Trading and Settlement Code Part B v0.1 Appendices

APPENDIX A: STANDARD LETTER OF CREDIT

This Appendix A contains a standard template for a Letter of Credit.

TEMPLATE FOR STANDARD LETTER OF CREDIT

Form of Doc Credit: IRREVOCABLE STANDBY LETTER OF CREDIT

Documentary Credit Number:

Date of Issue:

Applicable Rules: UCP [LATEST VERSION NO]

Date and Place of Expiry:

Applicant   ([insert Participant's name] or [insert company name]on behalf of [insert Participant's name]

Beneficiary: EirGrid plc and SONI Limited, trading as SEMO", being the Market Operator under the SEM Trading and Settlement Code. [address]

Currency Code, Amount (Maximum total amount):

Available With (ADVISING BANK IE SEMO'S BANK BY PAYMENT)

Partial Shipments/Drawings: Allowed

Documents required:

Beneficiary Statement, as detailed below, must be on Market Operator letterhead

QUOTE:

"We, the Market Operator under the Trading and Settlement Code (the "Beneficiary") hereby state that [insert Participant's name] is in default of its obligation to pay pursuant to the Trading and Settlement Code (to which the Participant is a party) under paragraph [insert details] and as a result we hereby demand …………..[insert amount being claimed] under Standby Letter of Credit number……..... issued by …………[insert name of Issuing Bank]. Payment in respect of this Beneficiary Statement shall be effected immediately to [insert relevant account details]. We confirm that the signatory(ies) to this Beneficiary Statement are empowered to sign and make this Beneficiary Statement on behalf of the Beneficiary.

Terms defined in the Standby Letter of Credit referred to above have the same meaning when used in this Beneficiary Statement."

SIGNED FOR AND ON BEHALF OF THE MARKET OPERATOR.

NAME...................... TITLE.............

UNQUOTE

Additional Conditions:

1.   Not Used.

2.   This irrevocable Standby Letter of Credit is available by payment at sight against presentation to the Advising Bank of a Beneficiary Statement as detailed in Documents required.

3.   The Beneficiary Statement must be made on original letterhead paper of the Beneficiary and signed on its behalf, and must be presented to the Advising Bank on or before the Expiry Date.

4.   Upon receipt of a signed Beneficiary Statement in compliance with the above conditions the Advising Bank is required promptly to notify us by SWIFT of receipt of such Beneficiary Statement and inform us of the relevant details of such Beneficiary Statement. Provided such notification is received by us no later than 14:00 hrs on any weekday on which banks are open for business in Dublin and Belfast, we shall make payment under this Standby Letter of Credit for Same Day Value on that day or if received after 14.00hrs on the next such weekday in accordance with such notification and shall confirm payment by notifying the Advising Bank by SWIFT.

5.   Where we, the Issuing Bank are also the Advising Bank, we may revise the above notification requirements as appropriate provided that this shall in no way affect the obligation on us to make payment under this Standby Letter of Credit.

6.   We the Issuing Bank hereby waive any right to set off or counterclaim whatsoever against any amounts payable under this Standby Letter of Credit in respect of any claims we may have against the Beneficiary and such amounts shall be paid free and clear of all deductions or withholdings whatsoever.

7.   Effective From:

8.   This Standby Letter of Credit is personal to you and your rights hereunder including the right to receive proceeds to this Standby Letter of Credit, are not assignable.

This Letter of Credit shall be governed by and construed in accordance with the laws of Northern Ireland and the parties 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 this Letter of Credit.

Charges:

All Issuing Bank charges are for the account of the Applicant.

All Advising Bank charges are for the account of the Beneficiary.

Confirmation:

CONFIRMATION WITH OR WITHOUT? (THIS INSTRUCTION IS TO SEMO'S BANK TO ADD CONFIRMATION OR NOT)

Instruction to Pay:

PLEASE REFER TO ADDITONAL CONDITIONS.

ADVISING BANK TO CLAIM REIMBURSEMENT BY SWIFT AND RETAIN BENEFICIARY STATEMENT ON FILE.

APPENDIX

[Market Operator letterhead]

We, the Market Operator under the Trading and Settlement Code (the "Beneficiary") hereby state that [insert Participant's name] is in default of its obligation to pay pursuant to the Trading and Settlement Code (to which the Participant is a party) under paragraph [insert details]

and as a result we hereby demand …………..[insert amount being claimed] under Standby Letter of Credit number……... issued by …………[insert name of Issuing Bank]. Payment in respect of this Beneficiary Statement shall be effected immediately to [insert relevant account details].   We confirm that the signatory(ies) to this Beneficiary Statement are empowered to sign and make this Beneficiary Statement on behalf of the Beneficiary.

Terms defined in the Standby Letter of Credit referred to above have the same meaning when used in this Beneficiary Statement.

APPENDIX B: DISPUTE RESOLUTION AGREEMENT

This Appendix B contains the template for a Dispute Resolution Agreement.

Words in square brackets should be deleted as appropriate depending on whether there is a one member DRB or a three member DRB.

TEMPLATE FOR DISPUTE RESOLUTION AGREEMENT

DISPUTE RESOLUTION AGREEMENT

GENERAL CONDITIONS OF DISPUTE RESOLUTION AGREEMENT FOR A DISPUTE RESOLUTION BOARD

BETWEEN:-

1   THE DISPUTING PARTIES, REFERRED TO IN ANNEX 1

AND

2   EACH MEMBER OF THE DISPUTE RESOLUTION BOARD, REFERRED TO IN ANNEX 2 ("MEMBER" OR "THE MEMBERS" AS APPLICABLE)

RECITALS

A.   The Disputing Parties are, directly or via the Accession Deed, adhering parties to the Framework Agreement dated xxx, by which they agree to be bound by the terms of the Trading and Settlement Code ("Code).

B.   The Disputing Parties are parties to a Dispute within the meaning of the Code.

C.   The Dispute has, in accordance with section B.19 of the Code, been referred to a [single member / three member] Dispute Resolution Board ("DRB") for resolution.

D.   In order to facilitate the resolution of the Dispute by the DRB, the Disputing Parties wish to enter into this Agreement with each of the Members, setting out the terms and conditions upon which each Member is engaged to hear and determine the Dispute.

1.   Definitions and Interpretation

1.1 Unless the context requires otherwise, words and expressions which are not otherwise defined in this Dispute Resolution Agreement (including the Recitals) shall have the meanings assigned to them in the Code.

1.2 Where the DRB is comprised of a single member, references to "the Members" shall be construed as references to "the Member" and references to "each Member" shall be construed as references to "the Member".

2. General Provisions

2.1 Each Disputing Party engages each Member to constitute a Dispute Resolution Board to hear and determine the Dispute.

2.2 Each Member accepts that engagement.

2.3 Each Member agrees to hear and determine the Dispute:

1. in accordance with the Code, the Framework Agreement and Applicable Laws; and

2. on the terms and conditions set out in this Agreement.

2.4 This Agreement shall take effect when signed by all parties to this Agreement, on the last date of signature by a party.

2.5 The appointment of the Members pursuant to this Agreement is a personal appointment. At any time, the Members may give not less than 14 days' notice of resignation to the Disputing Parties and to the Market Operator, and, where the Market Operator is a Disputing Party, to the Regulatory Authorities, and the Dispute Resolution Agreement shall terminate upon the expiry of this period.

2.6 No assignment or subcontracting of the Dispute Resolution Agreement is permitted without the prior written agreement of all the Disputing Parties to it and of the Members.

2.7 When appointing each Member, the Disputing Parties shall request of the relevant Member and shall be entitled to rely upon the Member's representations that he/she:

1. is experienced in and familiar with alternative dispute resolution procedures; or

2. has appropriate experience of the electricity industry, or the particular matters the subject of the dispute,

and that he/she is familiar with, or shall, prior to the commencement of the hearing of the Dispute, be familiar with, the provisions of the Code.

3. Warranties

3.1 The Members warrant and agree that they are and shall be impartial and independent of the Market Operator and the Disputing Parties. Each Member shall promptly disclose, to each Disputing Party and to the other Members, any fact or circumstance which might appear inconsistent with his/her warranty and agreement of impartiality and independence.

4. Objectives of the Dispute Resolution Procedure

4.1 It is intended that procedures effected under this Dispute Resolution Agreement should to the extent possible:

1. be simple, quick and inexpensive;

2. preserve or enhance the relationship between the Disputing Parties;

3. without prejudice to the obligations of each of the Disputing Parties pursuant to the Code and in particular paragraph B.19.1.7 thereof, preserve and allow for the continuing and proper operation of the Code and the Single Electricity Market;

4. resolve disputes on an equitable basis in accordance with the provisions of the Code; and

5. encourage resolution of disputes without formal legal representation or reliance on legal procedures.

5. General Obligations of the Members

5.1 Each Member shall:

1. have no interest financial or otherwise in the Disputing Parties, nor any financial interest in the Code except for payment under the Dispute Resolution Agreement;

2. not previously have been employed as a consultant or otherwise by any of the Disputing Parties, except in such circumstances as were disclosed in writing to all of the Disputing Parties before they signed the Dispute Resolution Agreement;

3. have disclosed in writing to the Disputing Parties and the other Members, before entering into the Dispute Resolution Agreement and to his/her best knowledge and recollection, any professional or personal relationships with any director, officer or employee of the Disputing Parties, and any previous involvement in the SEM;

4. not, for the duration of the Dispute Resolution Agreement, be employed as a consultant or otherwise by any of the Disputing Parties, except as may be agreed in advance in writing by the Disputing Parties and the other Members;

5. comply with the applicable provisions of section B.19 of the Code;

6. not, while a Member, enter into discussions or make any agreement with any of the Disputing Parties regarding employment by any of them, whether as a consultant or otherwise, after ceasing to act under the Dispute Resolution Agreement;

7. ensure his/her availability for all site visits and hearings as are necessary;

8. be knowledgeable of the Code and all elements of the Dispute by studying all documents received prior to commencement of the hearing of the Dispute; and

9. treat the details of the DRB's activities and hearings as private and confidential, and not publish or disclose them without the prior written consent of the Disputing Parties and the other Members.

6. General Obligations of the Disputing Parties

6.1 The Disputing Parties and the Disputing Parties' employees, officers, servants or agents shall not request advice from or consult with the Members regarding the Code, otherwise than in accordance with the procedures determined by the DRB under the Code and the Dispute Resolution Agreement, and except to the extent that prior agreement is given by all other Disputing Parties and the other Members. The Disputing Parties shall be responsible for compliance with this provision by the Disputing Parties' employees, officers, servants or agents.

6.2 The Disputing Parties undertake to each other and to the Members that the Members shall not, except as otherwise agreed in writing by the Disputing Parties and the Members, be liable for any claims for anything done or omitted in the discharge or purported discharge of the Members' functions, unless the act or omission is shown to be in bad faith.

6.3 The Disputing Parties hereby jointly and severally indemnify and hold each Member harmless from and against claims from which he/she is relieved from liability under the preceding clause 6.2.

7. Breach of this Agreement

7.1 The parties acknowledge that the failure by a Disputing Party to comply with a requirement or determination of the Dispute Resolution Board:

1. does not constitute a breach of this Agreement; but

2. is a breach of the Code that may be referred to the Market Operator as an alleged breach of the Code, to be dealt with in accordance with the terms of the Code.

8. Payment

8.1 The Members' basis for charging shall be [insert basis for charging].

8.2 The Disputing Parties hereby agree to share equally the costs of the Members amongst them, subject to the terms of the Code and, in particular, any decision of the Dispute Resolution Board including as to costs.

9. Termination

9.1 At any time:

1. the Disputing Parties may jointly terminate the Dispute Resolution Agreement by giving 21 days' notice to the Members; or

2. the Members may resign as provided for in clause 2.

9.2 If any of the Members fails to comply with the Dispute Resolution Agreement, the Disputing Parties may, without prejudice to their other rights, jointly terminate it by notice to the Members. The notice shall take effect when received by the Members.

9.3 Any such notice, resignation and termination shall be final and binding on the Disputing Parties and the Members. However, a notice for the purposes of clause 9.1(1) or 9.2 by a Disputing Party, but not by all, shall be of no effect.

9.4 Termination of this Agreement shall be without prejudice to the rights and obligations of the parties having accrued prior to the date of termination.

10. Default of the Members

10.1 If a Member fails to comply with any obligation under clause 5, he/she shall not be entitled to any fees or expenses hereunder and shall, without prejudice to their other rights, reimburse each of the Disputing Parties for any fees and expenses received by the Member and the other Members, for proceedings or decisions (if any) of the DRB which are rendered void or ineffective.

11. Severability

11.1 If any part of this Agreement becomes invalid, illegal or unenforceable the parties shall in such an event negotiate in good faith in order to agree the terms of a mutually satisfactory provision to be substituted for the invalid, illegal or unenforceable provision which as nearly as possible gives effect to their intentions as expressed in this Agreement. Failure to agree on such a provision within one month of commencement of those negotiations shall result in automatic termination

of this Agreement. The obligations of the parties under any invalid, illegal or unenforceable provision of the Agreement shall be suspended during such a negotiation.

12.   Waiver

12.1   The failure of a party to exercise or enforce any right under this Agreement shall not be deemed to be a waiver of that right nor operate to bar the exercise or enforcement of it at any time or times thereafter.

13.   Entire Agreement

13.1   This Agreement and the Code, constitute the entire, complete and exclusive agreement between the parties in relation to the subject matter hereof, being the terms of engagement of the Members by the Disputing Parties.

14.   Governing Law and Jurisdiction

14.1   Any dispute or claim arising out of or in connection with this Dispute Resolution Agreement shall be governed by the laws of Northern Ireland and the parties hereby submit to the exclusive jurisdiction of any of the Courts of Ireland and the Courts of Northern Ireland for all disputes arising out of, under or in relation to this Dispute Resolution Agreement, in accordance with the terms of the Code.

EXECUTED THIS DAY OF

BY

……………………………..

DISPUTING PARTY

…………………………….

DISPUTING PARTY

…

…………………………….

DRB MEMBER

…………………………….

DRB MEMBER

…………………………….

DRB MEMBER

APPENDIX C: FORM OF AUTHORITY

This Appendix C contains a standard template for a Form of Authority for Appointment of an Intermediary.

TEMPLATE FOR FORM OF AUTHORITY FOR APPOINTMENT OF AN INTERMEDIARY

FORM OF AUTHORITY FOR APPONTMENT OF AN INTERMEDIARY

THIS FORM OF AUTHORITY dated the [] day of [] [20__] is made between:

(I)   [Insert name of generator (if a company, please give full corporate name)]:

("Licensed Generator")

having its place of business at [Insert address of Licensed Generator]

being a [registered company/partnership/sole trader etc] registered under the laws of [insert country of registration if a company] and whose company registration number is [insert if a company];

and

(II)   [Insert name of proposed intermediary (if a company, please give full corporate name)]

("Intermediary")

having its place of business at [Insert address of Licensed Generator]

being a [registered company/partnership/sole trader etc] registered under the laws of [insert country of registration if a company] and whose company registration number is [insert if a company].

In respect of

[Insert description of generator unit or units to which this Form of Authority applies]

("Units")

Whereas:

1. The Licensed Generator legally controls the Units and is the subject of a [licence/authorisation/exemption] issued by the CER to use the Units for the purpose of generation of electricity in Ireland and/or a [licence/authorisation/exemption] issued by the NIAUR to use the Units for the purpose of generation of electricity in Northern Ireland];

2. The Licensed Generator and the Intermediary are parties to a contract ("the Contract") which satisfies all of the criteria for appointment of an Intermediary pursuant to Regulatory Authorities' Decision Paper AIP/SEM/07/029 and/or satisfies criterion IV pursuant to the SEM Committee's Decision Paper SEM/07/11;

3. The Licensed Generator wishes to appoint the Intermediary to act as the Participant in respect of the Units under the Code for the purposes of their trade in electricity in the all-island wholesale single electricity market ("SEM") and the Intermediary wishes to accept such appointment, in accordance with the following terms.

1. Interpretation

1.1 In this Form of Authority, "Trading and Settlement Code" or "Code" means the trading arrangements for the SEM established 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 and as designated pursuant to regulations made under section 9BA(2)(a) of the Electricity Regulation Act 1999 (Ireland).

1.2 Capitalised terms which are not defined in this Form of Authority shall have the meanings ascribed thereto in the Trading and Settlement Code.

2. Authorisation

2.1 The Licensed Generator hereby appoints and authorises the Intermediary to register the Units as Generator Units for the purposes of participation under the Trading and Settlement Code and the Intermediary accepts such appointment.

2.2 The Licensed Generator authorises the Intermediary, subject to the Intermediary becoming a party to the Code and successfully registering the Units under the Code, to undertake all of the obligations, covenants, undertakings, duties and liabilities of a Participant in respect of the Units under the Code [during the first 12 months from the Market Start Date]/[for the duration of the Contract]/ [for so long as the Units are registered under the Code as Price Taker Generator Units] and the Intermediary agrees to such.

