Scheduled Release Deployment Date, the Market Operator shall provide to the System Operator by 13:00 on the Day prior to Gate Closure any submitted Validation Technical Offer Data Records that have changed from the previously Accepted corresponding Data Records, as set out in Agreed Procedure 4 “Transaction Submission and Validation”.

- 7.50 Until the date that is the 8th Scheduled Release Deployment Date, the System Operator shall assess the Validation Technical Offer Data Records provided by the Market Operator under 7.49 and will instruct the Market Operator to Accept or reject the Data Records.

- 7.51 Until the date that is the 8th Scheduled Release Deployment Date, if the Market Operator does not receive notification to Accept the relevant Validation Technical Offer Data Records under 7.49 and 7.50, the last Accepted Validation Technical Offer Data Records shall be come the Default Data and be used by the Central Market Systems.

- 7.52 Until the date that is the 8th Scheduled Release Deployment Date, clause 3.43 shall be replaced with:

“3.43 Each Participant that is required to submit Default Data shall review its submitted Default Data, Primary Data Set and Alternative Data Set at least once per quarter, and update it as necessary to seek to ensure that the Default Data, Primary Data Set and Alternative Data Set for each of the Participant’s Units continues to comply with the requirements set out in the Code for Technical Offer Data and

Commercial Offer Data as appropriate. If changes to the Primary Data Set or Alternative Data Set are required, they shall be submitted to the Market Operator for assessment by the System Operator and shall be approved or rejected as appropriate.”

- 7.53 Until the date that is the 8th Scheduled Release Deployment Date, the following definition will be added to the Glossary to the Code:

Primary Data Set means, a set of Validation Technical Offer Data Records and Validation Registration Data Records approved by the relevant System Operator as per 7.48 to 7.52 of the Code. Changes to Data Records which are submitted and do not match in their entirety the Primary Data Set must be submitted by the Market Operator to the relevant System Operator for approval or rejection prior to being Accepted.

Alternative Data Set means, a set of Validation Technical Offer Data Records and Validation Registration Data Records approved by the relevant System Operator as per 7.48 to 7.52 of the Code. Changes to Data Records which are submitted and do not match in their entirety the Alternative Data Set must be submitted by the Market Operator to the relevant System Operator for approval or rejection prior to being Accepted.

- 7.54 Until the date that is 22 months after the Market Start Date, paragraph 5.104 shall be replaced with:

“5.104 The Interim Eligible Availability (IEA_{uh}) for each Energy Limited Generator Unit *u* in each Trading Period *h* in the period commencing at the start of the first Trading Period in each Capacity Period *c* and ending at the end of the last Trading Period of the first Trading Day *t* in each Capacity Period shall be calculated as follows:

Given λ_h and $I_{\phi h}$, select values of IEA_{uh} to maximise:

$$\sum_{h=a}^{h=b} IEA_{uh} \times \left[\left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (I_h) + \left(\frac{IECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (IECPWF_h \times CPESc)} \right) \times (If_h) \right]$$

subject to the following conditions:

1. $\sum_{h=a}^{h=b} IEA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQuh, 0) \right) \left(\frac{SEL_{ut}}{TPD} + \left[\left(\frac{SEL_{u(t-1)}}{TPD} \right) \times 0.25 \right] \right) \right\}$
2. $\forall h : IEA_{uh} \geq \text{Max} \{MSQuh, 0\}$
3. $\forall h : IEA_{uh} \leq AP_{uh}$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period *h*;

2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. IECWFh is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. l_{ph} is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. SELut is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
SELu(t-1) is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t-1 expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. TPD is the Trading Period Duration;
9. MSQuh is the Market Schedule Quantity for Energy Limited Generator Unit u in Trading Period h;
10. APuh is the Availability Profile for Energy Limited Generator Unit u in Trading Period h;
11. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in each Capacity Period c and b is the last Trading Period in the first Trading Day t to commence in each Capacity Period."

7.55 Until the date that is 22 months after the Market Start Date, paragraph 5.105 shall be replaced with:

"5.105 The Interim Eligible Availability (IEAuh) for each Energy Limited Generator Unit u in each Trading Period h in the last Trading Day commencing in each Capacity Period c, where each such Trading Period lies within such Capacity Period c shall be calculated as follows:

Given λ_h and l_{ph} , select values of IEAuh to maximise:

$$\sum_{h=a}^{h=b} IEAuh \times \left[\left(\frac{VCPWFh \times CPVSc}{(VCPWFh \times CPVSc) + (IECPWFh \times CPESc)} \right) \times (I_h) + \left(\frac{IECPWFh \times CPESc}{(VCPWFh \times CPVSc) + (IECPWFh \times CPESc)} \right) \times (I_{fh}) \right]$$

subject to the following conditions:

$$1. \quad \sum_{h=a}^{h=b} IEAuh \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQuh, 0) \right) \left(\frac{SELut}{TPD} \right) \times 0.75 \right\}$$

$$2. \quad \forall h : IEAuh \geq \text{Max} \{MSQuh, 0\}$$

$$3. \quad \forall h : IEAuh \leq APuh$$

Where:

1. VCPWFh is the Variable Capacity Payments Weighting Factor in Trading Period h;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. IECPWFh is the Interim Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. l_{ph} is the Interim Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. SELut is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. TPD is the Trading Period Duration;
9. MSQuh is the Market Schedule Quantity for Energy Limited Generator Unit u in Trading Period h;
10. APuh is the Availability Profile for Energy Limited Generator Unit u in Trading Period h;
11. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in the last Trading Day t to commence in each Capacity Period c and b is the last Trading Period in each Capacity Period c."

7.56 Until the date that is 22 months after the Market Start Date, paragraph 5.107 shall be replaced with:

"5.107 The Eligible Availability (EAuh) for each Energy Limited Generator Unit u for each Trading Period h in the period commencing at the start of the first Trading Period in each Capacity Period c and ending at the end of the last Trading Period of the first Trading Day t in each Capacity Period shall be calculated as follows:

Given λ_h and Φ_h , select values of EA_{uh} to maximise:

$$\sum_{h=a}^{h=b} EA_{uh} \times \left[\left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (1h) \right] + \left[\left(\frac{ECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (fh) \right]$$

subject to the following conditions:

$$1. \quad \sum_{h=a}^{h=b} EA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQuh, 0) \right) \left(\frac{SEL_{ut}}{TPD} + \left[\left(\frac{SEL_{u(t-1)}}{TPD} \right) \times 0.25 \right] \right) \right\}$$

$$2. \quad \forall h : EA_{uh} \geq \text{Max} \{MSQuh, 0\}$$

$$3. \quad \forall h : EA_{uh} \leq AP_{uh}$$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period h;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
6. ϕ_h is the Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M "Description of the Function for the Determination of Capacity Payments";
7. SEL_{ut} is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. SEL_{u(t-1)} is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t-1 expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
9. TPD is the Trading Period Duration;
10. MSQu_h is the Market Schedule Quantity for Energy Limited Generator Unit u in Trading Period h;

11. AP_{uh} is the Availability Profile for Energy Limited Generator Unit u in Trading Period h;

12. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in each Capacity Period c and b is the last Trading Period in the first Trading Day t to commence in each Capacity Period.”

7.57 Until the date that is 22 months after the Market Start Date, paragraph 5.108 shall be replaced with:

“5.108 The Eligible Availability (EA_{uh}) for each Energy Limited Generator Unit u in each Trading Period h in the last Trading Day commencing in each Capacity Period c, where each such Trading Period lies within such Capacity Period c shall be calculated as follows:

Given λ_h and φ_h, select values of EA_{uh} to maximise:

$$\sum_{h=a}^{h=b} EA_{uh} \times \left\{ \left(\frac{VCPWF_h \times CPVSc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (I_h) \right. \\ \left. + \left(\frac{ECPWF_h \times CPESc}{(VCPWF_h \times CPVSc) + (ECPWF_h \times CPESc)} \right) \times (f_h) \right\}$$

subject to the following conditions:

1. $\sum_{h=a}^{h=b} EA_{uh} \leq \text{Max} \left\{ \left(\sum_{h=a}^{h=b} \text{Max}(MSQ_{uh}, 0) \right) \left(\frac{SEL_{ut}}{TPD} \right) \times 0.75 \right\}$
2. $\forall h : EA_{uh} \geq \text{Max} \{MSQ_{uh}, 0\}$
3. $\forall h : EA_{uh} \leq AP_{uh}$

Where

1. VCPWF_h is the Variable Capacity Payments Weighting Factor in Trading Period h;
2. CPVSc is the Capacity Period Variable Sum in Capacity Period c;
3. ECPWF_h is the Ex-Post Capacity Payments Weighting Factor in Trading Period h;
4. CPESc is the Capacity Period Ex-Post Sum in Capacity Period c;
5. λ_h is the Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;
6. φ_h is the Ex-Post Loss of Load Probability value determined as part of the Capacity Payment calculations to provide a capacity weighting in each Trading Period h and is determined in accordance with Appendix M “Description of the Function for the Determination of Capacity Payments”;

7. SEL_{ut} is the Accepted Energy Limit for Energy Limited Generator Unit u in Trading Day t expressed in terms of generation, amended in accordance with paragraphs 5.97 or 5.101 as appropriate;
8. TPD is the Trading Period Duration;
9. EA_{uh} is the Eligible Availability for Energy Limited Generator Unit u in Trading Period h;
10. AP_{uh} is the Availability Profile for Energy Limited Generator Unit u in Trading Period h;
11. $\sum_{h=a}^{h=b}$ is a summation over all Trading Periods h in the range a to b, where a is the first Trading Period in the last Trading Day t to commence in each Capacity Period c and b is the last Trading Period in each Capacity Period c."

7.58 Until the date that is the Day1+ Deployment Date, the following Table K.35 and Table K.36 in Appendix K "Market Data Transactions" shall be regarded as "Intentionally Blank:"

Table K.35 – Forecast of Ex-Post Loss of Load Probability Data Transaction Data Records

Table K.36 – Forecast of Ex-Post Loss of Load Probability Data Transaction Submission Protocol

7.59 Until the date that is 24 months after the Market Start Date, paragraph 6.101 shall be replaced with:

"6.101 Subject to paragraph 6.101B, a Participant or an External Data Provider may raise a Settlement Query at any time prior to 17:00 on the twentieth Working Day after the last Timetabled Settlement Rerun."

"6.101A A Participant or an External Data Provider may not raise a Settlement Query with respect to Metered Generation data or any calculations relating to any Settlement Period prior to the Meter Validation Date of the relevant Generator Unit. Subsequent to the Meter Validation Date, a Settlement Query may be raised in respect of data relating to these Settlement Periods."

7.60 Until the date that is 24 months after the Market Start Date, the following paragraph 6.101B shall be added to the Code:

"6.101B If the Market Operator discovers, within two years after the end of the period referred to in paragraph 6.101, that an event has occurred that (i) has resulted in the incorrect calculation of the SMP and Market Schedule Quantities for the relevant Trading Day(s) by an amount greater than the Settlement Recalculation Threshold; and (ii) if the event had been known to such Participant or Participants within the time period set out in paragraph 6.101, it would have entitled such Participant or Participants to file a Settlement Query pursuant to paragraph 6.94, and (iii) such Participant or Participants could not reasonably have discovered the event within the period set out in paragraph 6.101; the Market Operator shall notify the relevant Participant or Participants as soon as reasonably practical after the discovery of such event with detail

of the Trading Days affected, and such Participant or Participants shall be entitled to raise a Settlement Query in respect of such event and such Trading Days at any time before 17:00 on the twentieth Working Day after such notification.”