2.3 The Licensed Generator authorises the Intermediary, subject to the Intermediary becoming a Party to the Code and successfully registering the Units under the Code, to benefit from all of the rights of a Participant under the Code, including the right to receive payments under the Code, in respect of the Units [during the first 12 months from the Market Start Date]/[for the duration of the Contract]/ [for so long as the Units are registered under the Code as Price Taker Generator Units] and the intermediary agrees to such.

3. Governing Law and Jurisdiction

3.1   The governing law of this Form of Authority shall be the law of Northern Ireland.

3.2   The parties hereby submit to the exclusive jurisdiction of the Courts of Ireland and the Courts of Northern Ireland for all disputes arising out of, under or in relation to this Form of Authority.

[To be executed as a Deed and (where appropriate to the legal form of the Licensed Generator) under seal]

[To be executed as a Deed and (where appropriate to the legal form of the Intermediary) under seal]

APPENDIX D: LIST OF AGREED PROCEDURES

1.   This Appendix D describes, and sets out the scope of, each Agreed Procedure.

2.   **Agreed Procedure 1 "Registration"**: sets out the detailed procedures applying to the Market Operator, Parties and (where applicable) Applicants in relation to:

   (a)   the data requirements set out in Appendix H;

   (b)   the operation of the registration process under sections B.7 to B.11;

   (c)   the operation of the data validation process set out in Chapter C (Data and Information Systems); and

   (d)   the Data Transaction (timelines and format) under which the Market Operator shall inform a Participant of the Required Credit Cover for a Unit prior to the registration of that Unit.

3.   **Agreed Procedure 3 "Communication Channel Qualification":** sets out the detailed procedures applying to the Participants in relation to the obtaining and maintenance of a functioning Type 2 Channel or Type 3 Channel, and the security required for these Communication Channels, and also sets out the manner in which Participants and (in the case of suspension of Communication Channel Qualification) the Market Operator shall perform the following functions in order that Participants may "issue", "submit", "send" or "receive" Data Transactions and to maintain a secure IT system:

   (a)   registering Type 2 Channel and Type 3 Channel communications;

   (b)   testing Participant qualification in respect of Type 2 Channel and Type 3 Channel communications;

   (c)   accessing the Market Operator's Isolated Market System;

   (d)   maintaining Communication Channel Qualification status in respect of both Type 2 Channel and Type 3 Channel; and

   (e)   suspension of Communication Channel Qualification status in respect of Type 2 Channel and Type 3 Channel.

4.   **Agreed Procedure 4 "Transaction Submission and Validation"**: sets out the detailed obligations of the Parties in relation to the submission of data under Chapter D "Balancing Market Data Submission" and Settlement Reallocation Agreements.

5.   **Agreed Procedure 5 "Data Storage and IT Security"**: sets out the detailed procedures applying to the Market Operator and Parties in relation to:

   (a)   the technical security, data storage and data access specifications and standards with which the Isolated Market System of the Market Operator and of each Participant must comply;

   (b)   the technical security specifications and standards that must be maintained in order to gain access to the Market Operator's Isolated Market System;

   (c)   the security standards for data communications that must be complied with in respect of Type 2 Channel and Type 3 Channel communications;

   (d)   computational machine precision and methods of rounding; and

   (e)   other relevant matters under Chapter C "Data and Information Systems".

6.   **Agreed Procedure 6 "Data Publication and Data Reporting"**: sets out the detailed procedures applying to the Market Operator and Parties in relation to:

(a)   the method of publication of data, and the updating of published data;

(b)   the data listed in Appendix E "Data Publication" that must be provided by the Market Operator in response to a request made by a Participant, and the method of such response;

(c)   the data that must be provided by the Market Operator to certain Participants only (or all of them), and the method by which the Market Operator must make such data available;

(d)   the matters set out in paragraphs A.4.1.1(o), A.4.2.1(l), B.17.22.2, B.28, B.29, B.32.4.1, C.2.4.2, C.4.1.3 and C.7.

7.   **Agreed Procedure 7 "Emergency Communications":** sets out the detailed procedures applying to the Market Operator and Parties that arise in the event of and for the duration of a General Communication Failure, a General System Failure or a Limited Communication Failure in relation to:

(a)   the processes for communication of data required for market settlement;

(b)   the process to be followed by the Market Operator in notifying the market that a General Communication Failure or a General System Failure is in effect;

(c)   general responsibilities of Parties;

(d)   updates to be issued by the Market Operator;

(e)   estimation to be carried out by the Market Operator as to how long the emergency situation will remain in effect; and

(f)   the matters set out in paragraphs C.3.1.5, C.3.1.10, C.4 and C.5.

8.   **Agreed Procedure 9 "Management of Credit Cover and Credit Default":** sets out the detailed procedures applying to the Market Operator and Participants in relation to:

(a)   the processes for managing the Credit Cover that is required to be maintained by Participants;

(b)   the process that is to be invoked in the event of a default by a Participant in relation to Credit Cover; and

(c)   other relevant matters under Chapter G (Financial and Settlement).

9.   **Agreed Procedure 10 "Settlement Reallocation":** sets out the detailed procedures applying to the Market Operator and Participants in relation to Settlement Reallocation Agreements and the cancellation of Settlement Reallocation Agreements, and the matters set out in paragraph G.17.

10.   **Agreed Procedure 11 "Market System Operation, Testing, Upgrading and Support":** sets out the detailed procedures applying to the Market Operator in relation to the:

(a)   provision of advice to Parties in relation to the operation of the Market Operator's Isolated Market System and Communication Channels;

(b)   provision to Parties of a facility for the reporting of incidents;

(c)   implementation and coordination of the Market Operator's Isolated Market System and its interfaces to Communication Channels;

(d)   scheduled testing and down-time of the Market Operator's Isolated Market System or its interfaces to Communication Channels;

(e)   commissioning of an externally-audited report in the event of a General Communication Failure or General System Failure;

(f) restoration of the Market Operator's Isolated Market System in the event of a General System Failure; and

(g) the matters set out in paragraphs C.2.2.5, C.2.5.1, C.2.5.3, C.5.4.4 and C.5.5.1.

11. **Agreed Procedure 12 "Modifications Committee Operation"**: sets out the detailed procedures applying to the Market Operator and Parties in relation to the rules and proceedings of the Modifications Committee under section B.17.

12. **Agreed Procedure 13 "Settlement Queries "**: sets out the detailed procedures applying to the Market Operator and Parties in relation to the raising and processing of Settlement Queries raised in accordance with section G.3 of the Code.

13. **Agreed Procedure 14 "Disputes"** sets out the detailed obligations of the Market Operator and Parties in relation to the procedures governing Disputes under section B.19.

14. **Agreed Procedure 15 "Settlement and Billing"**: sets out the detailed procedures applying to the Market Operator and Parties in relation to the issuing of Market Operator , Settlement Statements, and Settlement Documents in accordance with Chapter G "Financial and Settlement" and Appendix G "Settlement Statements, Reports and Settlement Documents".

15. **Agreed Procedure 16 "Provision of Metered Data"**: sets out the detailed procedures applying to Meter Data Providers in relation to the grouping of Meter Data for provision to the Market Operator, and the timing of such provision.

16. **Agreed Procedure 17 "Banking and Participant Payments"**: sets out the detailed procedures applying to the Participants and the Market Operator in relation to the banking arrangements required under the Code for Settlement, including the manner in which Participants are required to make payments to the Market Operator, and the manner in which the Market Operator is required to make payments to Participants. Agreed Procedure 17 "Banking and Participant Payments" also sets out the detailed obligations of the Parties in relation to the management of SEM Collateral Reserve Accounts.

17. **Agreed Procedure 18 "Suspension and Termination"**: sets out the detailed timings and procedures regarding the operation of section B.18.

APPENDIX E: DATA PUBLICATION

1. A list of data items that the Market Operator shall be required to publish, and the timing with which the Market Operator shall be required to publish them, is contained in the tables in this Appendix E. Procedures for the updating of publications and the method of publication are contained in Agreed Procedure 6 "Data Publication and Data Reporting".

2. All data received by the Market Operator over a Type 2 or Type 3 Communication Channel, or calculated by the Market Operator, shall be published according to the specific timelines set out in this Appendix.

3. Agreed Procedure 6 "Data Publication and Data Reporting", sets out the manner in which the Market Operator shall be required to comply with requests by Participant for reports with any data detailed in paragraph 2 of this Appendix above to be made available for communication over Type 2 or Type 3 Communication Channels. Subject to data confidentiality, and the timelines set out in this Appendix, all such reports will be published on the Market Operator's website.

4. Agreed Procedure 6 "Data Publication and Data Reporting", will follow the following principles set out in the following paragraphs or sub-sections of the Code: A.4.1.1(o), A.4.1.1(p), B17.22.2, B.28.1.3, B.29.1.1, B.32.4.1, C.2.4.2, C.4.1.3 and C.7.1 to C.7.5.

Table 1 – Data publication list part 1: updated periodically as required

Time	Item / Data Record	Term	Subscript
Periodically as required			
No less frequently than twice yearly in line with the Scheduled Release	The Code (including Agreed Procedures)		
At least once a year and no later than two weeks prior to the first meeting in the schedule	Schedule of Modification Panel meetings		
As soon as practical but no later than two Working Days after receipt of Modification Proposal	Modification Proposal		
As soon as practical but no later than two Working Days after receipt of consultation on Modification Proposal	Public Consultation on Modification Proposal		
As soon as practical but no later than two Working Days after closing of consultation on Modification Proposal	Responses to Public Consultation on Modification Proposal		
As soon as practical but no later than two Working Days after receipt of further information on Modification Proposal	Further information on Modification Proposal		
As soon as practical but no later than two Working Days after issue of Final Recommendation Report to the Regulatory Authorities	Final Recommendation Report		

Time	Item / Data Record	Term	Subscript
As soon as practical but no later than two Working Days after receipt of Regulatory Authority decision on Final Modification Recommendation	Regulatory Authority decision on Final Modification Recommendation		
As updated and at least within five Working Days of a successful application for Registration or Deregistration	List of Parties, Participants and each of their Generator Units and Supplier Units		
As soon as practical after being issued and at least within two Working Days of issue	Making or lifting of a Suspension Order		
As soon as practical after being issued and at least within two Working Days of issue	Termination Order		
As received and at least within two Working Days of issue	Generator Unit Under Test Notice		
As soon as practical after being updated	Proposed Market Operator Isolated Market System Testing Schedule		
As updated and at least within five Working Days of update	Details of the Accession Fees and Participation Fees		
As updated and at least two weeks in advance of the Meeting	Date of the next meeting of the Modifications Committee		
Within one Working Day of receipt from the Regulatory Authorities	Supplier Suspension Delay Period		
As updated and at least within two Working Days of update	Members and chairperson of the Modification Committee		
As soon as possible after calculation	Calculations and methodology used by the Market Operator during Administered Settlement		
As required	REMIT Data Transaction		h
Updated as required from time to time	Price Materiality Threshold		
Updated as required from time to time	Settlement Recalculation Threshold		
Within five Working Days of receipt from the Regulatory Authorities approval	Imbalance Weighting Factor	WFIMB	γy
Within five Working Days of receipt from the Regulatory Authorities approval or two months before effective day whichever is later	De Minimis Acceptance Threshold		
At least four Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Full Administered Scarcity Price	PFAS	

Time	Item / Data Record	Term	Subscript
Within five Working Days of receipt from the Regulatory Authorities approval or two months before effective day whichever is later	Reserve Scarcity Price Curve	PRSC	Θ
Within five Working Days of receipt from the Regulatory Authorities approval or two months before effective day whichever is later	Price Average Reference Quantity		
Within five Working Days of receipt from the Regulatory Authorities approval	Information Imbalance Quantity Weighting Factor	WFQII	uβγ
Within five Working Days of receipt from the Regulatory Authorities approval	Information Imbalance Tolerance	TOLII	uβγ
Within five Working Days of receipt from the Regulatory Authorities approval	Information Imbalance Price	PII	uγ
Within five Working Days of receipt from the Regulatory Authorities approval	Tracked Difference Payment Shortfall Amount	CSHORTDIFFPTRACK	vd
Within five Working Days of receipt from the Regulatory Authorities approval	Carbon Price	PCARBON	m
Within five Working Days of receipt from the Regulatory Authorities approval	Natural Gas Fuel Price	PFUELNG	m
Within five Working Days of receipt from the Regulatory Authorities approval	Oil Fuel Price	PFUELO	m
Within five Working Days of receipt from the Regulatory Authorities approval	Peaking Unit Theoretical Efficiency	FTHEORYPU	y
Within five Working Days of receipt from the Regulatory Authorities approval	Natural Gas Carbon Intensity Factor	FCARBONING	y
Within five Working Days of receipt from the Regulatory Authorities approval	Oil Carbon Intensity Factor	FCARBONIO	y
Within five Working Days of receipt from the Regulatory Authorities determination	Aggregated Settlement Period	α	
At least two Months before start of the Capacity Auction, or within five Working Days of its approval from the Regulatory Authorities, whichever is later	Annual Stop-Loss Limit Factor	FSLLA	uy
At least two Months before start of the Capacity Auction, or within five Working Days of its approval from the Regulatory Authorities, whichever is later	Billing Period Stop-Loss Limit Factor	FSLLB	ub

Table 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 Regulatory Authorities, whichever is later	Annual Capacity Charge Exchange Rate	XRCCA	y
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Capacity Duration Exchange Rate	XRCD	ny
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Capacity Charge Metered Quantity Factor	FQMCC	y
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Supplier Capacity Charge Price	PCCSUP	y
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Difference Payment Socialisation Multiplier	FSOCDIFFP	y
At least four Months before start of Year	Annual Load Forecast		
At least four Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Market Price Cap	PCAP	y
At least four Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Market Price Floor	PFLOOR	y
At least four Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Residual Meter Volume Interval Proportion	RMVIP	ey
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Residual Error Volume Price	PREV	y
At least one Month before start of Year	Fixed Market Operator Charge (Supplier Unit)	CMOAV	vy
At least one Month before start of Year	Fixed Market Operator Charge (Generator Unit)	CMOAU	uy

Time	Item / Data Record	Term	Subscript
At least one Month before start of Year	Variable Market Operator Price	PVMO	y
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Engineering Tolerance	TOLENG	
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	MW Tolerance	TOLMW	t
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	System per Unit Regulation Factor	FUREG	
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Discount for Over Generation Factor	FDOG	uγ
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Premium for Under Generation Factor	FPUG	uγ
Four Weeks before start of Audit, or within one Working Day of its receipt from the Regulatory Authorities, whichever later	Terms of Reference for Market Operator Audit		
Within five Working Days after delivery of Audit Report in its final form to the Regulatory Authorities, or within one Working Day of its receipt from the Regulatory Authorities, whichever later	Audit Report		
At least two Months before start of Tariff Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later	Transmission Loss Adjustment Factors	FTLAF	uγ for Generator Units, lγ for Interconnector
At least two Months before start of Tariff Year, or within five Working Days of its receipt from the relevant System Operator, whichever is later	Distribution Loss Adjustment Factors	FDLAF	uγ for Generator Units, lγ for Interconnector
At least two weeks before start of Tariff Year, or within five Working Days of its receipt from the relevant System Operator, whichever is later	Combined Loss Adjustment Factors	FCLAF	uγ for Generator Units, lγ for Interconnector
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities,	Imperfections Price	PIMP	y

Time	Item / Data Record	Term	Subscript
whichever later			
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Imperfections Charge Factor	FCIMP	γy
Four Months before start of Year	Testing Tariff	PTESTTARIFF	uγ
Four Months before start of Year	Settlement Calendar		
Four Months before start of Year, and as updated	Schedule of Testing Tariffs		
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Fixed Credit Requirement, in respect of Generator and/or Supplier Units	FCR	py
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Historical Assessment Period for the Billing Period	γ	y
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Analysis Percentile Parameter	AnPP	
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Credit Cover Adjustment Trigger		
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Currency Cost Price	PCC	y
At least two Months before start of Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever later	Currency Cost Charge Factor	FCCA	y
In April of each Year	Annual Maintenance Schedule - Transmission Line Outages		
At least two Months before start of Year	Two Year Maintenance Schedule - Generator Outages Schedule		

Table 3 – Data publication list part 3: updated Monthly

Time	Item / Data Record	Term	Subscript
Monthly			
Within five Working Days of its creation	Market Operator Performance Report		

Time	Item / Data Record	Term	Subscript
At least one Working Day before start of Month	Monthly Maintenance Schedule Generator Unit outages	– --	--
At least one Working Day before start of Month	Monthly Maintenance Schedule Transmission System line outages	–	
At least one Working Day before start of Month	Monthly Load Forecast and assumptions	--	--
At least once every Month	Registered Capacity	RC	u

Table 4 – Data publication list part 4: updated daily in advance of the Trading Day

Time	Item / Data Record	Term	Subscript
Daily, in advance of the the Trading Day			
By 17:00 on the day prior to the Gate Closure 1 in respect of the Trading Day	Trading Day Exchange Rate between euro (€) and pounds sterling (£)	-	-
By 17:00 on the day prior to the Trading Day, plus as updated	Unit Under Test		
By 17:00 on the day prior to the Trading Day, plus as updated	Net Transfer Capacity		
By 17:00 on the day prior to the Trading Day, plus as updated	Four Day Load Forecast	-	-
By17:00 on the day prior to the Trading Day, plus as updated	Four Day Rolling Wind Power Unit Forecast by Unit		
By 17:00 on the day prior to the Trading Day, plus as updated	Four Day Rolling Wind Power Unit Forecast aggregated by Jurisdiction	-	-
By 17:00 on the day prior to the Trading Day, plus as updated	Four Day Rolling Wind Power Unit Forecast by Market	-	-
By 17:00 on the day prior to the Trading Day, plus as updated	OUTAGE ADJUSTED WIND UNIT FORECAST – 36 hours lookout		
By 17:00 on the day prior to the Trading Day	Daily Transmission Outage Schedule Report		

Table 5 – Data publication list part 5: updated hourly or half hourly prior to the Imbalance Settlement Period (ISP)

Time	Item / Data Record	Term	Subscript
Hourly or half hour prior to each ISP			
Every hour prior to each ISP	Forecast Imbalance		γ
Every half hour prior to each ISP	Net Imbalance Volume Forecast		γ

Table 6 – Data publication list part 6: updated following each Gate Closure 1

Time	Item / Data Record	Term	Subscript
Following each Gate Closure 1			
After each Gate Closure 1	Aggregated Final Physical Notifications		γ

Table 7 – Data publication list part 7: updated following each Imbalance Pricing Period (IPP) or Imbalance Settlement Period (ISP)

Time	Item / Data Record	Term	Subscript
Following each IPP or ISP			
Following each IPP	Imbalance Price by IPP	PIMB	φ
Following each ISP	Imbalance Price by ISP	PIMB	γ
Following each IPP	Net Imbalance Volume by IPP	QNIV	φ
Following each ISP	Net Imbalance Volume by ISP	QNIV	γ
Following each IPP	Net Imbalance Volume	TNIV	ukφ
Following each IPP	Demand Control Volume	QDC	φ
Following each IPP	Marginal Energy Action	PMEA	φ
Following each IPP	Price Average Reference Quantity	QPAR	φ
Following each IPP	Price of Bid Offer Acceptance	PBOA	φ
Following each IPP	Quantity of Bid Offer Acceptance	QBOA	φ
Following each IPP	SO Flag	FSO	ukφ
Following each IPP	Non-Marginal Flag	FNM	ukφ
Following each IPP	Emergency Flag	FEI	ukφ
Following each ISP	Anonymised Inc / Dec Curves		

Table 8 – Data publication list part 6: updated daily post Trading Day or Settlement Day

Time	Item	Term	Subscript
Daily, post Trading Day or Settlement Day			
By 16:00 Trading Day +1	Technical Offer Data Accepted		ut
By 16:00 Trading Day +1	Forecast Availability		uγ
By 16:00 Trading Day +1	Outturn Availability		uγ
By 16:00 Trading Day +1	Final Physical Notifications		uγ

Time	Item	Term	Subscript
By 16:00 Trading Day +1	Commercial Offer Data Accepted		uγ
By 16:00 Trading Day +1	Daily Generator Outage Schedules		
By 16:00 Trading Day +1	Demand Control Data Transaction	QDC	φ
By 16:00 Trading Day +1 and by 17:00 Trading Day +5	Dispatch Instructions	-	-
By 16:00 Trading Day +1	Load Shedding Volume		
By 16:00 Trading Day +1	SO Interconnector Trades	-	-
By 17:00 Trading Day +5	Initial Interconnector Flows and Residual Capacity		
By 16:00 Trading Day +1	Generator Unit Technical Characteristics Data Transaction		
By 16:00 Trading Day +1	Nominal System Frequency	FRQNOR	γ
By 16:00 Trading Day +1	Average System Frequency	FRQAVG	γ
By 16:00 Working Day +1 and by 17:00 Trading Day +5	Metered Generation by Unit	QM	uγ
By 16:00 Working Day +1 and by 17:00 Trading Day +5	Metered Generation by Jurisdiction	QM, QD and NIJ	uγ
			uγ
By 16:00 each Working Day	Credit Assessment Price for the Undefined Exposure Period for Billing Periods	PCA	g
By 16:00 on Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Tolerance for Over Generation	TOLOG	uγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Tolerance for Under Generation	TOLUG	uγ
By 16:00 Two Working Days after Trading Day, by 17:00 Five Working Days after end Trading Day and as updated at 17:00 the day of recalculation	Trading Payments and Charge D+1	CIMB, CPREMIUM, CDISCOUNT, CAOOPO, CABBPO, CCURL, CUNIMB, CII, COCMWP, CREVMWP, CMWP, CIMP, CTEST, CREV,	uγ, uk or vγ as appropriate

Time	Item	Term	Subscript
		CCA	
By 16:00] Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Capacity Quantity Scaling Factor	FSQC	γ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Required Capacity Quantity	qCREQ	y
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Reserve Adjustment Capacity	qCREQAR	y
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Net Capacity Quantity	QCNET	$\Omega\gamma$
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Obligated Capacity Quantity	QCOB	$\Omega\gamma$
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Loss-Adjusted Commissioned Capacity Quantity	qCCOMMISSLF	$\Omega\gamma$
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	De-rating Factor	FDERATE	Ω
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Above De-rated Capacity Factor	FCADERATE	$\Omega\gamma$
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Capacity Quantity	qC	Ωn
By 16:00 Two by Working Days after Trading Day and 17:00 Five Working Days after Trading Day	Initial Primary Auction Capacity Payment Price	PCPIPA	y
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Day-ahead Difference Quantity	QDIFFDA	$\Omega\gamma$
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Day-ahead Trade Quantity	qTDA	xuh
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Day-ahead Trade Price for Trade	PTDA	xuh
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Day-ahead Difference Charge	CDIFFCDA	$\Omega\gamma$
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working	Day-ahead Difference Charge Metered Quantity	QMDIFFCDA	$\nu\gamma$

Time	Item	Term	Subscript
Days after Trading Day			
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Strike Price for Month	PSTR	m
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Loss-Adjusted Accepted Offer Quantity	QAOLF	uoiγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Loss-Adjusted Accepted Bid Quantity	QABLF	uoiγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Loss-Adjusted Offer Price Only Accepted Offer Quantity	QAOOPOLF	uoiγ
By 16:00 Two Working Days after Trading Day and 17:00 Five Working Days after Trading Day	Biased Accepted Offer Quantity	QAOBIAS	uoiγ
B 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Loss-Adjusted Trade Opposite TSO Accepted Offer Quantity	QAOTOTSOLF	uoiγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Within-day Trade Difference Quantity	QDIFFCTWD	Ωγk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Within-day Trade Difference Charge	CDIFFCTWD	Ωγk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Within-day Difference Charge Metered Quantity	QMDIFFCWD	sγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Non-performance Difference Quantity	QDIFFCNP	Ωγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Loss-Adjusted Maximum Import Capacity Market Availability Quantity for Interconnector	qCMAMAXILF	lγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Annual Cumulative Non-performance Difference Charge	CDIFFCNPA	Ω(γ-1)
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Billing Period Cumulative Non-performance Difference Charge	CDIFFCNPB	Ω(γ-1)
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Total Difference Charge	CDIFFCTOT	pγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Day-ahead Difference Payment	CDIFFPDA	vd
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Intraday Trade Quantity for Trade	qTID	xuhk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working	Intraday Trade Price for Trade	PTID	xvhk

Time	Item	Term	Subscript
Days after Trading Day			
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Intraday Trade Difference Quantity	QDIFFPTID	vγk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Intraday Trade Difference Payment	CDIFFPTID	vγk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Tracked Difference Quantity	QDIFFTRACK	vγk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Imbalance Difference Quantity	QDIFFPIMB	vγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Total Difference Payment	CDIFFPTOT	vd
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Daily Total Difference Payment	CDIFFPTOTD	d
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Difference Payment Shortfall Amount	CSHORTDIFFP	vd
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Difference Payment Socialisation Balance in Settlement Day	CBSOCDIFFP	d
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Difference Payment Reimbursement Payment	CREIMDIFFP	v(d-1)
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Tracked Difference Payment Shortfall Charge	CSHORTDIFFPTRACK	vd
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Achievable Difference Payment	CDIFFPACHIEVE	vd
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Total Achievable Difference Payment	CDIFFPACHIEVETOT	pd
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Initial Socialisation Balance	CBSOCI	d

Table 9 – Data publication list part 7: updated on a Capacity Period basis, post end of Capacity Period (all variables Capacity Period+3 WD and Capacity Period +7WD)

Time	Item	Term	Subscript
Each Capacity Period, post end of Capacity Period			
By 17:00] Three Working Days and by 12:00 Seven Working Days after end of	Capacity Payment Price	PCP	Ωn

Time	Item	Term	Subscript
Capacity Period,			
By 17:00 Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Capacity Payments to each Capacity Market Unit	CCP	Ωγ
By 17:00 Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Supplier Capacity Charge Price	PCCSUP	y
By 17:00] Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Difference Payment Socialisation Multiplier	FSOCDIFFP	y
By 17:00 Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Capacity Charge Metered Quantity Factor	FQMCC	γ
By 17:00 Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Capacity Charge	CCC	vc
By 17:00 Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Total Capacity Charge	CCCTOT	pc
By 17:00 Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Difference Payment Socialisation Charge	CSOCDIFFP	vc
By 17:00 Three Working Days and by 12:00 Seven Working Days after end of Capacity Period,	Total Difference Payment Socialisation Charge	CSOCDIFFPTOT	pc

APPENDIX F: OTHER COMMUNICATIONS

INTRODUCTION

1. This Appendix F outlines the detailed Data Record requirements for miscellaneous Data Transactions under the Code not related to Notices of Dispute, Suspension or Termination, or operation of the Modifications Committee.

2. Agreed Procedure 13 "Settlement Queries" sets out the detail of Notices related to the Query process.

3. Agreed Procedure 7 "Emergency Communications" and Agreed Procedure 11 "Market System Operation, Testing, Upgrading, and Support" set out the detail of Notices related to Limited Communication Failures, General Communication Failures, General System Failures.

4. Agreed Procedure 12 "Modifications Committee Operation" sets out the detail of all Notices related to the process of raising Modification Proposals, impact assessing Modification Proposals, seeking consultation on Modification Proposals, publishing the Modifications Committee's Final Modification Recommendation and the decision of the Regulatory Authorities.

5. Chapter B of the Code sets out the treatment of Suspension Orders and Termination Orders.

Generator Unit Under Test Notice

6. Agreed Procedure 4 "Transaction Submission and Validation" sets out the detail of all Generator Unit Under Test Notices, following the principles in paragraphs 7 and 8 of this Appendix below.

7. Each Participant shall submit a Generator Unit Under Test Request to the Market Operator in accordance with the Grid Code in advance of Unit Under Test Start Date. The Generator Unit Under Test Request will specify in all cases Unit Under Test Start Date and time, Unit Under Test End Date and time and the Generator Unit Under Test and any such requirements as specified in the Grid Code.

8. Participants shall submit a Generator Unit Under Test Notice to the Market Operator in accordance with the Grid Code. The Generator Unit Under Test Notice will specify in all cases the Unit Under Test Start Date and time and the Unit Under Test End Date and time, and the Generator Unit Under Test. The Market Operator will ensure that Generator Unit Under Test Notices can be submitted by Participants through Type 2 or 3 Communications Channels.

Maintenance Schedules Data Transactions

9. Each System Operator shall submit an annual Maintenance Schedule Data Transaction to the Market Operator in April each Year, and whenever it is updated. The following shall also apply:

   (a)   The annual Maintenance Schedule Data Transaction shall contain the Outage Schedule for each line in the Transmission System in the relevant Jurisdiction over the year commencing at the submission of the original version of that Data Transaction.

   (b)   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.

10. Each System Operator shall submit a two year Maintenance Schedule Data Transaction to the Market Operator at least two months before the start of each Year, and whenever it is updated. The following shall also apply:

   (a) The Maintenance Schedule Data Transaction shall contain the Maintenance Schedule for each Generator and Interconnector, identified by the System Operator as part of the Grid Code operational planning process in the relevant Jurisdiction over the next two Years.

   (b) The Market Operator shall only provide for Type 1 Communication Channel for the communication of such 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.

11. Each System Operator shall submit a monthly Maintenance Schedule Data Transaction to the Market Operator at least one Working Day before the start of each Month, and whenever it is updated. The following shall also apply:

   (a) The monthly Maintenance Schedule Data Transaction shall contain the Maintenance Schedule of each Generator connected to the Transmission System in the relevant Jurisdiction over the next two Months, and the Maintenance Schedule of each line on the Transmission System in the relevant Jurisdiction over the next two Months.

   (b) The Market Operator shall only provide for Type 1 Communication Channel for the communication of monthly Maintenance Schedule Data Transactions from the System Operator during normal operation of the Market Operator's Isolated Market System and the Type 1 Communication Channel.

APPENDIX G: SETTLEMENT STATEMENTS, SETTLEMENT REPORTS AND SETTLEMENT DOCUMENTS

1. This Appendix G sets out the detailed Data Record requirements for the Settlement Data Transactions (as defined in paragraph 2 of this Appendix), and the relevant Submission Protocols for the Market Operator to follow in respect of such Data Transactions.

2. The Settlement Data Transactions comprise the Data Records that the Market Operator shall be obliged to include in the following Settlement Statements, Settlement Reports, Settlement Documents and invoices,:

(a) Settlement Statements and Settlement Reports for Trading Payments and Charges per Participant in respect of their Supplier Units and Generator Units

(b) Settlement Statements and Settlement Reports for Capacity Payments and Charges per Participant in respect of their Capacity Market Units and Supplier Units

(c) Market Operator Charge invoices

(d) Participant Settlement Documents.

3. The Fixed Market Operator Charge will be part of the Fixed Market Operator Charge invoice, the amounts of the Fixed Market Operator Charge in relation to the periods of time described under paragraph G.7.7.2.

4. The Variable Market Operator Charge will be part of the Variable Market Operator Charge invoice.

5. The Market Operator shall denominate each Data Record in this Appendix G which contains Currency amounts in the designated Currency of the relevant Participant.

6. The Market Operator shall include the following identifying Data Records in each Settlement Statement, Settlement Report and Settlement Document, along with sufficient information for a Participant to reasonably determine the provisions of the Code under which the Settlement Statement, Settlement Report or Settlement Document was created, and to uniquely identify the Settlement Statement, Settlement Report or Settlement Document during correspondence with the Market Operator:

(a) Settlement Day (if applicable)

(b) Imbalance Settlement Period (if applicable)

(c) Start and End Date of the relevant Billing Period and /or Capacity Period

(d) Participant ID

(e) Unit ID(s) (if applicable)

(f) Settlement amounts

7. The Market Operator shall, in relation to each Billing Period and Capacity Period, issue at least four Settlement Statements and Settlement Reports to each Participant comprising settlement data in respect of each of their registered Units: one arising from the Indicative Settlement run, one arising from the Initial Settlement run, one arising from the first Timetabled Settlement Rerun and one arising from the second Timetabled Settlement Rerun.

8.	The Market Operator shall issue Settlement Statements and Settlement Reports to each Participant comprising settlement data in respect of each of their registered Units in the event of any ad hoc Settlement Rerun arising from a Settlement Query or Dispute.

9.	The Market Operator shall, in relation to each Billing Period and Capacity Period, issue to each Participant one Settlement Document based on the Settlement Statements arising from the Initial Settlement run for that Billing Period and/or Capacity Period.

10.	The Market Operator shall issue to each Participant a further Settlement Document based on the Settlement Statements arising from each Settlement Rerun.

11.	Participants may query the content of the Settlement Statements and Settlement Reports by raising a Settlement Query under section G.3 or a Disputes under section B.19.

12.	The timings under which the Market Operator shall be obliged to issue all Settlement Statements, Settlement Reports, Settlement Documents and invoices are set out in sections G.2.5, G.2.9 and paragrphs G.7.2.2 [and equivalent provision in section G.7.3, when finalised], or as appropriate depending on the outcomes of a Settlement Query or a Dispute.