7.61 Until the date that is 29 months after the Market Start Date, paragraph 4.41B shall be replaced with:

“4.41B Each Distribution System Operator shall provide the relevant System Operator with Distribution Loss Adjustment Factors as follows:

- (i) At least 10 weeks before the start of each Year, each Distribution System Operator shall provide the relevant System Operator with a set of Distribution Loss Adjustment Factors for each Generator Unit that is Distribution Connected within its Jurisdiction, calculated in accordance with the statutory and Licence requirements pertaining within its Jurisdiction, for each Trading Period from the start of January to the end of September of the following Year, and including the relevant supporting information to enable the System Operator to calculate the corresponding Combined Loss Adjustment Factors.
- (ii) At least four months before the end of each Year, each Distribution System Operator shall provide the relevant System Operator with a set of Distribution Loss Adjustment Factors for each Generator Unit that is Distribution Connected within its Jurisdiction, calculated in accordance with the statutory and Licence requirements pertaining within its Jurisdiction, for each Trading Period from the start of October to the end of December of the current Year, and including the relevant supporting information to enable the System Operator to calculate the corresponding Combined Loss Adjustment Factors.”

7.62 Until the date that is 29 months after the Market Start Date, paragraph 4.42 shall be replaced with:

“4.42 Each System Operator shall provide the Market Operator with Combined Loss Adjustment Factors as follows:

- (i) At least two months before the start of each Year, each System Operator shall provide to the Market Operator in accordance with Appendix K “Market Data Transactions” the System Parameters Data Transaction which shall comprise a set of Combined Loss Adjustment Factors for each Generator Unit (other than Demand Side Units and Interconnector Units) connected within its Jurisdiction, and each Interconnector linked to that Jurisdiction, for each Trading Period from the start of January to the end of September of the following Year.
- (ii) At least three months before the end of each Year, each System Operator shall provide to the Market Operator in accordance with Appendix K “Market Data Transactions” the System Parameters Data Transaction which shall comprise a set of Combined Loss Adjustment Factors for each Generator Unit (other than Demand Side Units and

Interconnector Units) connected within its Jurisdiction, and each Interconnector linked to that Jurisdiction for each Trading Period from the start of October to the end of December of the current Year.”

7.63 Until the date that is 29 months after the Market Start Date, paragraph 4.42B shall be replaced with:

“4.42B Each System Operator shall provide the Market Operator with Distribution Loss Adjustment Factors as follows:

- (i) At least two months before the start of each Year or within five Working Days of receipt from the relevant System Operator, whichever later, each System Operator shall provide the Market Operator with a set of Distribution Loss Adjustment Factors for each Generator Unit (other than Demand Side Units) that is Distribution Connected within its Jurisdiction for each Trading Period from the start of January to the end of September of the following Year.
- (ii) At least three months before the end of each Year or within five Working Days of receipt from the relevant System Operator, whichever later, each System Operator shall provide the Market Operator with a set of Distribution Loss Adjustment Factors for each Generator Unit (other than Demand Side Units) that is Distribution Connected within its Jurisdiction for each Trading Period from the start of October to the end of December of the current Year.”

7.64 Until the date that is 29 months after the Market Start Date, the following rows in Table E.2 shall be replaced with:

Table E.2 – Data publication list part 2: updated annually and as required

Time	Item / Data Record	Term	Subscript
Annual			
At least two Months before start of Year, or within five Working Days of its receipt from the relevant System Operator, whichever later	Distribution Loss Adjustment Factors covering each Trading Period in the period from the start of January to the end of September of the following Year	DLAF	uh for Generator Units, lh for Interconnector
At least three Months before end of Year, or within five Working Days of its receipt from the relevant System Operator, whichever later	Distribution Loss Adjustment Factors covering each Trading Period in the current Year	DLAF	uh for Generator Units, lh for Interconnector
At least two Months before start of Year, or within five Working Days of its receipt from the relevant System Operator, whichever later	Combined Loss Adjustment Factors covering each Trading Period in the period from the start of January to the end of September of the following Year	CLAF	uh for Generator Units, lh for Interconnector
At least three Months before start of Year, or within five Working Days of its receipt from the relevant System Operator, whichever later	Combined Loss Adjustment Factors covering each Trading Period in the current Year	CLAF	uh for Generator Units, lh for Interconnector

7.65 Until the date that is 29 months after the Market Start Date, Table K.2 shall be replaced with:

Table K.2 – System Parameters Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	Two separate transactions: <ol style="list-style-type: none"> 1) Containing data for each Generator Unit that is not an Interconnector Unit per Trading Period from the start of January to the end of September in the following Year. 2) Containing data for each Generator Unit that is not an Interconnector Unit per Trading Period from the start of October to the end of December in the current Year.
Frequency of Data Transactions	Annually
First Submission time	As available
Last Submission time	<ol style="list-style-type: none"> 1) At least two months prior to the start of each Year, or prior to the registration of a new Generator Unit. 2) At least three months prior to the end of each Year, or prior to the registration of a new Generator Unit.
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Updates only
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

7.66 Until the date that is 29 months after the Market Start Date, Table K.2A shall be replaced with:

Table K.2A –Loss Adjustment Factors Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	Two separate transactions: <ol style="list-style-type: none"> 1) Containing data for each Generator Unit that is not an Interconnector Unit or Demand Side Unit per Trading Period from the start of January to the end of September in the following Year.