13.	The Market Operator shall ensure that a Settlement Statement and Settlement Reports for Trading Payments and Charges issued to a Participant for its Generator Units provides to Participants, when considered in conjunction with other supplementary reports made available to the Participant under the same timeframes and over the same Communication Channels, inter alia, for the relevant Generator Unit u in each Imbalance Settlement Period γ for the relevant Settlement Day in Billing Period b, values of:

total Daily Amounts for the Participant (Settlement Day value)

(a)	the Imbalance Component Payment or Charge for the Generator Unit

(b)	the Premium Component Payment for the Generator Unit

(c)	the Discount Component Payment for the Generator Unit

(d)	the Offer Price Only Accepted Offer Payment or Charge for the Generator Unit

(e)	the Bid Price Only Accepted Bid Payment or Charge for the Generator Unit

(f)	the Curtailment Payment or Charge for the Generator Unit

(g)	the Uninstructed Imbalance Charge for the Generator Unit

(h)	the Information Imbalance Charge for the Generator Unit

(i)	the Fixed Cost Payment or Charge for the Generator Unit (where calculable over the Billing Period and included in the last Settlement Day of the Billing Period)

(g) the Testing Charge for the Generator Unit

(h) Metered Quantity for the Generator Unit

(i) Actual Availability Quantity for the Generator Unit

(j) Ex-Ante Quantity for the Generator Unit

(k) Dispatch Quantity for the Generator Unit

(l) Loss-Adjusted Accepted Offer Quantities, with corresponding Bid Offer Prices, for the Generator Unit

(m) Loss-Adjusted Accepted Bid Quantities, with corresponding Bid Offer Prices, for the Generator Unit

(n) Loss-Adjusted Offer Price Only Accepted Offer Quantities for the Generator Unit

(o) Loss-Adjusted Bid Price Only Accepted Bid Quantities for the Generator Unit

(p) Biased Accepted Offer Quantities for the Generator Unit

(q) Biased Accepted Bid Quantities for the Generator Unit

(r) Loss-Adjusted Non-Firm Accepted Bid Quantities for the Generator Unit

(s) Loss-Adjusted Trade Opposite TSO Accepted Offer Quantities for the Generator Unit

(t) Loss-Adjusted Trade Opposite TSO Accepted Bid Quantities for the Generator Unit

(u) Curtailment Quantites for the Generator Unit

(v) Start Up Costs for the Generator Unit

(w) No Load Costs for the Generator Unit

(x) Imbalance Settlement Price

(y) Curtailment Price

(z) Market Back Up Price

The Settlement Statement version will be indicated.

14.   The Market Operator shall ensure that Settlement Statements and Settlement Reports for Trading Payments and Charges issued to a Participant for their Capacity Market Units, provides to the Participant, when considered in conjunction with other supplementary reports made available to the Participant under the same timeframes and over the same Communication Channels, inter alia, for the relevant Capacity Market Unit u in each Imbalance Settlement Period γ for the relevant Settlement Day in Billing Period b, values of:

(a) Obligated Capacity Quantity for the Capacity Market Unit

(b) Day-ahead Difference Quantity for the Capacity Market Unit

(c) Day-ahead Difference Charge for the Capacity Market Unit

(d) Within-day Trade Difference Quantities for the Capacity Market Unit

(e) Within-day Trade Difference Charges for the Capacity Market Unit

(f) Within-day Difference Charge Metered Quantity for the Capacity Market Unit

(g) Final Tracked Difference Quantity for the Capacity Market Unit

(h) Non-performance Difference Quantity for the Capacity Market Unit

(i) Non-performance Difference Charge for the Capacity Market Unit

(j) Loss-Adjusted Maximum Import Capacity Market Availability Quantity for Interconnector for the Capacity Market Unit

(k) Billing Period Stop-Loss Limit for the Capacity Market Unit

(l) Annnual Stop-Loss Limit for the Capacity Market Unit

(m) Annual Cumulative Non-performance Difference Charge for the Capacity Market Unit

(n) Billing Period Cumulative Non-performance Difference Charge for the Capacity Market Unit

(o) Total Difference Charge for the Capacity Market Unit

(p) The Settlement Statement version will be indicated.

15.   The Market Operator shall ensure that Settlement Statements and Settlement Reports for Trading Payments and Charges issued to a Participant for its Supplier Units provides to the Participant, when considered in conjunction with other supplementary reports made available to the Participant under the same timeframes and over the same Communication Channels, inter alia, for the relevant Supplier Unit v in each Imbalance Settlement Period γ as appropriate for the relevant Settlement Day in Billing Period b, values of:

(a) Total Daily Amounts for the Participant (Settlement Day value)

(b) the Imbalance Component Payment or Charge for the Supplier Unit

(c) the Imperfections Charge for the Supplier Unit

(d) the Residual Error Volume Charge for the Supplier Unit

(e) the Currency Adjustment Charge for the Supplier Unit

(f) Metered Quantity for the Supplier Unit

(g) Ex-Ante Quantity for the Supplier Unit

(h) Non Interval Energy Proportion Factor for the Supplier Unit

(i) Imbalance Settlement Price

(j) Total Difference Payment for the Supplier Unit

(k) Daily Total Difference Payment for the Supplier Unit

(l) Day-ahead Difference Quantity for the Supplier Unit

(m) Day-ahead Difference Payment for the Supplier Unit

(n) Intraday Trade Difference Quantity for the Supplier Unit

(o) Intraday Trade Difference Payment for the Supplier Unit

(p) final Tracked Difference Quantity for the Supplier Unit

(q) Imbalance Difference Quantity for the Supplier Unit

(r) Imbalance Difference Payment for the Supplier Unit

(s) Difference Payment Shortfall Amount for the Supplier Unit

(t) Difference Payment Reimbursement Payment for the Supplier Unit

(u) Tracked Difference Payment Shortfall Charge for the Supplier Unit

(v) Achievable Difference Payment for the Supplier Unit

The Settlement Statement version will be indicated

16.   The Market Operator shall ensure that Settlement Statements and Settlement Reports for Capacity Payments issued to a Participants for its Capacity Market Units, provides to the Participant, when considered in conjunction with other supplementary reports made available to the Participant under the same timeframes and over the same Communication Channels, inter alia, for the

relevant Capacity Market Unit u in each Imbalance Settlement Period γ in the Capacity Period c, values of:

(a) Total Capacity Payment for the Capacity Market Unit (Capacity Period value)

(b) Capacity Payment for the Capacity Market Unit

(c) Capacity Quantities, with corresponding Capacity Payment Prices, for the Capacity Market Unit

   The Settlement Statement version will be indicated.

17.   The Market Operator shall ensure that Settlement Statements and Settlement Reports for Capacity Charges issued to a Participant for its Supplier Units provides to the Participant, when considered in conjunction with other supplementary reports made available to the Participant under the same timeframes and over the same Communication Channels, inter alia, for each Supplier Unit v in each Imbalance Settlement Period γ in the Capacity Period c, values of:

(a) Capacity Charge for the Supplier Unit (Capacity Period value)

(b) Difference Payment Socialisation Charge for the Supplier Unit (Capacity Period value)

(c) Metered Quantity for the Supplier Unit

(d) The Settlement Statement version will be indicated.

18.   The Market Operator shall issue Market Operator Charge invoices over the Billing Period to each Participant, and shall ensure that each such invoice shall contain, inter alia, for each Billing Period b, values of:

(a) Fixed Market Operator Charge

(b) Invoice version

(c) Any applicable interest

(d) Applicable VAT applied in the invoice and applicable VAT owing/owed by/to Revenue Authorities

19.   The Market Operator shall issue Variable Market Operator Charge invoices over the Billing Period to each Participans, and shall ensure that each such invoice shall contain, inter alia, for each Billing Period b, values of:

(a) Variable Market Operator Charge

(b) Amount from the previous run where the invoice is in respect of a Settlement Rerun.

(c) Invoice version

(d) Any applicable interest

20.   Applicable VAT applied in the Invoice and applicable VAT owing/owed by/to Revenue AuthoritiesThe Market Operator shall issue Debit Notes in respect of any Unsecured Bad Energy Debt over the Billing Period to each applicable Participant identifying that the Debit Note is in respect of a particular Unsecured Bad Energy Debt event, and shall ensure that each such Debit Note shall contain, inter alia, for each Billing Period b, values of:

(a) Unsecured Bad Energy Debt Charge

(b) Settlement Document version

(c) Any applicable interest

21. The Market Operator shall issue Debit Notes in respect of any Unsecured Bad Capacity Debt over the Capacity Period to each applicable Participant identifying that the Debit Note is in respect of a particular Unsecured Bad Capacity Debt event, and shall ensure that each such Debit Note shall contain, inter alia, for each Capacity Period c, values of:

(a) Unsecured Bad Capacity Debt Charge

(b) Settlement Document version

(c) Any applicable interest

22. The Market Operator shall ensure that Settlement Documents or Debit Notes issued by it to Participants in respect of their Units shall contain, inter alia:

(a) Payment amount for the relevant Generator Units for relevant Billing Period or Capacity Period

(b) Charge amount for the relevant Supplier Units for relevant Billing Period or Capacity Period

(c) Sum of Settlement Reallocation Amounts in respect of that period

(d) Any applicable interest

(e) Total payment amount

(f) Applicable VAT applied in the Settlement Document or Debit Note and applicable VAT owing/owed by/to Revenue Authorities

23. Agreed Procedure 15 " Settlement and Billing" sets out more detail as to the obligations of the Market Operator set out in this Appendix G in relation to the process of issuing Settlement Statements, Settlement Reports, Settlement Documents, invoices and Debit Notes, but nothing in that Agreed Procedure shall preclude the issue of any such item over any particular Communication Channel.

APPENDIX H: DATA REQUIREMENTS FOR REGISTRATION

INTRODUCTION

24.   This Appendix H sets out the data requirements for the registration and deregistration of Participants and of Units. It should be noted that a Party becomes a Participant upon the registration of the first Unit to that Party.

PARTICIPATION NOTICE

25.   In completing a Participation Notice, a Party (or an Applicant as applicable) shall include the Registration Data required by paragraph B.7.2.1(t) as set out in Table 1below. Certain Registration Data items shall be classified as Validation Registration Data as outlined in Table 1.

Table 1 - Data, required from Party (or Applicant as applicable) registering the Unit

Name	Term	Relevant Units	Validation Registration Data
Data Exchange Test Flag		All Units	Yes
Effective Date		All Units	Yes
Expiry Date		All Units	Yes
Jurisdiction		All Units	Yes
Qualified Communication Channels		All Units	Yes
Regulatory License ID		All Units	
REMIT Reporting Flag		All Units	
Resource Name		All Units	Yes
Short Name		All Units	Yes
TUoS Agreement		All Units	
Unit Type		All Units	
NEMO Market Resource Name		All Units	
Capacity Market Resource Name		All Units	
First Participation Information Notice		All Units	
Combined Cycle Unit Flag		All Generator Units	
Controllable/Non-controllable Flag		All Generator Units	
Dispatchable Generator Unit Flag		All Generator Units	

Name	Term	Relevant Units	Validation Registration Data
Non-Dispatchable Capacity		All Generator Units	
Previously Registered Flag		All Generator Units	Yes
Previously Registered Participant Name		All Generator Units	Yes
Previously Registered Unit Name		All Generator Units	Yes
Short Notice Unit Flag		All Generator Units	
Synchronous/Asynchronous		All Generator Units	
Connection Agreement		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Connection Agreement Reference ID		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	
Connection Point		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Connection Type		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
DUoS Agreement		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	
Firm Access Quantity (Site) (MW)	qFAQst	All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Fuel Type		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Licence Expiry Date		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes

Name	Term	Relevant Units	Validation Registration Data
Non-Firm Access Quantity		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Physical Location ID		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Station Address		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Station ID		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Station Name		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Unit Location ID		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Assetless Units and Trading Units	Yes
Acting as Intermediary Flag		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	
Commission Test Certificate		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Droop	%	All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Dual Rated Unit Flag		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
End Point of Start Up Period		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes

Name	Term	Relevant Units	Validation Registration Data
Fixed Unit Load (MW)	FUL_u	All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Licence Effective Date		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Licence Reference Number		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Minimum Generation		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Maximum Generation		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units. The Maximum Generation shall be submitted equal to the Registered Capacity of the Generator Unit.	Yes
Priority Dispatch Flag		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Pumped Storage Flag		All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Registered Capacity (MW)	qRC_u	All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
Unit Load Scalar	ULS_u	All Generator Units except Interconnector Error Units, Interconnector Residual Capacity Units, Demand Side Units, Assetless Units and Trading Units	Yes
AoLR Active		Only Generator Units availing of AOLR service	

AGREED PROCEDURE

26. Agreed Procedure 1 "Registration" sets out the detail of the registration process and must include all requirements set out in this Appendix H.

27. Agreed Procedure 1 "Registration" shall set out the detail of the process of data flow between the Market Operator and the Party (or Applicant as appropriate) to register new Units.

28. Agreed Procedure 1 "Registration" shall provide for the validation of the data flows.

CURRENCY

29. All data comprising currency amounts submitted as part of registration shall be submitted by the relevant Party to the Market Operator in the Currency of the designated Currency Zone of the Unit.

MISSING DATA

30. The Market Operator shall not apply any default rules in the event that any Registration Data is missing or incomplete. The Party (or Applicant as applicable) shall be obliged to provide such data before the registration of the Unit can become effective.

COMMUNICATIONS CHANNELS

31. For Parties that have completed Communication Channel Qualification, the Market Operator will facilitate receipt of data for the purposes of registration of new Units over Type 2 and Type 3 Communication Channels. The Market Operator will facilitate a Type 1 Communication Channel for other Parties or Applicants as applicable. The Market Operator will similarly facilitate receipt any clarification or additional information required pursuant to paragraph B.7.6.3.

REGISTRATION WITHDRAWAL

32. Where a Unit Registration is deemed withdrawn under paragraphs B.7.6.4, B.7.6.8, or B.7.6.14, the Market Operator shall send a Notice to the relevant Party or Applicant as appropriate. The Notice shall include sufficient information to identify the Unit concerned, and shall provide a reason for the Unit Registration withdrawal.

APPENDIX I: OFFER DATA

INTRODUCTION

1. This Appendix I sets out the components of Commercial Offer Data and Technical Offer Data in respect of each relevant category of Generator Unit and refers to the Code obligations relating to such data. In addition, this Appendix I sets out the requirements to be met by Agreed Procedure 4 "Transaction Submission and Validation".

COMMERCIAL OFFER DATA

Commercial Offer Data Elements

2. Commercial Offer Data in respect of Generator Units shall comprise one or more of the following data components and shall be submitted in accordance with paragraphs 1 to 5 of this Appendix:

    (a) Simple Bid Offer Data:

      (i) Incremental Price Quantity Pairs;

      (ii) Decremental Price Quantity Pairs;

    (b) Complex Bid Offer Data:

      (i) Incremental Price Quantity Pairs;

      (ii) Decremental Price Quantity Pairs;

      (iii) No Load Costs;

      (iv) Start Up Costs;

      (v) Shut Down Cost.

Commercial Offer Data Submission

3. Each Participant may submit Commercial Offer Data to the Market Operator in respect of each of its Generator Units as follows:

    (a) before Gate Closure 1 in respect of the Trading Day, in accordance with paragraphs 1 and 5 of this Appendix; and

    (b) before Gate Closure 2 in respect of the Imbalance Settlement Period, in accordance with paragraphs 1 and 5 of this Appendix.

Commercial Offer Data for Generator Units

4. Participants shall not submit Commercial Offer Data in respect of each of the following Generator Units:

    (a) Trading Unit;

    (b) Assetless Unit;

    (c) Interconnector Residual Capacity Unit;

    (d) Interconnector Error Unit; or

    (e) Generator Unit which is not Dispatchable.

5. A Participant shall only submit Commercial Offer Data to the Market Operator in respect of its Generator Units, as provided for in Table 2.

Table 2 – Commercial Offer Data Elements

Data Element	Energy Limited Unit	Demand Side Unit	Other Generator Units not included in paragraph 1 of this Appendix
Simple Incremental Price Quantity Pairs	Yes	Yes	Yes
Simple Decremental Price Quantity Pairs	Yes	Yes	Yes
Complex Incremental Price Quantity Pairs	Yes	Yes	Yes
Complex Decremental Price Quantity Pairs	Yes	Yes	Yes
No Load Costs	Yes		Yes
Start Up Costs	Yes		Yes
Shut Down Cost		Yes	
Energy Limit	Yes		
Forecast Availability Profile	Yes	Yes	Yes
Forecast Minimum Output Profile	Yes	Yes	Yes
Forecast Minimum Stable Generation Profile	Yes	Yes	Yes

TECHNICAL OFFER DATA

6.   Each Participant shall submit Technical Offer Data to the Market Operator in respect of each of its Generator Units in accordance with paragraphs 11 to 1 of this Appendix.

Technical Offer Data Submission

7.   Each Participant shall submit Technical Offer Data to the Market Operator in respect of each Trading Day and each of its Generator Units in accordance with section D.5, and in accordance with paragraphs 8 to 1 of this Appendix inclusive.

8.   Each Participant may submit a Data Transaction identifying a Validation Data Set Number for a given Trading Day to the Market Operator in respect of a Generator Unit before Gate Closure 1 in respect of that Trading Day, in accordance with paragraphs D.5.2.1 to D.5.5.2 inclusive and paragraphs 8 to 1 of this Appendix inclusive.

9.   If a Participant submits a Data Transaction identifying a Validation Data Set Number for a given Trading Day to the Market Operator in respect of a Generator Unit after Gate Closure 1 in respect of that Trading Day, except as allowed in

accordance with paragraph D.3.4.1 and Agreed Procedure 7 "Emergency Communications", the Market Operator shall reject that Data Transaction.