	2) Containing data for each Generator Unit that is not an Interconnector Unit or Demand Side Unit per Trading Period from the start of October to the end of December in the current Year.
First Submission time	As available
Last Submission time	1) At least two months prior to the start of each Year, or prior to the registration of a new Generator Unit. 2) At least three months prior to the end of each Year, or prior to the registration of a new Generator Unit.
Permitted frequency of resubmission	Unlimited
Valid Communication Channels	Type 1 (manual), to be provided in electronic format
Process for data validation	None

8. TRANSITIONAL ARRANGEMENTS

PURPOSE

- 8.1 This Section 8 sets out provisions, which:
1. suspend, amend or replace specified paragraphs or parts of paragraphs of other Sections of the Code for specified periods; and
 2. provide for certain additional matters of a transitional nature in relation to the administration of the Code in the period from the Commencement Date to the end of the First Trading Year.
- 8.2 The Registration process for Parties who have registered to participate in the Market Trial is modified by this Section and for the purposes of transition only, to recognise that these Parties will have provided data to the Market Operator in respect of their units in order to participate in the Market Trial. Such Parties will confirm or may amend this data, as necessary, prior to the Market Start Date in accordance with this Section.

GENERAL

- 8.3 Any reference in the Code to anything being required to be done prior to the start of a Year shall, in relation to the First Trading Year only, be deemed to mean prior to the Market Start Date.
- 8.4 Any reference in the Code to a period prior to the start of a Year shall, in relation to the First Trading Year only, be deemed to refer to the relevant period prior to the Market Start Date, or such other period as may be determined by the Regulatory Authorities.
- 8.5 Any reference in the Code to a Year shall, in respect of the First Trading Year, apply only to that part of the year which falls within the First Trading Year.
- 8.6 For the avoidance of doubt, no Trading Day shall commence prior to the Market Start Date.
- 8.7 Notwithstanding the definition of “Trading Day”, the first Trading Day shall be deemed to commence at 00:00 on the Market Start Date and will end at the end of the Trading Period commencing at 05:30 on the Market Start Date.
- 8.8 Notwithstanding that no trading shall occur before the Market Start Date, the first Trading Day shall fall within a 30 hour First Optimisation Time Horizon which shall commence at 06:00 on the day prior to the Market Start Date. Participants shall be required to submit data in respect of the first Trading Day and the preceding 18 hours as though the Pool were fully operational. Participants shall be required to submit Offer Data in respect of the 24 hour period from 06:00 on the day prior to the Market Start Date to 06:00 on the Market Start Date and the Market Operator shall conduct an MSP Software run for the First Optimisation Time Horizon. Any calculations required to be made in respect of a Trading Day or a Trading Period, shall for the purposes of the first Trading Day, utilise data submitted in respect of the period 06:00 to 06:00. Notwithstanding this, any Settlement shall use the outputs of the MSP Software in respect of Trading Periods falling within the first Trading Day.
- 8.9 In respect of the first Trading Day, Meter Data Providers shall provide Meter Data for the 2 days immediately prior to Market Start.

- 8.10 For the first Trading Day, any calculations referring to the use of data from Trading Day t-1 shall use data derived from the corresponding time period in the Market Trial.
- 8.11 In respect of the first Trading Day, the Market Operator shall, at 08:00 two Working Days prior to the first Trading Day, publish a Trading Day Exchange Rate between euro (€) and pound sterling (£), which, notwithstanding the definition of “Trading Day Exchange Rate” shall be deemed to be the Trading Day Exchange Rate in relation to the first Trading Day.
- 8.12 In respect of the second Trading Day, the Market Operator shall, at 08:00 on the day that is one Working Day prior to the Trading Day commencing at 06:00 on the Market Start Date, publish a Trading Day Exchange Rate between euro (€) and pound sterling (£), which, notwithstanding the definition of “Trading Day Exchange Rate” shall be deemed to be the Trading Day Exchange Rate in relation to that second Trading Day.
- 8.13 Notwithstanding any other provisions of the Code, for the purposes of the first Trading Day, Gate Closure means 10:00 on the calendar day two days prior to the first Trading Day.
- 8.14 Without prejudice to paragraphs 8.8, 8.55 to 8.56 or 8.68, Participants taking part in the Market Trial shall submit Trial Offer Data for use in runs of the MSP Software in respect of the week leading up to the Market Start Date, as if the Single Electricity Market were fully operational during that period. Technical Offer Data submitted in respect of the week leading up to the Market Start Date shall be in accordance with applicable Grid Code provisions and consistent with the information sent to the System Operators in respect of the current markets.

ACCESSION AND PARTICIPATION FEES

- 8.15 In advance of the Commencement Date, the Regulatory Authorities shall determine the Accession Fee payable by an Applicant seeking to accede to the Code prior to the Market Start Date.
- 8.16 In advance of the Commencement Date, the Regulatory Authorities shall determine the Participation Fee payable by a Party (or Applicant, as appropriate) to register a Unit prior to the Market Start Date.

ACCESSION AND REGISTRATION OF INITIAL PARTICIPANTS

- 8.17 The following paragraphs shall apply to Applicants (or Parties, as appropriate) who have registered with the Market Operator for the Market Trial. Persons who have acceded to the Code and have registered for the Market Trial shall be deemed to be Initial Participants in respect of Units Registered in accordance with this Section in advance of the Market Start Date.
- 8.18 For the avoidance of doubt, Initial Participants shall be Participants for the purposes of the Code and all Code provisions shall apply, save as otherwise provided in Section 8.
- 8.19 Parties who have not registered to participate in the Market Trial shall apply to Register Units in accordance with Section 2 and Agreed Procedure 1 “Participant and Unit Registration and Deregistration”.

- 8.20 Notwithstanding paragraphs 2.13 to 2.18 or the corresponding provisions of Agreed Procedure 1 “Participant and Unit Registration and Deregistration”, the following timings shall apply in relation to Initial Participants:
1. The Market Operator shall issue a Party Registration Form to all Market Trial participants prior to the Commencement Date.
 2. Within 2 Working Days of receipt of the Party Registration Form, the Market Operator will validate the contents of the completed Party Registration Form and will communicate any information to be clarified to, or request any additional information from, the Party.
 3. The Applicant shall respond to the Market Operator with the required information within 5 Working Days of receipt of such a communication.
 4. The Applicant may request additional time to provide any clarification or additional information and the Market Operator shall not unreasonably withhold consent to any such request.
- 8.21 No later than 5 Working Days after the date on which a Party has successfully Acceded to the Code, the Market Operator shall issue a Unit Registration Pack to such Party. The Unit Registration Pack shall contain the following:
1. a list of the requirements, in accordance with the Code, that must be complied with by such Party in order to become an Initial Participant;
 2. a request for confirmation of receipt of digital certificates; and
 3. notification of the requirement to provide an estimate of the Unit’s consumption or production of energy for the duration of the longer of the first Historical Assessment Period for Billing Periods or the first Historical Assessment Period for Capacity Periods.
- 8.22 Notwithstanding the provisions of Section 2, the following timings shall apply in relation to Parties applying to be Initial Participants:
1. The Market Operator will, in accordance with Section 2, validate the contents of the completed Unit Registration Pack within 5 Working Days of receipt of the Unit Registration Pack and will communicate any information to be clarified to, or request any additional information from, the Party within 10 Working Days of receipt of the Unit Registration Pack.
 2. The Party must respond to the Market Operator with the required information within 5 Working Days of receipt of any such communication.
 3. A Party may request additional time to provide any clarification or additional information and the Market Operator shall not unreasonably withhold consent to any such request.
- 8.23 Upon completion of the requirements set out in paragraphs 8.21 and 8.22, registration will be deemed complete and the Market Operator will issue a Commencement Notice.
- 8.24 Notwithstanding any other provision of the Code, the registration of Initial Participants is not contingent upon the Required Credit Cover being in place.
- 8.25 During the course of the Market Trial, Initial Participants may make changes to a subset of their Registration Data in accordance with the timings as per paragraphs 8.26 to 8.30.

- 8.26 In respect of the following Data types as detailed in Agreed Procedure 4 “Transaction Submission and Validation”, the Market Operator will not accept any updates or amendments from the date the Commencement Notice is issued until the Market Start Date:
1. Resource Type
Resource Type shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
 2. Participant Class
Participant Class shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
 3. Resource Ids
Resource IDs shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
- 8.27 In respect of Trading Site Configurations as detailed in Agreed Procedure 1 “Participant and Unit Registration and Deregistration”, the Market Operator will not accept any updates or amendments from the date the Commencement Notice is issued until the Market Start Date.
- 8.28 In respect of the following Data types as detailed in Agreed Procedure 4 “Transaction Submission and Validation”, Initial Participants may submit updates or amendments from the date of receipt of a Commencement Notice until 2 Working Days prior to Market Start Date:
1. Application Data
Application Data shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
 2. Users Data
Users Data shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
 3. Load Bid Data
Load Bid Data shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
- 8.29 In respect of the following Data types as detailed in Agreed Procedure 4 “Transaction Submission and Validation”, Initial Participants may submit updates or amendments from the date of receipt of a Commencement Notice until 3 Working Days prior to Market Start Date:
1. Unit (Resource) Data
Unit (Resource) Data shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
 2. Load Parameters
Load Parameters shall have the meaning as set out in Agreed Procedure 4 “Transaction Submission and Validation”
- 8.30 Participants may submit updates or amendments to their Bank Data, as defined in Agreed Procedure 4 “Transaction Submission and Validation”, from the date of receipt of a Commencement Notice until 10 Working Days prior to Market Start Date.

CREDIT COVER

- 8.31 Each Participant shall provide the Market Operator with an estimate of its forecast demand for the Initial Exposure Period by not later than 11 weeks prior to the Market Start Date.
- 8.32 The Market Operator will compare the estimate of forecast demand provided by a Participant with the Meter Data provided during the Market Trial. If the difference between the two is greater than the Credit Cover Adjustment Trigger, the Market Operator shall increase the Required Credit Cover accordingly.
- 8.33 The Market Operator shall send each Initial Participant details, by facsimile, of the initial Required Credit Cover no later than 5 Weeks prior to the date on which the Initial Participant is required to post such Credit Cover, provided that (and without prejudice to its right to do so after the Market Start Date in accordance with the Code):
1. if necessary, the Market Operator may by notice to the relevant Initial Participant, revise such Required Credit Cover up to 8 Working Days prior to the Market Start Date;
and
 2. notwithstanding paragraph 6.238, the initial Required Credit Cover shall not take into account any Settlement Reallocation Agreement unless this has been lodged with the Market Operator at least 9 Working Days prior to the Market Start Date.
- 8.34 The Market Operator shall publish an Exchange Rate between euro (€) and pounds sterling (£) at 08:00 on the day preceding the day on which the Market Operator will calculate the initial Credit Cover.
- 8.35 The Market Operator shall publish an Exchange Rate between euro (€) and pounds sterling (£) at 08:00 on the day preceding the day on which the Market Operator will calculate the revised initial Credit Cover, as set out in 8.33.
- 8.36 Notwithstanding any other provision of the Code, the Market Operator shall convert the Required Credit Cover into pounds sterling using the Exchange Rate published in accordance with 8.34 in respect of the Required Credit Cover for Market Start for each Participant using pounds sterling as the Settlement Currency.
- 8.37 Notwithstanding any other provision of the Code, the Market Operator shall convert the Required Credit Cover into pounds sterling using the Exchange Rate published in accordance with 8.35 in respect of the revised Required Credit Cover for Market Start for each Participant using pounds sterling as the Settlement Currency.
- 8.38 No later than 3 Working Days before the Market Start Date, each Participant must put its Required Credit Cover in place.
- 8.39 The Market Operator shall issue a Suspension Order in respect of any Participant who fails to provide the Required Credit Cover 3 Working Days before the Market Start Date.
- 8.40 For the duration of the longer of the first Historical Assessment Period for Billing Periods or for Capacity Periods, estimates provided by each Participant in relation to its consumption or production of energy, pursuant to paragraph 8.31, will be evaluated against the Meter Data received from the

relevant Meter Data Provider. If the difference between the Meter Data and the forecast quantities provided exceeds the Credit Cover Adjustment Trigger, the Market Operator shall calculate a revised future consumption or production (as appropriate) forecasts based on a statistical analysis of the known Meter Data to produce a forecast which has only a 5% probability of being exceeded. Such forecasts will then be used to recalculate the relevant Participant's Required Credit Cover.