Restrictions on Technical Offer Data Submission

10.   Each Participant shall submit Technical Offer Data to the Market Operator in respect of each of its Generator Units in accordance with paragraphs 1 to 9 of this Appendix inclusive and paragraph 1 of this Appendix, subject to the following requirements:

(a)   Data shall be submitted to reflect the actual capabilities of the relevant Generator Unit net of Unit Load as set out in paragraph D.5.1.2;

(b)   Data shall be submitted in respect of a Generator Unit such that it is consistent with data submitted for that Unit under the applicable Grid Code, scaled, where appropriate, by the appropriate Distribution Loss Adjustment Factor as set out in paragraph D.5.1.3;

(c)   Technical Offer Data items shall be submitted as either Validation Technical Offer Data or Validation Registration Data as set out in paragraph 1 of this Appendix.

11.   Participants shall not submit Technical Offer Data in respect of each of the following Generator Units:

(a)   Trading Unit;

(b)   Assetless Unit;

(c)   Interconnector Residual Capacity Unit;

(d)   Interconnector Error Unit; or

(e)   Generator Unit which is not Dispatchable.

Technical Offer Data for Generator Units

12.   A Participant shall only submit Technical Offer Data to the Market Operator in respect of its Generator Units as provided for in Table 3.

Table 3 – Technical Offer Data Elements

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	**Validation Registration Data**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Minimum On Time	Yes		Yes	Yes		Yes
Minimum Off Time	Yes		Yes	Yes		Yes

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Maximum On Time	Yes		Yes	Yes		Yes
Synchronous Start Up Time Hot	Yes		Yes	Yes		Yes
Synchronous Start Up Time Warm	Yes		Yes	Yes		Yes
Synchronous Start Up Time Cold	Yes		Yes	Yes		Yes
Block Load Cold	Yes		Yes	Yes		Yes
Block Load Hot	Yes		Yes	Yes		Yes
Block Load Warm	Yes		Yes	Yes		Yes
Deload Break Point	Yes		Yes	Yes		Yes
Deloading Rate 1	Yes		Yes	Yes		Yes
Deloading Rate 2	Yes		Yes	Yes		Yes
Dwell Time Up 1	Yes		Yes	Yes		Yes
Dwell Time Up 2	Yes		Yes	Yes		Yes
Dwell Time Up 3	Yes		Yes	Yes		Yes

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Dwell Time Down 1	Yes		Yes	Yes		Yes
Dwell Time Down 2	Yes		Yes	Yes		Yes
Dwell Time Down 3	Yes		Yes	Yes		Yes
Dwell Time Up Trigger Point 1	Yes		Yes	Yes		Yes
Dwell Time Up Trigger Point 2	Yes		Yes	Yes		Yes
Dwell Time Up Trigger Point 3	Yes		Yes	Yes		Yes
Dwell Time Down Trigger Point 1	Yes		Yes	Yes		Yes
Dwell Time Down Trigger Point 2	Yes		Yes	Yes		Yes
Dwell Time Down Trigger Point 3	Yes		Yes	Yes		Yes
End Point of Start Up Period	Yes		Yes	Yes		Yes

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Load Up Break Point Cold 1	Yes		Yes	Yes		Yes
Load Up Break Point Cold 2	Yes		Yes	Yes		Yes
Load Up Break Point Hot 1	Yes		Yes	Yes		Yes
Load Up Break Point Hot 2	Yes		Yes	Yes		Yes
Load Up Break Point Warm 1	Yes		Yes	Yes		Yes
Load Up Break Point Warm 2	Yes		Yes	Yes		Yes
Loading Rate Cold 1	Yes		Yes	Yes		Yes
Loading Rate Cold 2	Yes		Yes	Yes		Yes
Loading Rate Cold 3	Yes		Yes	Yes		Yes
Loading Rate Hot 1	Yes		Yes	Yes		Yes
Loading Rate Hot 2	Yes		Yes	Yes		Yes
Loading Rate Hot 3	Yes		Yes	Yes		Yes

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	**Validation Registration Data**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Loading Rate Warm 1	Yes		Yes	Yes		Yes
Loading Rate Warm 2	Yes		Yes	Yes		Yes
Loading Rate Warm 3	Yes		Yes	Yes		Yes
Ramp Down Break Point 1	Yes		Yes	Yes		Yes
Ramp Down Break Point 2	Yes		Yes	Yes		Yes
Ramp Down Break Point 3	Yes		Yes	Yes		Yes
Ramp Down Break Point 4	Yes		Yes	Yes		Yes
Ramp Down Rate 1	Yes		Yes	Yes		Yes
Ramp Down Rate 2	Yes		Yes	Yes		Yes
Ramp Down Rate 3	Yes		Yes	Yes		Yes
Ramp Down Rate 4	Yes		Yes	Yes		Yes
Ramp Down Rate 5	Yes		Yes	Yes		Yes

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Ramp Up Break Point 1	Yes		Yes	Yes		Yes
Ramp Up Break Point 2	Yes		Yes	Yes		Yes
Ramp Up Break Point 3	Yes		Yes	Yes		Yes
Ramp Up Break Point 4	Yes		Yes	Yes		Yes
Ramp Up Rate 1	Yes		Yes	Yes		Yes
Ramp Up Rate 2	Yes		Yes	Yes		Yes
Ramp Up Rate 3	Yes		Yes	Yes		Yes
Ramp Up Rate 4	Yes		Yes	Yes		Yes
Ramp Up Rate 5	Yes		Yes	Yes		Yes
Soak Time Cold 1	Yes		Yes	Yes		Yes
Soak Time Cold 2	Yes		Yes	Yes		Yes
Soak Time Trigger Point Cold 1	Yes		Yes	Yes		Yes

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Soak Time Trigger Point Cold 2	Yes		Yes	Yes		Yes
Soak Time Hot 1	Yes		Yes	Yes		Yes
Soak Time Hot 2	Yes		Yes	Yes		Yes
Soak Time Trigger Point Hot 1	Yes		Yes	Yes		Yes
Soak Time Trigger Point Hot 2	Yes		Yes	Yes		Yes
Soak Time Warm 1	Yes		Yes	Yes		Yes
Soak Time Warm 2	Yes		Yes	Yes		Yes
Soak Time Trigger Point Warm 1	Yes		Yes	Yes		Yes
Soak Time Trigger Point Warm 2	Yes		Yes	Yes		Yes
Start of Restricted Range 1	Yes		Yes	Yes		Yes
End of Restricted Range 1	Yes		Yes	Yes		Yes

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Start of Restricted Range 2	Yes		Yes	Yes		Yes
End of Restricted Range 2	Yes		Yes	Yes		Yes
Hot Cooling Boundary	Yes		Yes	Yes		Yes
Warm Cooling Boundary	Yes		Yes	Yes		Yes
Block Load Flag	Yes		Yes	Yes		Yes
Short-Term Maximisation Capability	Yes		Yes	Yes		Yes
Short-Term Maximisation Time	Yes		Yes	Yes		Yes
Minimum Generation		Yes	Yes	Yes		Yes
Lower Registered Output	Yes		Yes	Yes		Yes
Pumped Storage Cycle Efficiency	Yes			Yes		
Battery Storage Efficiency	Yes		Yes			

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Pumping Capacity	Yes			Yes		
Off to Generating Time	Yes			Yes		
Off to Spin Pump Time	Yes			Yes		
Spin Pump to Pumping Energy Time	Yes			Yes		
Battery Storage Capacity	Yes		Yes			
Minimum Battery Storage Capacity		Yes	Yes			
Maximum Battery Storage Capacity		Yes	Yes			
Maximum Storage Capacity		Yes		Yes		
Minimum Storage Capacity		Yes		Yes		
Maximum Ramp Down Rate	Yes				Yes	

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT			
	Validation Technical Offer Data	Validation Registration Data	Battery Storage Unit	Pumped Storage Unit	Demand Side Unit	Other Generator Units not included in paragraph 11 of this Appendix
Maximum Ramp Up Rate	Yes				Yes	
Minimum Down Time	Yes				Yes	
Maximum Down Time	Yes				Yes	

PHYSICAL NOTIFICATION DATA

Physical Notification Data Elements

13.   Physical Notification Data in respect of Generator Units shall comprise one or more of the following data components and shall be submitted in accordance with paragraphs 1 to 17 of this Appendix:

    (a)   From MW Level;

    (b)   From MW Time;

    (c)   To MW Level;

    (d)   To MW Time; and

    (e)   Under Test Flag.

Physical Notification Data Submission

14.   Each Participant may submit Physical Notification Data to the Market Operator in respect of each of its Generator Units and Supplier Units as follows:

    (a)   before Gate Closure 1 in respect of the Trading Day, in accordance with paragraphs 1 and 17 of this Appendix;

    (b)   before Gate Closure 2 in respect of the Imbalance Settlement Period, in accordance with paragraphs 1 and 17 of this Appendix.

15.   Participants shall not submit Physical Notification Data in respect of each of the following Generator Units:

    (a)   Trading Unit;

    (b)   Assetless Unit;

    (c)   Interconnector Residual Capacity Unit; or

    (d)   Interconnector Error Unit.

Physical Notification Data for Generator Units and Supplier Units

16.   Each Participant shall submit Physical Notification Data to the Market Operator in respect of each of its Generator Units and Supplier Units in accordance with paragraphs 1 to 15 of this Appendix inclusive and paragraph 17 of this Appendix, subject to the following requirements:

(a)   Data shall be submitted to reflect the Output intended by the Participant for each of its Generator Units, excluding Accepted Offers and Accepted Bids, as set out in paragraph D.7.1.3;

(b)   Data submitted in respect of a Generator Unit shall be submitted such that it is consistent with the Technical Offer Data for that Generator Unit as set out in paragraph D.7.1.4;

(c)   A Participant submitting Physical Notification Data for a Generator Unit must do so in the following way, except as allowed under subparagraph (d):

(i)   Each From MW Level and Time must have the same values as the immediately previous To MW Level and Time, with the exception of the first From MW Level and Time for a Trading Day;

(ii)   Each From MW Level and To MW Level submitted in respect of a Dispatchable Generator Unit cannot be less than the Minimum Generation for the Unit, and cannot be greater than the Maximum Generation for the Unit, submitted in accordance with Appendix H "Participant and Unit Registration and Deregistration".

(d)   A Participant submitting Physical Notification Data shall submit Physical Notification Data for a Supplier Unit, a Participant submitting Physical Notification Data may submit Physical Notification Data for a Generator Unit which has a Registered Capacity of less than the De Minimis Threshold, or a Generator Unit which is not Dispatchable, and the Aggregator of Last Resort submitting Physical Notification Data may submit Physical Notification Data on behalf of Generator Units, in the following way while being deemed to be compliant with the requirements in paragraphs D.7.1.3 and D.7.1.4:

(i)   Each From Time and To Time must be at the start of a minute which corresponds to the start of a fifteen minute period, starting on each hour, quarter past the hour, half hour and quarter to the hour;

(ii)   Each From Time must have the same value as the immediately previous To Time;

(iii)   Each From MW Level must have the same value as the To MW Level;

(iv)   Each From MW Level and To MW Level submitted in respect of a Dispatchable Generator Unit cannot be less than the Minimum Generation for the Unit, and cannot be greater than the Maximum Generation for the Unit, submitted in accordance with Appendix H "Participant and Unit Registration and Deregistration";

(v)   All Physical Notification Data for a Trading Day must be submitted in this way if Physical Notification Data for any time within that Trading Day is submitted in this way.

17.   A Participant shall only submit Physical Notification Data to the Market Operator in respect of its Generator Units and Supplier Units as provided for in Table 4.

Table 4 – Physical Notification Data Elements

Data Element	Supplier Unit	Unit Under Test	Other Generator Unit not included in paragraph 15 of this Appendix
From MW Level	Yes	Yes	Yes
From MW Time	Yes	Yes	Yes
To MW Level	Yes	Yes	Yes
To MW Time	Yes	Yes	Yes
Under Test Flag		Yes	

APPENDIX J: DATA TRANSACTIONS FROM MARKET OPERATOR TO SYSTEM OPERATOR

1. This Appendix J sets outs the data that the Market Operator is required to send to the System Operators, and the rules relating to the sending of such data, as well as certain validation obligations of the System Operators.

2. Agreed Procedure 4 "Transaction Submission and Validation" sets out further detail in relation to the data transfer obligations set out in this Appendix J.

REGISTRATION DATA

3. The Market Operator shall submit to the System Operators within two Working Days of receipt from a Participant, but no later than 13:00 one Day before the Trading Day on which it is to become effective, any update to the Registration Data of any of that Participant's Units. Similarly, the Market Operator shall submit to the System Operators within two Working Days of receipt from the Interconnector Owner or the Interconnector Administrator as appropriate, but no later than 13:00 one Day before the Trading Day on which it is to become effective, any update to the Interconnector Registration Data of the relevant Interconnector.

4. The full set of registration details are set out in Appendix H "Data Requirements for Registration".

5. The System Operator for the Currency Zone in which the Participant is registered shall validate the registration details and confirm to the Market Operator whether the registration information is accurate with respect to the data that such System Operator holds under the applicable Grid Code.

6. The Market Operator shall submit all Generator Unit Under Test Notices to the System Operators in accordance with Grid Code requirements.

7. The System Operator for the Currency Zone in which the Participant is registered shall validate the Generator Unit Under Test Notice and confirm to the Market Operator whether the Generator Unit is Under Test in accordance with Appendix F "Other Communications".

COMMERCIAL OFFER DATA, TECHNICAL OFFER DATA AND PHYSICAL NOTIFICATIONS

8. The Market Operator shall share with the System Operators the full set of Accepted Technical Offer Data, Accepted Commercial Offer Data and Physical Notifications for all Generator Units for all Imbalance Settlement Periods for the relevant Gate Closure as soon as technical validations set out in section C.3 are completed.

9. The Data Transactions associated with Technical Offer Data, Commercial Offer Data and Physical Notifications, and the rules for the submission of such data by Participants to the Market Operator, are set out in Appendix I "Offer Data".

10. The System Operators shall not be required to validate any Commercial Offer Data or Technical Offer Data, other than as set out in paragraph D.5.3.

11. The Market Operator shall submit all currency values to the System Operators in the Participant's designated Currency.

SUSPENSION ORDERS

12.   The Market Operator shall submit to the System Operators a copy of any Suspension Order, any notice of the lifting of a Suspension Order, or any Termination Order at the same time as such Suspension Order, notice of the lifting of a Suspension Order or Termination Order is submitted to the relevant Participant as described under paragraphs B.18.3.7, B.18.4.9 and B.18.7.2.

13.   The System Operators shall not be required to validate any Termination Order or Suspension Order.

COMMENCEMENT NOTICE

14.   In accordance with paragraph B.7.6.12, the Market Operator shall copy, to each System Operator and relevant External Data Provider, any Commencement Notice issued, as soon as reasonably practicable and at least 4 Working Days prior to the Effective Date for the relevant Unit.

15.   The System Operators shall not be required to validate any Commencement Notice.

COMMUNICATION CHANNELS

16.   During normal operation of the Market Operator's Isolated Market System, the Market Operator shall only utilise a Type 3 Communication Channel for the communication of the data in this Appendix to the System Operators, with the exception of Suspension Orders, notice of the lifting of Suspension Orders, and Termination Orders, for which the Market Operator shall utilise a Type 1 Communication Channel. If the Type 3 Communication Channel is unavailable for communication of any data to a System Operator as required by this Appendix, the Market Operator shall utilise a Type 1 Communication Channel for the communication of such data.

APPENDIX K: OTHER MARKET DATA TRANSACTIONS

INTRODUCTION

1. This Appendix K outlines the detailed Data Record requirements for Data Transactions sent by the System Operator to Market Operator and by the Interconnector Administrator to the Market Operator, which are not defined in other Appendices, and the associated high-level Data Transaction Submission Protocols.

DATA TRANSACTIONS

2. The Data Transactions in this Appendix K include:

Data Transactions from System Operator to Market Operator

(a)   System Parameters (FCLAF)

(b)   Loss Adjustment Factors (FTLAF and FDLAF)

(c)   Generator Unit Technical Characteristics

(d)   Demand Control (QDC)

(e)   System Characteristics (FRQAVG and FRQNOR)

(f)   Dispatch Instructions

(g)   SO Interconnector Trades

(h)   SO Interconnector Physical Notifications

(i)   Annual Load Forecast

(j)   Monthly Load Forecast

(k)   Four Day Load Forecast

(l)   Wind Power Unit Forecast

(m)   Uninstructed Imbalance Parameters (FPUG, FDOG, UREG, TOLMW, TOLENG)

(n)   Testing Tariffs

(o)   Strike Price Parameters (PCARBON, PFUELNG and PFUELO)

Data Transactions from Interconnector Administrator to Market Operator

(a)   Interconnector Capacity Market Availability

3. Each Data Record in this Appendix K which contains Currency amounts will be denominated in the Participant's designated Currency.