- 8.41 The Market Operator shall make a report to the Regulatory Authorities at least 90 days before the Market Start Date proposing the Initial Credit Assessment Price and the Estimated Capacity Price relating to the calculation of the Required Credit Cover for the Undefined Exposure Period for New Participants and Adjusted Participants from the Market Start Date.
- 8.42 The Market Operator's report proposing the Initial Credit Assessment Price and the Estimated Capacity Price must set out any relevant research or analysis carried out by the Market Operator and the justification for the specific values proposed. The Market Operator shall publish the approved value for these prices at least 60 days before the Market Start Date or within 5 Working Days of receipt of the Regulatory Authorities' determination, whichever is the later.
- 8.43 For the avoidance of doubt for the purposes of Credit Cover monitoring and calculation, all Participants shall be considered New Participants on the Market Start Date.
- 8.44 Paragraph 6.174 shall not apply to the report to be published by the Market Operator proposing parameters relating to the calculation of the Required Credit Cover in advance of the First Trading Year and for the purpose of the report required in advance of that period only, paragraph 6.174 shall be replaced with:
- “6.174 The Market Operator shall make a report to the Regulatory Authorities at least 90 days before the start of the First Trading Year proposing the following parameters relating to the calculation of the Required Credit Cover for application in the First Trading Year:
1. the Fixed Credit Requirement;
 2. the Historical Assessment Period for the Billing Period;
 3. the Historical Assessment Period for the Capacity Period;
 4. the Analysis Percentile Parameter;
 5. the Credit Cover Adjustment Trigger; and
 6. the maximum level of the Warning Limit.”

MARKET OPERATOR WEBSITE

- 8.45 The Market Operator shall ensure that the website referred to in paragraph 2.364 shall be operative and be accessible to all members of the public no later than 30 days before the Market Start Date.

MODIFICATIONS

- 8.46 The initial Modifications Committee shall be established at a time specified by the Regulatory Authorities. The Regulatory Authorities shall publish the names of the members of the initial Modifications Committee at least 2 weeks before the establishment date it proposes for the initial Modifications Committee.

- 8.47 The nominees of the Commission, NIAUR, the Market Operator, System Operators and Meter Data Providers shall be automatically appointed to the initial Modifications Committee.
- 8.48 The Regulatory Authorities shall appoint members and alternate members to the initial Modifications Committee from nominees put forward by the nominating parties.
- 8.49 Where requested to do so by the Regulatory Authorities, persons who have not yet acceded to the Code may put forward nominees for the positions of member and alternate member of the initial Modifications Committee and such nominations shall, notwithstanding that the person making the nomination has not yet acceded to the Code, be considered to be a nomination by Nominating Participant for the purposes of the Code.
- 8.50 Where a person who has put forward nominees for the positions of member and alternate member pursuant to paragraph 8.49, has not acceded to the Code within 5 Working Days of the Commencement Date, such nominations shall cease to be valid and will not be considered by the Regulatory Authorities when appointing members or alternate members of the initial Modifications Committee.
- 8.51 The members of the Modifications Committee and their alternate members shall each serve for the respective terms as follows:
1. The initial members appointed by, and to represent, the Commission, the Market Operator, the Northern Ireland System Operator and one Meter Data Provider shall each have an initial term of one year. Thereafter, each member appointed by the foregoing shall be appointed for a term of two years.
 2. The initial members appointed by, and to represent, the NIAUR, the System Operator for Ireland and the remaining Meter Data Providers shall each have an initial term of two years. Thereafter each member appointed by the foregoing shall be appointed for a term of two years.
 3. Every second initial member appointed following nomination by the Nominating Participants shall have an initial term of one year. All other remaining initial members appointed following nomination by the Nominating Participants shall have an initial term of two years.
- 8.52 Notwithstanding any paragraph of the Code to the contrary, from the Commencement Date until the Market Start Date, no person shall submit a Modification Proposal save for a Modification Proposal submitted in accordance with paragraph 2.206 of the Code.
- 8.53 From the Commencement Date until the Market Start Date, paragraph 2.208 shall be replaced with:
- “2. 208 A Modification Proposal shall be determined to be Urgent by the Regulatory Authorities where, if not made, it can be reasonably anticipated that the event or circumstance with which the Modification Proposal is concerned would:
1. threaten the ability to deliver a properly functioning market for the Market Start Date; or
 2. result in one or more of the Parties being in breach of this Code on or after the Market Start Date due to systems limitations, or

3. correct an obviously material error or material inconsistency in the Code.”

DISPUTE RESOLUTION BOARD

- 8.54 The Market Operator will establish a Panel for Dispute Resolution within 30 Working Days of the Commencement Date. Any Dispute arising prior to the establishment of the Dispute Resolution Board shall be referred to the Regulatory Authorities.

MSP SOFTWARE

- 8.55 Paragraph 4.70 shall not apply to the calculation of Uplift for the First Trading Year and for the purpose of the calculation required for this period only, paragraph 4.70 shall be replaced with:

“4.70 The following three input parameters that are to be used in the calculation of Uplift in each Year shall be determined by the Regulatory Authorities at least 60 days in advance of the Market Start Date:

1. The Uplift Alpha value α , which governs the importance of the Uplift Cost Objective, such that $0 \leq \alpha \leq 1$;
2. The Uplift Beta value β , which governs the importance of the Uplift Profile Objective, such that $0 \leq \beta \leq 1$; and
3. The Uplift Delta value δ , to constrain the overall impact on revenue in each Trading Day t , arising from the Uplift calculation, such that $\delta \geq 0$.”