4. Contingency Data rules for these Market Data Transactions are summarised in Table 5.

CONTINGENCY DATA

5. The Market Operator shall use Contingency Data in the event that the following Data Transactions are not received within the timescales required under the Code:

Data Transactions from System Operator to Market Operator

    (a)   Four Day Load Forecast

    (b)   Wind Power Unit Forecast

6.   Contingency Data only applies to Data Transactions that are listed in paragraph 1 of this Appendix K.

7.   Table 5 sets out the Contingency Data values for the Data Transaction listed in respect of each Ex-ante Gate Closure.

Table 5 – Contingency Data Rules for Market Data Transactions

Transaction	Associated Ex-ante Gate Closure	Contingency Data
Wind Power Unit Forecast	DAM	Most recent Wind Forecast Accepted by DAM Gate Closure
Wind Power Unit Forecast	IDM	Most recent Wind Forecast Accepted by each IDM Gate Closure

8.   Agreed Procedure 4 "Transaction Submission and Validation" will describe the detail of the Data Transactions listed within this Appendix K, noting the requirements for the appropriate scaling of submitted data outlined in paragraphs D.6.2.1, D.6.2.5 and F.4.1.2.

DATA TRANSACTION AND DATA RECORDS

System Parameters Data Transaction

9.   The Data Records for the System Parameters Data Transaction are described in Table 6 and the Submission Protocol in Table 7.

Table 6 – System Parameters Data Transaction Data Records

Participant Name

Unit ID

Trading Day

Imbalance Settlement Period

Combined Loss Adjustment Factor, $FCLAF_{u\gamma}$

Table 7 – System Parameters Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator

Number of Data Transactions	One, containing data for each Generator Unit that is not an Interconnector Unit for each Imbalance Settlement Period in the Tariff Year and data for each Interconnector for each Imbalance Settlement Period in the Tariff Year.
Frequency of Data Transactions	Annually
First Submission time	As available
Last Submission time	At least two months prior to the start of each Tariff Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later, or prior to the registration of a new Generator Unit.
	As required to resolve a Data or Settlement Query where the Data records in the Data Transaction are discovered to be in error.
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Resubmission will occur within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality or if the last Timetabled Settlement Rerun had occurred.
	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

10. The Data Records for the Loss Adjustment Factors Data Transaction are described in Table 8 and the Submission Protocol in Table 9.

Table 8 – Loss Adjustment Factors Data Transaction Data Records

Participant Name

Unit ID

Trading Day

Imbalance Settlement Period

Transmission Loss Adjustment Factor, $FTLAF_{uY}$

Distribution Loss Adjustment Factor, $FDLAF_{uY}$

Table 9 – Loss Adjustment Factors Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One containing data for each Generator Unit that is not an Interconnector Unit or Demand Side Unit
First Submission time	As available
Last Submission time	At least two months prior to the start of each Tariff Year, or within five Working Days of its receipt from the Regulatory Authorities, whichever is later, or prior to the registration of a new Generator Unit. As required to resolve a Settlement Query or a Dispute where the Data Records in the Data Transaction are discovered to be in error.
Permitted frequency of resubmission	Unlimited
Valid Communication Channels	Type 1 (manual), to be provided in electronic format
Process for data validation	None

Generator Unit Technical Characteristics Data Transaction

11.   The Data Records for the Generator Unit Technical Characteristics Data Transaction are described in Table 10 and the Submission Protocol in Table 11.

Table 10 – Generator Unit Technical Characteristics Data Transaction Data Records

Trading Day

Participant Name

Unit ID

Effective Time

Issue Time

Outturn Availability (Primary Fuel Type Outturn Availability for Dual Rated Generator Units)

Secondary Fuel Type Outturn Availability

Rating Flag

Outturn Minimum Stable Generation

Outturn Minimum Output

Table 11 – Generator Unit Technical Characteristics Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One containing spot data for each change in Outturn Availability (Primary Fuel Type Outturn Availability for Dual Rated Generator Units), Secondary Fuel Type Outturn Availability, Rating Flag, Outturn Minimum Stable Generation or Outturn Minimum Output per Generator Unit (excluding Interconnector Units, Interconnector Error Units and Interconnector Residual Capacity Units) during the day
Frequency of Data Transactions	Daily
First Submission time	After end of Imbalance Pricing Period
Last Submission time	Prior to Imbalance Price Calculation. As required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error.
Permitted frequency of resubmission prior to last submission time	Unlimited
Valid Communication Channels	Type 3 (computer to computer)

Process for data validation	None

Demand Control Data Transaction

12.   The Data Records for the Demand Control Data Transaction are described in Table 12 and the Submission Protocol in Table 13.

Table 12 – Demand Control Data Transaction Data Records

Jurisdiction

Trading Day

Imbalance Pricing Period

Quantity of any reduction in demand (QDC_φ) as a consequence of Demand Control, i.e. load shedding

Table 13 – Demand Control Data Transaction Submission Protocol

Sender	System Operator
Recipient	Market Operator
Number of Data Transactions	One, only submitted when non-zero, containing data for each Imbalance Pricing Period in the Trading Day
First Submission time	After end of Imbalance Pricing Period
Last Submission time	Prior to Imbalance Price Calculation. .
	As required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error.
Permitted frequency of resubmission prior to last submission time	Unlimited
Valid Communication Channels	Type 1 (manual)
Process for data validation	None

System Characteristics Data Transaction

13.   The Data Records for the System Technical Characteristics Data Transaction are described in Table 14 and the Submission Protocol in Table 15.

Table 14 – System Characteristics Data Transaction Data Records

System Operator	
Trading Day	
Imbalance Settlement Period	
Average System Frequency, $FRQAVG_\gamma$	
Nominal System Frequency, $FRQNOR_\gamma$	

Table 15 – System Characteristics Data Transaction Submission Protocol

Sender	Relevant System Operator(s)
Recipient	Market Operator
Number of Data Transactions	One containing data for each Imbalance Settlement Period in the relevant Trading Day.
Frequency of Data Transactions	Daily
First Submission time	After end of Trading Day
Last Submission time	Prior to Imbalance Settlement Calculation
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Dispatch Instruction Data Transaction

14.   The Data Records for the Dispatch Instruction Data Transaction are described in Table 16 and the Submission Protocol in Table 17.

Table 16 – Dispatch Instruction Data Transaction Data Records

Participant Name	
Participant ID	
Unit ID	
Instruction Timestamp	

Participant Name

Participant ID

Instruction Issue Time

Effective Time

Effective Until Time

Instruction Code

Instruction Combination Code

Ramp Up Rate

Ramp Down Rate

Dispatch Instruction MW

Table 17 – Dispatch Instruction Data Transaction Submission Protocol

Sender	System Operator(s)
Recipient	Market Operator
Number of Data Transactions	One, per Dispatch Instruction per Generator Unit and Interconnector during the relevant Imbalance Pricing Period
Frequency of Data Transactions	Every Imbalance Pricing Period
First Submission time	After end of Imbalance Pricing Period
Last Submission time	Prior to Imbalance Pricing Calculation. As required to resolve a Dispute or Settlement Query where the Data Records in the Transaction are discovered to be in error
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	For Settlement Purposes anytime prior to Imbalance Settlement Calculation and within 10 Working Days of notification to the System Operator of an upheld Dispute or Settlement Query if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred

	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

SO Interconnector Trade Data Transaction

15. The Data Records for the SO Interconnector Trade Data Transaction are described in Table 18 and the Submission Protocol in Table 19.

Table 18 – SO Interconnector Trade Data Transaction Data Records

Interconnector

Trading Day

Imbalance Pricing Period/Imbalance Settlement Period

Interconnector Bid Offer Price (PBO_{uoih})

Interconnector Accepted Offer Quantity, (QAO_{uoih})

Interconnector Accepted Bid Quantity, (QAB_{uoih},)

Table 19 – SO Interconnector Trade Data Transaction Submission Protocol

Sender	Relevant System Operator(s)
Recipient	Market Operator
Number of Data Transactions	One, containing data for the relevant Interconnector, for each Imbalance Pricing Period/Imbalance Settlement Period as appropriate for the Trading Day.
Frequency of Data Transactions	Imbalance Pricing Period/Imbalance Settlement Period
First Submission time	After end of Imbalance Pricing Period
Last Submission time	Prior to Imbalance Price Calculation. As required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error

Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Prior to Imbalance Settlement Calculation and within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred.
	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

SO Interconnector Physical Notifications Transaction for IRCU

16.   The Data Records for the IRCU Interconnector Physical Notifications Data Transaction are described in Table 20 and the Submission Protocol in Table 21.

Table 20 – SO Interconnector Physical Notifications Data Transaction Data Records

Interconnector
Interconnector Residual Capacity Unit
Trading Day
Imbalance Settlement Period
Final Physical Notification Quantity ($qFPN_{Iy}(t)$)

Table 21 – SO Interconnector Physical Notifications Transaction Submission Protocol

Sender	Relevant System Operator(s)
Recipient	Market Operator
Number of Data Transactions	One, containing data for the relevant Interconnector, for each Imbalance Settlement Period for the Trading Day.
Frequency of Data Transactions	Imbalance Settlement Period

First Submission time	At the end of the Trading Day
Last Submission time	Prior to Imbalance Settlement Calculation.
	As required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred.
	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Annual Load Forecast Data Transaction

17.   The Data Records for the Annual Load Forecast Data Transaction are described in Table 22 and the Submission Protocol in Table 23.

Table 22 – Annual Load Forecast Data Transaction Data Records

Period Type (A for Annual, M for Monthly or D for Daily)

Trading Day

Imbalance Settlement Period

Jurisdiction

Annual Load Forecast value, in MW

Assumptions

Table 23 – Annual Load Forecast Data Transaction Submission Protocol

Sender	Relevant System Operator(s)

Recipient	Market Operator
Number of Data Transactions	One per Jurisdiction, containing data for each Imbalance Settlement Period in the calendar Year
Frequency of Data Transactions	Annually, plus as updated
First Submission time	As available
Last Submission time	Four Months before the start of the Year
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Monthly Load Forecast Data Transaction

18.   The Data Records for the Monthly Load Forecast Data Transaction are described in Table 24 and the Submission Protocol in Table 25.

Table 24 – Monthly Load Forecast Data Transaction Data Records

Period Type (A for Annual, M for Monthly or D for Daily)
Trading Day
Imbalance Settlement Period
Jurisdiction
Monthly Load Forecast value, in MW
Assumptions

Table 25 – Monthly Load Forecast Data Transaction Submission Protocol

Sender	System Operator(s)
Recipient	Market Operator
Number of Data Transactions	One per Jurisdiction, containing data for each Imbalance Settlement Period in the relevant calendar Month

Frequency of Data Transactions	Monthly, plus as updated
First Submission time	Four Working Days before the start of the relevant Month
Last Submission time	One Working Day before the start of the relevant Month
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Four Day Load Forecast Data Transaction

19.   The Data Records for the Four Day Load Forecast Data Transaction are described in Table 26 and the Submission Protocol in Table 27.

Table 26 – Four Day Load Forecast Data Transaction Data Records

Period Type (A for Annual, M for Monthly or D for Daily)

Trading Day

Imbalance Settlement Period

Jurisdiction

Daily Load Forecast value, in MW

Assumptions

Table 27 – Four Day Load Forecast Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One per Jurisdiction, containing data for each Imbalance Settlement Period in the following 4 complete calendar days
Frequency of Data Transactions	Daily
First Submission time	As available prior to the DAM Gate

	Closure
Last Submission time	At least one submission prior to the DAM Gate Closure, plus as updated
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Wind Power Unit Forecast Data Transaction

20.   The Data Records for the Wind Power Unit Forecast Data Transaction are described in Table 28 and the Submission Protocol in Table 29.

Table 28 – Wind Power Unit Forecast Data Transaction Data Records

Period Type (A for Annual, M for Monthly or D for Daily)

Unit ID

Trading Day

Imbalance Settlement Period

Jurisdiction

Output Forecast for each Wind Power Unit, in MW

Assumptions

Table 29 – Wind Power Unit Forecast Data Transaction Submission Protocol

Sender	System Operator(s)
Recipient	Market Operator
Number of Data Transactions	At least once for each Jurisdiction in each of the following timescales in respect of the relevant Trading Day:
	By the DAM Gate Closure and as updated;
	Data Transactions should contain data for each Wind Power Unit in a given Jurisdiction for each Imbalance Settlement Period in the following two

	complete Trading Days
Frequency of Data Transactions	At least once prior to the DAM Gate Closure, plus as updated
First Submission time	As updated
Last Submission time	Unlimited, at least one Data Transaction shall be submitted by the DAM Gate Closure, plus as updated
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Uninstructed Imbalance Parameter Data Transaction

21.   The Data Records for the Uninstructed Imbalance Parameter Data Transaction are described in Table 30 and the Submission Protocol in Table 31.

Table 30 – Uninstructed Imbalance Parameter Transaction Data Records

Engineering Tolerance (TOLENG)

MW Tolerance ($TOLMW_t$) for each Trading Day t

System per Unit Regulation parameter (UREG)

Discount for Over Generation Factor ($FDOG_{u\gamma}$) for each Generator Unit u in each Imbalance Settlement Period γ

Premium for Under Generation Factor ($FPUG_{u\gamma}$) for each Generator Unit u in each Imbalance Settlement Period γ

Table 31 – Uninstructed Imbalance Parameter Data Transaction Submission Protocol

Sender	Relevant System Operator(s)
Recipient	Market Operator
Number of Data Transactions	One per Year, and within Year with the approval of the Regulatory Authorities
Frequency of Data Transactions	Annually

First Submission time	As available
Last Submission time	On receipt of the Regulatory Authorities' determination on the values of the Uninstructed Imbalance Parameters and no later than two months before the start of the Year or within 5 Working Days of receipt whichever is the later
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 1 (manual)
Process for data validation	None

Testing Tariffs Data Transaction

22. The Data Records for the Testing Tariffs Data Transaction are described in Table 32 and the Submission Protocol in Table 33.

Table 32 – Testing Tariffs Transaction Data Records

Jurisdiction
Unit ID
Trading Day
Imbalance Settlement Period
Testing Tariff Price ($PTESTTARIFF_{u\gamma}$)

Table 33 – Testing Tariffs Transaction Submission Protocol

Sender	System Operator(s)
Recipient	Market Operator
Number of Data Transactions	One per Year, and within Year with the approval of the Regulatory Authorities, containing data for each Generator Unit in the Jurisdiction for each Imbalance Settlement Period in the relevant Year

Frequency of Data Transactions	Annually
First Submission time	As available
Last Submission time	On receipt of the Regulatory Authorities' determination on the values of the Testing Tariffs and no later than two months before the start of the Year or within 5 Working Days of receipt whichever is the later
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 1 (manual)
Process for data validation	None

Strike Price Parameters Data Transaction

23. The Data Records for the Strike Price Parameters Data Transaction are described in Table 34 and the Submission Protocol in Table 35.

Table 34 – Strike Price Parameters Transaction Data Records

The data source or methodology for determining the Carbon Price ($PCARBON_m$) for Month, m;

The data source or methodology for determining the Natural Gas Fuel Price ($PFUELNG_m$) for Month, m

The data source or methodology for determining the Oil Fuel Price ($PFUELO_m$) for Month, m.

Table 35 – Strike Price Parameters Submission Protocol

Sender	System Operator(s)
Recipient	Market Operator
Number of Data Transactions	On request by the Regulatory Authority
Frequency of Data Transactions	As Available
First Submission time	As available
Last Submission time	Within 5 Working Days of receipt of

	the Regulatory Authorities' approval
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	None
Valid Communication Channels	Type 1 (manual)
Process for data validation	None

Interconnector Capacity Market Availability Data Transaction

24. The Data Records for the Interconnector Capacity Market Availability Data Transaction are described in Table 36 and the Submission Protocol in Table 37.

Table 36 – Interconnector Capacity Market Availability Data Transaction Data Records: Average values per Imbalance Settlement Period

Interconnector

Trading Day

Imbalance Settlement Period

Maximum Import Capacity Market Availability ($qCMAMAXI_{Iy}$)

Maximum Export Capacity Market Availability ($qCMAMAXE_{Iy}$)

Table 37 – Interconnector Capacity Market Availability Data Transaction Submission Protocol

Sender	Interconnector Administrator
Recipient	Market Operator
Number of Data Transactions	One containing:
	Maximum Import Capacity Market Availability and Maximum Export Capacity Market Availability for each Imbalance Settlement Period in the relevant Trading Day for the relevant Interconnector.
Frequency of Data Transactions	Daily and as updated
First Submission time	As available
Last Submission time	Unlimited, prior to Imbalance Settlement Calculation

Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	In the event of a change in the magnitude of Capacity Market Availability in either direction, resubmission is possible prior to Imbalance Settlement Calculation or as required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error.
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

APPENDIX L: METER DATA TRANSACTIONS

1.   Agreed Procedure 16 "Provision of Metered Data" describes how Meter Data Providers shall be required to group Meter Data into Data Transactions for receipt by the Market Operator, in accordance with the requirements set out in this Appendix L.