- 8.56 Notwithstanding any other provision of the Code for the first Trading Day, where the operation of the MSP Software requires initial conditions from a Preceding MSP Software Run as set out in paragraphs N.50 to N.52, then the Market Operator shall use data from the last applicable MSP Software run or runs of the MSP Software undertaken during the Market Trial for the relevant periods preceding the first Trading Day. Paragraphs 5.125 and N.53 shall not apply to the first Trading Day.

- 8.57 The Market Operator shall use reasonable endeavours to procure that for each run of the MSP Software relating to the first Trading Day, the reservoir level for each Pumped Storage Unit at the start of the Optimisation Time Horizon will be set equal to a value that best reflects its understanding of the actual reservoir level at that time.

UNINSTRUCTED IMBALANCE

- 8.58 Paragraph 4.142 shall not apply to the calculation of Uninstructed Imbalances for the First Trading Year and for the purpose of the calculation required for this period only, paragraph 4.142 shall be replaced with:

“4.142 The System Operator shall make a report to the Regulatory Authorities at least 90 days before the First Trading Year proposing values for the following parameters used in the calculation of Uninstructed Imbalances for that year:

1. Engineering Tolerance ENGTOl (where $0 \leq \text{ENGTOl} \leq 1$);
2. MW Tolerance MWTOL t (where $0 \leq \text{MWTOL}t$) for each Trading Day t ;
3. System per Unit Regulation parameter (UREG);

4. the Discount for Over Generation (DOGu_h) for each Generator Unit *u* in each Trading Period *h*, such that $0 \leq \text{DOGu}_h \leq 1$; and
5. the Premium for Under Generation (PUGu_h) for each Generator Unit *u* in each Trading Period *h*, such that $0 \leq \text{PUGu}_h \leq 1$.”

TESTING TARIFFS

- 8.59 Paragraph 5.175 shall not apply in relation to the making of a report to the Regulatory Authorities proposing values for the Testing Tariffs in advance of the First Trading Year and for the purpose of the report required in advance of that period only, paragraph 5.175 shall be replaced with:

“5.175 The relevant System Operator shall make a report to the Regulatory Authorities at least 60 days before the start of the First Trading Year proposing values for the Testing Tariffs which shall apply for the First Trading Year. The System Operator's report must set out the justification for the specific values proposed. Such a report may, and shall if so requested by the Regulatory Authorities, include alternative values from those proposed and must set out the arguments for and against such alternatives.”

SETTLEMENT CALENDAR

- 8.60 Paragraph 6.47 shall not apply to the publication of a Settlement Calendar for all days in the First Trading Year and for the purposes of the publication of a Settlement Calendar for that period only, paragraph 6.47 shall be replaced with:

“6.47 The Market Operator shall publish, at least 60 days prior to the start of the First Trading Year, a Settlement Calendar for all days in the First Trading Year which shall include the following information:

1. details of Non-Working Days;
2. details of:
 - a. when Ex-Post Indicative Settlement Statements are due (for each type of Settlement Statement);
 - b. when Initial Settlement Statements are due (for each type of Settlement Statement);
 - c. each Invoice issue date (for each type of Invoice);
 - d. the Invoice Due Date (for each type of Invoice);
 - e. the Self-Billing Invoice issue date (for each type of Self-Billing Invoice);
 - f. the Self-Billing Invoice Due Date (for each type of Self-Billing Invoice);
 - g. the Timetable M+4 Settlement Reruns for relevant Settlement Period; and
 - h. the Timetable M+13 Settlement Reruns for relevant Settlement Period.”

ANNUAL MAINTENANCE SCHEDULE DATA

- 8.61 In Table E.2 the publication by the Market Operator of the Annual Maintenance Schedule – Generator Outages Schedule shall not apply in advance of the First Trading Year and for the purpose of the publication required in advance of the First Trading Year only, the publication in Table E.2 shall be replaced with:

Time	Item / Data Record	Term	Subscript
At least one Month before start of Year	Annual Maintenance Schedule - Generator Outages Schedule (Appendix F)		

- 8.62 Paragraph F.9 shall not apply to the transaction to be submitted to the System Operator by the Market Operator in respect of the annual Maintenance Schedule Data Transaction in advance of the First Trading Year and for the purpose of the transaction required in advance of the First Trading Year only, paragraph F.9 shall be replaced with:

“F.9 Each System Operator shall submit an annual Maintenance Schedule Data Transaction to the Market Operator at least one month before the start of each Year, and whenever it is updated. The following shall also apply:

1. The annual Maintenance Schedule Data Transaction shall contain the Maintenance Schedule for each Generator connected to the Transmission System in the relevant Jurisdiction over that Year.
2. The Market Operator shall only provide for Type 1 Communication Channel for the communication of such annual Maintenance Schedule Data Transaction from the System Operator during normal operation of the Market Operator's Isolated Market System and the Type 1 Communication Channel.”

FLATTENING POWER FACTOR

- 8.63 Paragraph M30 shall not apply to the report to be submitted to the Regulatory Authorities by the Market Operator in respect of the Loss of Load Probability Table in advance of the First Trading Year and for the purpose of the report required in advance of that period only, paragraph M.30 shall be replaced with:

“M.30 With respect to the Loss of Load Probability Table, the System Operators shall make a report to the Regulatory Authorities at least 90 days before the start of the First Trading Year proposing a value for the Flattening Power Factor (FPFy) for Year y which shall be in the range $0 < \text{FPFy} \leq 1$. The Market Operator shall publish the approved value of this parameter within 5 Working Days of receipt of the Regulatory Authorities' determination. The System Operators may propose revisions to the value of the Flattening Power Factor (FPFy) during the Year and, subject to the approval of the Regulatory Authorities, the Market Operator shall publish such revised value not less than thirty 30 days prior to the first Capacity Period for which such revised value is to be applied.”