2.   The timing of these Meter Data Transactions is described in Agreed Procedure 16 "Provision of Metered Data", in accordance with the requirements set out in this Appendix L.

3.   The Meter Data required for the creation of Settlement Statements are the Metered Generation of all Generator Units, the Net Inter-Jurisdictional Import, the Interconnector Metered Data, and all other Supplier Units.

4.   Each System Operator in its role as a Meter Data Provider shall provide to the Market Operator Meter Data required for the creation of Settlement Statements for which the System Operator has been recorded as the Meter Data Provider as appropriate in its Jurisdiction.

5.   The System Operators shall agree a process with the Market Operator to determine which one System Operator is responsible for the provision of the Net Inter-Jurisdictional Import Meter Data to the Market Operator.

6.   The System Operator in Ireland shall have responsibility for the installation, commissioning and maintenance of metering systems to such standards as are applicable under and set out in the Grid Code or Metering Code for all Transmission Connected Generation Sites in Ireland.

7.   The Distribution System Operator responsible for the installation, commissioning and maintenance of metering systems at a Unit's site, shall provide reasonable access to that site and to data polled at that site to the relevant System Operator with responsibility for the provision of that Unit's Meter Data to the Market Operator as appropriate in its Jurisdiction (to the extent that the relevant Distribution System Operator has access under their individual customer connection agreements).

8.   Each Distribution System Operator in its role as Meter Data Provider shall provide to the Market Operator all Meter Data required for the creation of Settlement Statements as appropriate in its Jurisdiction.

9.   Subject to paragraph 6, in respect of all Units under the Code, the Distribution System Operators shall be responsible for the installation, commissioning and maintenance of metering systems within their Jurisdiction to such standards as are applicable in and set out in the Grid Code or Metering Code.

10.   Where a Distribution System Operator is responsible for the provision of a Unit's Meter Data to the Market Operator and a System Operator is responsible for the installation, commissioning and maintenance of metering systems at those Unit's sites, the relevant System Operator shall provide reasonable access to that site or polled data to the relevant Distribution System Operator (to the extent that the relevant Distribution System Operator has access under their individual customer connection agreements).

11.   Meter Data Providers shall provide the Meter Data listed in paragraph 3 to the Market Operator required for each Settlement Day by 14:00 on the first Week Day after the Settlement Day as described in Agreed Procedure 16 "Provision of Metered Data".

12. Meter Data Providers shall provide the Meter Data listed in paragraph 3 to the Market Operator required for each Settlement Day by 14:00 on the fourth Week Day after the Settlement Day as described in Agreed Procedure 16 "Provision of Metered Data".

13. Meter Data Providers shall provide to the Market Operator the Meter Data listed in paragraph 3 in sufficient time to permit the Timetabled Settlement Reruns to be performed by the Market Operator in accordance with the Settlement Calendar.

14. If a System Operator in its role as Meter Data Provider has provided data for a Unit as described in paragraph 12, this fulfils that System Operator's requirement to send that data again as described in paragraph 13, unless there are known corrections required to the data arising from the resolution of Settlement Queries or Disputes.

15. In the event of a Settlement Query in respect of Meter Data and where the Meter Data is discovered to be in material error, the Meter Data Provider shall send the updated Meter Data for the Units, Interconnector, or Net Inter-Jurisdictional Import as appropriate for the Settlement Day or Settlement Days to which the Settlement Query relates as described in Agreed Procedure 16 "Provision of Meter Data".

16. In the event of a Dispute in respect of Meter Data and where the Meter Data is discovered to be in material error, the Meter Data Provider shall send the updated Meter Data for the Units, Interconnector, or Net Inter-Jurisdictional Import as appropriate in a manner and form determined by the Dispute Resolution Board.

APPENDIX M: CAPACITY MARKET DATA TRANSACTIONS

INTRODUCTION

1.   This Appendix M outlines the detailed Data Record requirements for Data Transactions sent by the System Operators to the Market Operator, which are not defined in other Appendices, which are required for the settlement of the Capacity Market, and the associated high-level Data Transaction Submission Protocols.

DATA TRANSACTIONS

2.   The Data Transactions in this Appendix M include:

   (a)   The Demand Side Non-Delivery Percentage (FNDDS);

   (b)   The Contract Register Data;

   (c)   The Commissioned Capacity Quantity (qCCOMMISS);

   (d)   The De-rating Factor (FDERATE); and

   (e)   The Gross De-Rated Capacity Quantity (qCDERATEG).

3.   Each Data Record in this Appendix M which contains Currency amounts will be denominated in the Participant's designated Currency.

DATA TRANSACTION AND DATA RECORDS

Demand Side Non-Delivery Percentage Data Transaction

4.   The Data Records for the System Parameters Data Transaction are described in Table 6 and the Submission Protocol in Table 39.

Table 38 – Demand Side Non-Delivery Percentage Data Transaction Data Records

Participant Name
Capacity Market Unit ID
Trading Day
Imbalance Settlement Period
Demand Side Non-Delivery Percentage, $FNDDS_{\Omega\gamma}$

Table 39 – Demand Side Non-Delivery Percentage Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One, containing data for each Capacity Market Unit which represents one or more Generator Units that are Demand Side Units, for each Imbalance Settlement Period in

	the relevant Trading Day.
Frequency of Data Transactions	Daily
First Submission time	After end of Trading Day
Last Submission time	Prior to Imbalance Settlement Calculation
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Prior to Imbalance Settlement Calculation and within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred.
	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
	As available prior to the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 2 (human to computer)/ Type 3 (computer to computer)
Process for data validation	None

Contract Register Data Transaction

5. The Data Records for the Contract Register Data Transaction are described in Table 8 and the Submission Protocol in Table 9.

Table 40 – Contract Register Data Transaction Data Records

Participant Name

Capacity Market Unit ID

Trading Day

The Capacity Quantity ($qC_{\Omega n}$)

Primary or Secondary Trade Flag

The Annual Stop-Loss Limit Factor ($FSLLA_n$)

The Billing Period Stop-Loss Factor ($FSLLB_n$)

The Capacity Payment Price ($PCP_{\Omega n}$)

The Capacity Duration Exchange Rate ($XRCD_n$)

Table 41 – Contract Register Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One containing data for each Capacity Market Unit, for each Imbalance Settlement Period in the Capacity Year.
Frequency of Data Transactions	Daily
First Submission time	After end of Trading Day
Last Submission time	Prior to Imbalance Settlement Calculation
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Prior to Imbalance Settlement Calculation and within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred.
	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Commissioned Capacity Quantity Data Transaction

6. The Data Records for the Commissioned Capacity Quantity Data Transaction are described in Table 10 and the Submission Protocol in Table 11.

Table 42 – Commissioned Capacity Quantity Data Transaction Data Records

Participant Name

Capacity Market Unit ID

Trading Day

Imbalance Settlement Period

Commissioned Capacity Quantity ($qCCOMMISS_{\Omega y}$)

Table 43 – Commissioned Capacity Quantity Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One containing data for each Capacity Market Unit, for each Imbalance Settlement Period in the Capacity Year.
Frequency of Data Transactions	At least once per Capacity Year, plus as updated
First Submission time	As available
Last Submission time	Prior to Imbalance Settlement Calculation.
	As required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error.
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Prior to Imbalance Settlement Calculation and within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred.
	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 2 (human to computer)/ Type 3 (computer to computer)

Process for data validation	None

De-rating Factor Data Transaction

7. The Data Records for the Commissioned Capacity Quantity Data Transaction are described in Table 44 and the Submission Protocol in Table 45.

Table 44 – De-rating Factor Data Transaction Data Records

Participant Name
Capacity Market Unit ID
Trading Day
Imbalance Settlement Period
De-rating Factor ($FDERATE_{\Omega}$)

Table 45 – De-rating Factor Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One containing data for each Capacity Market Unit
Frequency of Data Transactions	At least once per Capacity Year, plus as updated
First Submission time	As available
Last Submission time	Prior to Imbalance Settlement Calculation. As required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error.
Permitted frequency of resubmission prior to last submission time	Unlimited
Required resubmission subsequent to last submission time	Prior to Imbalance Settlement Calculation and within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred.

	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 2 (human to computer)/ Type 3 (computer to computer)
Process for data validation	None

Gross De-Rated Capacity Quantity Data Transaction

8.   The Data Records for the Commissioned Capacity Quantity Data Transaction are described in Table 46 and the Submission Protocol in Table 47.

Table 46 – Gross De-Rated Capacity Quantity Data Transaction Data Records

Participant Name
Capacity Market Unit ID
Trading Day
Imbalance Settlement Period
Gross De-Rated Capacity Quantity ($qCDERATEG_{\Omega\gamma}$)

Table 47 – De-rating Factor Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One containing data for each Capacity Market Unit for each Imbalance Settlement Period in the Capacity Year.
Frequency of Data Transactions	At least once per Capacity Year, plus as updated
First Submission time	As available
Last Submission time	Prior to Imbalance Settlement Calculation.
	As required to resolve a Settlement Query or a Dispute where the Data Records in the Transaction are discovered to be in error.
Permitted frequency of	Unlimited

resubmission prior to last submission time	
Required resubmission subsequent to last submission time	Prior to Imbalance Settlement Calculation and within 10 Working Days of notification to the System Operator of an upheld Settlement Query or Dispute if the error has High Materiality, or if the last Timetabled Settlement Rerun has occurred.
	If the error has Low Materiality resubmission will occur by the deadline for data provision for Timetabled Settlement Rerun as specified in the Settlement Calendar.
Valid Communication Channels	Type 1 (manual)/ Type 3 (computer to computer)
Process for data validation	None

APPENDIX N: FLAGGING & TAGGING

SYSTEM OPERATOR AND NON-MARGINAL FLAGGING

1.　For each Imbalance Pricing Period φ, the Market Operator shall use information from the most recent Indicative Operations Schedule to identify whether a Generator Unit's scheduled output is bound by the presence of an Operational Constraint and where it determines that the Generator Unit is so bound, shall set the System Operator Flag ($FSO_{uk\varphi}$) for all Accepted Bids and Accepted Offers for that Generator Unit to a value equal to zero for that Imbalance Pricing Period. For each Imbalance Pricing Period φ, the Market Operator shall use information from the most recent Indicative Operations Schedule to identify whether a Generator Unit's scheduled output is bound by the presence of a Unit Constraint and where it determines that the Generator Unit is so bound, shall set the Non-Marginal Flag ($FNM_{uk\varphi}$) for all Accepted Bids and Accepted Offers for that Generator Unit to a value equal to zero for that Imbalance Pricing Period.

2.　For each Imbalance Pricing Period φ, the Market Operator shall identify the Accepted Bids and Accepted Offers corresponding to the final Bid Offer Acceptance o for each Generator Unit in respect of that Imbalance Pricing Period φ and shall set the Non-Marginal Flag ($FNM_{uk\varphi}$) for all other Accepted Bids and Accepted Offers for that Generator Unit to a value equal to zero.

3.　The Market Operator shall publish details of how Operational and Unit constraints are to be applied in the System Operator Flagging and Non-Marginal Flagging processes.

NET IMBALANCE VOLUME TAGGING

Setting the Value of the Initial Net Imbalance Volume Tag

5.　For each Imbalance Pricing Period φ, where the Net Imbalance Volume Quantity ($QNIV_{uk\varphi}$) is a positive value, the Market Operator shall set the value of each Initial Net Imbalance Volume Tag ($TINIV_{uk\varphi}$) to zero for each rank k from 1 to M and to the value of the Imbalance Price Flag ($FIP_{uk\varphi}$) for each rank k from M+1 to N.

6.　For each Imbalance Pricing Period φ, where the Net Imbalance Volume Quantity ($QNIV_{uk\varphi}$) is a negative value, the Market Operator shall set the value of each Initial Net Imbalance Volume Tag ($TINIV_{uk\varphi}$) to the value of the Imbalance Price Flag ($FIP_{uk\varphi}$) for each rank k from 1 to M and to zero for each rank k from M+1 to N.

Calculation of the Residual Tagged Quantity

7.　The Market Operator shall calculate the Residual Tagged Quantity for each Imbalance Pricing Period ($QRTAG_{\varphi}$) as follows:

$$QRTAG_{\varphi} = -\sum_k QAB_{uk\varphi} \times \left(1 - TINIV_{uk\varphi}\right) - \sum_k QAO_{uk\varphi} \times (1 - TINIV_{uk\varphi})$$

where:

(a)　$\sum_k$ is the sum of values over all k;

(b)　$QAB_{uk\varphi}$ is the Accepted Bid Quantity for Generator Unit u and rank k;

(c) QAO$_{uk\varphi}$ is the Accepted Offer Quantity for Generator Unit u and rank k; and

(d) TINIV$_{uk\varphi}$ is the value of the Initial Net Imbalance Volume Tag for Generator Unit u and rank k.

Setting the Net Imbalance Volume Tag in the Case of a Positive Net Imbalance Volume Quantity

8. For each Imbalance Pricing Period φ, where the Net Imbalance Volume Quantity (QNIV$_{uk\varphi}$) is a positive value, the Market Operator shall:

(a) Where the Residual Tagged Quantity (QRTAG$_\varphi$) is a negative value:

(i) determine the value of b and β to satisfy the following equation:

$$\sum_{k<b} QAO_{uk\varphi} \times (1 - TINIV_{uk\varphi}) + \beta_{k=b} \times QAO_{uk\varphi} \times \left(1 - TINIV_{uk\varphi}\right) = -QRTAG_{\varphi}$$

where:

(A) b is a positive integer (1 ≤ b ≤ N) and β is a positive real number (0 ≤ β < 1);

(B) QAO$_{uk\varphi}$ is the Accepted Offer Quantity for Generator Unit u and rank k; and

(C) TINIV$_{uk\varphi}$ is the Initial Net Imbalance Volume Tag for each Generator Unit u and rank k.

(ii) set the value of each Net Imbalance Volume Tag (TNIV$_{uk\varphi}$) to a value equal to the value of each corresponding Initial Net Imbalance Volume Tag for each rank from 1 to M and b+1 to N, to a value of one for each rank k from M+1 to b-1 and to a value of β for rank k = b.

(b) Where the Residual Tagged Quantity (QRTAG$_\varphi$) is a positive value:

(i) determine the value of b and β to satisfy the following equation:

$$\sum_{k>b} QAO_{uk\varphi} \times TINIV_{uk\varphi} + \beta_{k=b} \times QAO_{uk\varphi} \times TINIV_{uk\varphi} = QRTAG_{\varphi};$$

where:

(A) b is a positive integer (1 ≤ b ≤ N) and β is a positive real number between (0 ≤ β < 1);

(B) QAO$_{uk\varphi}$ is the Accepted Offer Quantity for Generator Unit u and rank k; and

(C) TINIV$_{uk\varphi}$ is the Initial Net Imbalance Volume Tag for each Generator Unit u and rank k.

(ii) set the value of each Net Imbalance Volume Tag (TNIV$_{uk\varphi}$) to a value equal to the value of each corresponding Initial Net Imbalance Volume Tag for each rank from 1 to b-1, to a value of 1-β for k = b and to a value of zero for each rank k from b+1 to N.

Setting the Net Imbalance Volume Tag in the Case of a Negative Net Imbalance Volume Quantity

9.   For each Imbalance Pricing Period φ, where the Net Imbalance Volume Quantity ($QNIV_{ukφ}$) is a negative value, the Market Operator shall:

   (a)   Where the Residual Tagged Quantity ($QRTAG_φ$) is a positive value:

      (i)   determine the value of b and β to satisfy the following equation:

$$\sum_{k>b} QAB_{ukφ} \times (1 - TINIV_{ukφ}) + \beta_{k=b} \times QAB_{ukφ} \times (1 - TINIV_{ukφ}) = -QRTAG_φ$$

         where

         (A) b is a positive integer (1 ≤ b ≤N) and β is a positive real number between (0 ≤ β <1);

         (B) $QAB_{ukφ}$ is the Accepted Bid Quantity for Generator Unit u and rank k; and

         (C) $TINIV_{ukφ}$ is the Initial Net Imbalance Volume Tag for each Generator Unit u and rank k.

      (ii)   set the value of each Net Imbalance Volume Tag ($TNIV_{ukφ}$) to a value equal to the value of each corresponding Initial Net Imbalance Volume Tag for each rank from 1 to b-1 and M+1 to N, to a value of β for k = b and to a value of one for each rank k from b+1 to M..

   (b)   Where the Residual Tagged Quantity ($QRTAG_φ$) is a negative value:

      (i)   determine the value of b and β to satisfy the following equation:

$$\sum_{k<b} QAB_{ukφ} \times TINIV_{ukφ} + \beta_{k=b} \times QAB_{ukφ} \times TINIV_{ukφ} = QRTAG_φ;$$

         where:

         (A) b is a positive integer (1 ≤ b ≤N) and β is a positive real number (0 ≤ β <1);

         (B) $QAB_{ukφ}$ is the Accepted Bid Quantity for Generator Unit u and rank k; and

         (C) $TINIV_{ukφ}$ is the Initial Net Imbalance Volume Tag for each Generator Unit u and rank k

      (ii)   set the value of each Net Imbalance Volume Tag ($TNIV_{ukφ}$) to a value of zero for each rank k from 1 to b-1, to a value of 1 − β for k = b and to a value equal to the value of each corresponding Initial Net Imbalance Volume Tag for each rank from b+1 to N.