DATA PUBLICATION BY THE MARKET OPERATOR

- 8.64 The Market Operator shall publish all relevant parameters or reports within 3 Working Days of receiving the Regulatory Authorities' determination.

DATA PROVISION BY THE SYSTEM OPERATORS

- 8.65 Notwithstanding any other provision of the Code, for the first Trading Day, each System Operator shall submit to the Market Operator the Generator Unit Technical Characteristics, consisting of Outturn Minimum Stable Generation, Outturn Availability and Outturn Minimum Output, in respect of each Generator Unit, which is Dispatchable, registered within its Currency Zone, 2 days prior to Market Start.

BILLING PERIOD

- 8.66 Notwithstanding the definition of Billing Period in paragraph 6.41, for the purposes of paragraph 6.41, the first Billing Period shall be defined as the period from 00:00 on the Market Start Date to the end of the Trading Period beginning at 23:30 on the Saturday which either follows or coincides with, the Market Start Date.

CAPACITY PERIOD

- 8.67 Notwithstanding the definition of Capacity Period in paragraph 6.44 the first Capacity Period shall be defined as the period from 00:00 on the Market Start Date to the end of the Trading Period beginning on 23:30 on the last day of the calendar month during which the Market Start Date occurs.

MARKET SCHEDULE WARMTH STATE

- 8.68 For the first Trading Day, and with respect to each relevant Generator Unit, the reference to "preceding Trading Periods" in the definition of Market Schedule Warmth State shall refer to a period of equivalent duration immediately preceding the Market Start Date.

INTERCONNECTOR TRADES

- 8.69 Notwithstanding any other provision of the Code, the Market Operator shall publish Available Transfer Capacity values for the first Trading Day by 10:00 two days prior to Gate Closure for the first Trading Day.
- 8.70 Notwithstanding any other provision of the Code, the Market Operator shall by 10:30 two days prior to the first Trading Day notify each Interconnector User of the Active Interconnector Unit Capacity Holding for its Interconnector Unit.
- 8.71 Notwithstanding any other provision of the Code, for the first Trading Day, the Market Operator shall by 11:00 two days prior to the start of the first Trading Day determine Interconnector Unit Nominations for each Interconnector Unit from the Ex-Ante Indicative MSP Software Run based on the Active Interconnector Unit Capacity Holding and Commercial Offer Data such that the following conditions are satisfied:
1. the Ramp Rate for each Interconnector Unit that is implied by the Interconnector Unit Nominations shall not exceed a value of 99999.9 MW/min; and
 2. the implied Ramp Rate for the sum of all Interconnector Units on any Interconnector that is implied by their Interconnector Unit Nominations

shall not exceed the Aggregate Interconnector Ramp Rate for that Interconnector at any time.

and the Market Operator shall by 11:00, 2 days prior to the first Trading Day submit the Interconnector Unit Nominations to the Interconnector Administrator.

- 8.72 Notwithstanding any other provision of the Code, the Interconnector Administrator shall by 11:45, 2 days prior to the start of the first Trading Day submit the Modified Interconnector Unit Nominations to the Market Operator.
- 8.73 Notwithstanding any other provision of the Code, for the first Trading Day, the Market Operator shall by 12:00 two days prior to the start of the first Trading Day submit to each Interconnector User the Modified Interconnector Unit Nominations in respect of its Interconnector Units, via the Modified Interconnector Unit Nominations Data Transaction in accordance with Appendix K “Market Data Transactions”.
- 8.74 Notwithstanding any other provision of the Code, for the first Trading Day, the Market Operator shall calculate Aggregate Modified Interconnector Unit Nominations for each Interconnector for each Trading Period, and by 12:00 two days prior to the start of the first Trading Day shall submit the Aggregate Modified Interconnector Unit Nomination Data Transaction to the relevant System Operator in accordance with Appendix J “Market Operator and System Operator Data Transactions”.

In this Section:

“Effective Date”	means the Trading Day from which the registration of a Unit or Units to an Initial Participant shall be effective, as specified in a Commencement Notice issued by the Market Operator, or as deferred in accordance with paragraph 2.48. Effective Dates are aligned to Trading Day timescales and all references to Effective Date shall apply from the start of the relevant Trading Day. For the first Trading Day, the Market Operator will use any relevant data from registered Units with an Effective Date equal to the Market Start date in any calculations required to be made in respect of a Trading Day or a Trading Period.
“Estimated Capacity Price”	means the price (ECP) to be used for the calculation of Required Credit Cover for Initial Participants, New Participants and Adjusted Participants until the end of the relevant first Historical Assessment Period.
“First Trading Year”	means the period commencing at 00:00 on the Market Start Date and concluding at the end of the Trading Period commencing at 23:30 on 31 December 2007.
“Initial Credit Assessment Price”	means the price (CAP) to be used for the calculation of Required Credit Cover for Initial Participants, New Participants and Adjusted Participants until the end of the relevant first Historical Assessment Period.
“Initial Participant”	means a Participant who has registered with the Market Operator for the Market Trial as set out in paragraph 8.17.

“Market Trial”	means the full-scale 'as-live' operational exercising of market systems and processes, conducted by the Market Operator and Market Trial participants, and the preparation therefore, which is to take place prior to the Market Start Date in preparation for the commencement of trading in the Pool.
“Initial Party Registration Form”	means an application form issued by the Market Operator to Applicants who have registered for the Market Trial, which sets out all the items of data and other information that must be provided by Parties seeking to become Initial Participants.
“Trial Offer Data”	means commercial and technical offer data in respect of a generator unit submitted to the Market Operator during the Market Trial.