PRICE AVERAGE REFERENCE TAGGING

Setting the Price Average Reference Tag if –QPAR ≤ QNIV$_φ$ ≤ QPAR

1.   For each Imbalance Pricing Period φ where the Net Imbalance Volume Quantity ($QNIV_φ$) is greater than or equal to the negative of the Price Average Reference

Quantity (-QPAR) and less than or equal to the Price Average Reference Quantity (QPAR), the Market Operator shall set the value of the Price Average Reference Tag ($TPAR_{uk\varphi}$) equal to one for all k.

Setting the Price Average Reference Tag if $QNIV_\varphi$ > QPAR

10. For each Imbalance Pricing Period φ where the Net Imbalance Volume Quantity ($QNIV_\varphi$) is greater than the Price Average Reference Quantity (QPAR), the Market Operator shall:

(a) Determine the value of b and β to satisfy the following equation:

$$\sum_{k>b} QAO_{uk\varphi} \times TNIV_{uk\varphi} + \beta_{k=b} \times QAO_{uk\varphi} \times TNIV_{uk\varphi} = QPAR;$$

where:

(i) b is a positive integer and β is a positive real number between zero and one;

(ii) $QAO_{uk\varphi}$ is the Accepted Offer Quantity for Generator Unit u and rank k; and

(iii) $TNIV_{uk\varphi}$ is the Net Imbalance Volume Tag for Generator Unit u and rank k.

(b) Set the value of the Price Average Reference Tag ($TPAR_{uk\varphi}$) equal to zero for all k = M+1 to b-1, to a value of β for k = b, and equal to one for k = 1 to M and k = b+1 to N.

Setting the Price Average Reference Tag if $QNIV_\varphi$ < -QPAR

11. For each Imbalance Pricing Period φ where the Net Imbalance Volume Quantity ($QNIV_\varphi$) is less than the negative of the Price Average Reference Quantity (QPAR), the Market Operator shall::

(a) Determine the value of b and β to satisfy the following equation:

$$\sum_{k<b} QAB_{uk\varphi} \times TNIV_{uk\varphi} + \beta_{k=b} \times QAB_{uk\varphi} \times TNIV_{uk\varphi} = -QPAR$$

where:

(i) b is a positive integer and β is a positive real number between zero and one;

(ii) $QAB_{uk\varphi}$ is the Accepted Bid Quantity for Generator Unit u and rank k; and

(iii) $TNIV_{uk\varphi}$ is the Net Imbalance Volume Tag for Generator Unit u and rank k.

(b) Set the value of the Price Average Reference Tag ($TPAR_{uk\varphi}$) equal to zero for all k = b+1 to M, to a value of β for k = b, and equal to one for k = 1 to b-1 and k = M+1 to N.

APPENDIX O: INSTRUCTION PROFILING CALCULATIONS

1. The following timing conventions applies to provisions within this Appendix O, in line with their use in the Trading and Settlement Code (T&SC):

   (a) The Imbalance Pricing Period is the period within an Imbalance Settlement Period relevant to the execution of the Imbalance Pricing Process, as per Chapter E "Imbalance Price", and represented by the subscript φ;

   (b) An Imbalance Settlement Period is the period relevant to the execution of Settlement calculations, as outlined in Chapter F "Calculation of Payments and Charges", and represented by the subscript γ;

   (c) Provisions that applies to both Imbalance Pricing Periods and Imbalance Settlement Periods, are indicated by the subscript for a generalised period, h.

2. This Appendix O of the Code sets out detailed provisions in relation to three types of Instruction Profiles:

   (a) Physical Notification Instruction Profile that shall be used by the Market Operator to determine the values of Dispatch Quantity ($qD_{uoh}(t)$) for Bid Offer Acceptances resulting from Dispatch Instructions;

   (b) Pseudo Instruction Profile that shall be used by the Market Operator to determine the values of Dispatch Quantity ($qD_{uoh}(t)$) for Bid Offer Acceptances resulting from Pseudo Dispatch Instructions; and

   (c) Uninstructed Imbalance Instruction Profile that shall be used by the Market Operator to determine values of Dispatch Quantity ($QD_{u\gamma}$)

as required by Chapter F "Calculation of Payments and Charges" for each Dispatchable Generator Unit for each period, h.

3. Physical Notification Instruction Profiling and Pseudo Instruction Profiling for the purpose of Bid Offer Acceptence calculation as set out in Chapter F "Calculation of Payment and Charges", section F.6.2, shall, be performed after each Imbalance Pricing Period for the purpose of being used in the Imbalance Price calculation and by [XX:XX] on D+1 and D+4 for the purpose of Imbalance Settlement Calculation.

4. Uninstructed Imbalance Instruction Profiling for the purpose of Undelivered Quantity calculation and Uninstructed Imbalance calculation as set out in Chapter F "Calculation of Payment and Charges", sections F.6.6 and F.9,shall be performed by [XX:XX] on D+1 and D+4 for each Imbalance Settlement Period.

5. Instruction Profiling shall be calculated prior to any additional Imbalance Pricing Software Run performed by the Market Operator as required for Imbalance Pricing and Settlement purposes respectively.

6. Instruction Profiling shall not be performed for Generator Units which are not Dispatchable and not Contollable, Assetless Units or Interconnector Residual Capacity Units, and the values of Dispatch Quantity for these Generator Units, where applicable, shall be calculated as set out in Chapter F "Calculation of Payment and Charges", section F.2.4.

7. All Dispatch Instructions shall be provided by the relevant System Operator to the Market Operator in accordance with Appendix K: "Other Market Data Transactions" and the Market Operator shall procure to publish the Dispatch Instructions within the Central Market Systems.

CAPTURE INPUT DATA

8.   To calculate each type of Instruction Profile, a different combination of inputs from Appendix H: "Data Requirements for Registration", Appendix I: "Offer Data", Appendix K: "Other Market Data Transactions", Dispatch Instructions issued by the System Operator and Pseudo Dispatch Instructions, created by the Market Operator as per Table 50, shall be used for each period, h, for each Dispatchable Generator Unit in accordance with paragraph 32.

9.   The following Commercial Offer Data, Technical Offer Data and Physical Notification Data provided in accordance with Appendix I: "Offer Data", shall be used by the Market Operator to calculate Physical Notification Instruction Profiles and Pseudo Instruction Profiles:

   (a)   Complex Bid Offer Data;

   (b)   Simple Bid Offer Data;

   (c)   Minimum On Time;

   (d)   Minimum Off Time;

   (e)   Maximum On Time;

   (f)   Minimum Down Time (applicable to Demand Side Units);

   (g)   Maximum Down Time (applicable to Demand Side Units); and

   (h)   Final Physical Notification Quantities ($qFPN_{uh}(t)$).

10.   The following Registration Data and Technical Offer Data, provided in accordance with Appendix H: "Data Requirements for Registration" and Appendix I: "Offer Data" respectively, shall be used by the Market Operator to calculate all Instruction Profile types:

   (a)   Registered Capacity / Maximum Generation;

   (b)   Hot Cooling Boundary;

   (c)   Warm Cooling Boundary;

   (d)   Block Load Flag;

   (e)   Block Load Cold, Block Load Warm and Block Load Hot;

   (f)   Loading Rate Hot 1, 2 & 3;

   (g)   Loading Rate Warm 1, 2 & 3;

   (h)   Loading Rate Cold 1, 2 & 3;

   (i)   Load Up Break Point Hot 1 & 2;

   (j)   Load Up Break Point Warm 1 & 2;

   (k)   Load Up Break Point Cold 1 & 2;

   (l)   Soak Time Hot 1 & 2;

   (m) Soak Time Warm 1 & 2;

   (n)   Soak Time Cold 1 & 2;

   (o)   Soak Time Trigger Point Hot 1 & 2;

   (p)   Soak Time Trigger Point Warm 1 & 2;

   (q)   Soak Time Trigger Point Cold 1 & 2;

   (r)   Ramp Up Rate 1, 2, 3, 4 & 5;

(s)   Ramp Up Break Point 1, 2, 3 & 4;

(t)   Dwell Time Up 1, 2 & 3;

(u)   Dwell Time Down 1, 2 & 3;

(v)   Dwell Time Up Trigger Point 1, 2 & 3;

(w)   Dwell Time DownTrigger Point 1, 2 & 3;

(x)   Ramp Down Rate 1, 2, 3, 4 & 5;

(y)   Ramp Down Break Point 1, 2, 3 & 4;

(z)   Deloading Rate 1 & 2;

(aa)   Deload Break Point;

(bb)   Maximum Ramp Up Rate (applicable to Demand Side Units);

(cc)   Maximum Ramp Down Rate (applicable to Demand Side Units);

(dd)   Dispatchable Quantity (Maximum Generation applicable to Demand Side Units);

(ee)   Start of Restricted Range 1;

(ff)   End of Restricted Range 1;

(gg)   Start of Restricted Range 2;

(hh)   End of Restricted Range 2; and

(ii)   Short Term Maximisation Capability.

11.   The following Outturn Data, provided by the relevant System Operator to the Market Operator in accordance with Appendix K: "Other Market Data Transactions", shall be used by the Market Operator to create all Instruction Profile types:

(a)   Outturn Minimum Stable Generation;

(b)   Outturn Minimum Output;

(c)   Outturn Availability (Primary Fuel Type Outturn Availability for Dual Rated Generator Units);

(d)   Secondary Fuel Type Outturn Availability;

(e)   Rating Flag; and

(f)   Last Status Change Time.

12.   The following Dispatch Instructions Data Records provided by the relevant System Operator to the Market Operator in accordance with Appendix K: "Other Market Data Transactions" shall be used by the Market Operator to create all Instruction Profile types for each Generator Unit for the applicable period, h:

(a)   Instruction Issue Time;

(b)   Instruction Effective Time;

(c)   Target Instruction Level;

(d)   Instruction Code;

(e)   Instruction Combination Code;

(f)   Dispatch Ramp Up Rate;

(g)   Dispatch Ramp Down Rate; and

(h)   Instruction Effective Until Time for MWOF.

13.   The Instruction Codes and Instruction Combination Codes that are used for the calculation of all Instruction Profile types, except as provided in paragraph 14, are listed and described in Table 48.

Table 48 – Instruction Codes and Instruction Combination Codes for Dispatch Instructions issued by the System Operator

Instruction Code	Instruction Combination Code	Description
SYNC	n/a	Synchronise the Generator Unit at the specified Instruction Effective Time.
MWOF	n/a	Adjust the Generator Unit Output to the specified Target Instruction Level at the specified Instruction Effective Time.
DESY	n/a	Desynchronise the Generator Unit at the specified Instruction Effective Time.
GOOP	PGEN	Instruct positive Output from a Pumped Storage Unit at the specified Instruction Effective Time.
GOOP	PUMP	Instruct negative Output from a Pumped Storage Unit at the specified Instruction Effective Time.
GOOP	SCT	Instruct Synchronisation in generating mode and 0MW Output for a Pumped Storage Unit at the specified Instruction Effective Time.
GOOP	SCP	Instruct Synchronisation in Pumping Mode and 0MW Output from a Pumped Storage Unit at the specified Instruction Effective Time.
TRIP	n/a	Retrospectively issued Dispatch Instruction to indicate that a Generator Unit Desynchronised unexpectedly.
WIND	LOCL	Instruction for a Wind Power Unit to reduce Output due to a Local Network Constraint at the specified Instruction Effective Time.
WIND	LCLO	Instruction for a Wind Power Unit to cease the reduction of Output due to a Local Network Constraint at the specified Instruction Effective Time.
WIND	CURL	Instruction for a Wind Power Unit to reduce Output due to an All-Island Curtailment at the specified Instruction Effective Time.
WIND	CRLO	Instruction for a Wind Power Unit to cease the reduction of Output due to an All-Island Curtailment at the specified Instruction Effective Time.

Instruction Code	Instruction Combination Code	Description
MXON	n/a	Instruction to a Generator Unit to adjust its Output to the registered Short Term Maximisation Capability at the specified Instruction Effective Time.
MXOF	n/a	Instruction to de-activate a Maximisation Instruction at the specified Instruction Effective Time.
FAIL	n/a	Retrospectively-issued Dispatch Instruction to indicate that a Generator Unit failed to Synchronise as instructed.

14. The Instruction Codes and Instruction Combination Codes that are used for the calculation of Physical Notification Instruction Profiles shall be the same as described in Table 48 except for those listed and described in Table 49.

Table 49 – Instruction Codes and Instruction Combination Codes as used for Physical Notification Instruction Profile

Instruction Code	Instruction Combination Code	Description
MWOF	n/a	**Step 1**: Adjust the Generator Unit Output to the specified Target Instruction Level until a specified Effective Until Tme or until the Target Instruction Level must be maintained in accordance with Technical Offer Data, whichever is later; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities; however if a new Dispatch Instruction is issued by the System Operator with Instruction Effective Time at or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 48 or Table 49 as appropriate.
GOOP	PGEN	**Step 1**: Instruct positive Output from a Pumped Storage Unit at the specified Instruction Effective Time and Adjust the Generator Unit Output to the specified Target Instruction Level until a specified Effective Until Tme or until the Target Instruction Level must be maintained in accordance with Technical Offer Data, whichever is later; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities; however if a new Dispatch Instruction is issued by the System Operator with Instruction Effective Time at or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 48 or Table 49 as appropriate.
MXON	n/a	**Step 1**: Instruction to a Generator Unit to adjust its Output to the registered Short Term Maximisation Capability at the specified Instruction Effective Time until a specified Effective Until Tme or until the Target Instruction Level must be maintained in accordance with Technical Offer Data,

Instruction Code	Instruction Combination Code	Description
		whichever is later; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities; however if a new Dispatch Instruction is issued by the System Operator with Instruction Effective Time at or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 48 or Table 49 as appropriate.
MXOF	n/a	**Step 1**: Instruction to de-activate a Maximisation Instruction at the specified Instruction Effective Time and adjust the Generator Unit Output to MWOF issued with MXOF or the last valid MWOF prior to the Maximisation instruction until specified Effective Until Tme or until the Target Instruction Level must be maintained in accordance with Technical Offer Data, whichever is later; **Step 2:** with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities; however if a new Dispatch Instruction is issued by the System Operator with Instruction Effective Time at or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 48 or Table 49 as appropriate.

15.   In addition to Dispatch Instructions issued by the System Operator, Pseudo Dispatch Instructions, corresponding to a subset of the Instructions listed in Table 48, shall also be created by the Market Operator and used in accordance to the description in Table 50 to calculate Pseudo Instruction Profiles.

16.   A Pseudo Dispatch Instruction shall not be created for a corresponding Dispatch Instruction where the System Operator issues a subsequent Dispatch Instruction with Instruction Effective Time at or before the time at which the first Target Instruction Level is reached.

Table 50 – Instruction Codes and Instruction Combination Codes for Pseudo Dispatch Instructions

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
PSYN	n/a	SYNC	**Continuous open acceptance after SYNC.** At Instruction Effective Time set as the later of: - the time when the corresponding SYNC Instruction Profile reaches the instructed MWOF Target Instruction Level where MWOF is replaced by Outturn Minimum Stable Generation

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			if Ramp Up Rate is greater than the Minimum On Time; or - the corresponding SYNC Instruction Effective Time plus Min On Time, **Step 1**: create a PSYN to maintain Generator Unit Output to the specified SYNC Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
PMWO	n/a	MWOF	**Continuous open acceptance after MWOF.** At Instruction Effective Time set as: - the time when the corresponding MWOF Instruction Profile reaches the specified Target Instruction Level, **Step 1**: create a PMWO to maintain the Generator Unit Output to the specified MWOF Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
PDES	n/a	DESY	**Continuous open acceptance after DESY.** At Instruction Effective Time set as: - the corresponding DESY Instruction Effective Time plus Min Off Time, **Step 1**: create a PDES to maintain the Generator Unit Output to the specified DESY Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
GOOP	PPGE	PGEN	**Continuous open acceptance after PGEN.** At Instruction Effective Time set as: - the time when the corresponding PGEN Instruction Profile reaches the specified Target Instruction Level,

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			Step 1: create a PPGE to maintain the Generator Unit Output to the specified PGEN Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, Target Instruction Level to Final Physical Notification Quantities.
PMXN	n/a	MXON	**Continuous open acceptance after MXON.** At Instruction Effective Time set as: - the time when the corresponding MXON Instruction Profile reaches the Short Term Maximisation Capability, **Step 1**: create a PMXN to maintain the Generator Unit Output to the specified MXON Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
PMXF	n/a	MXOF	**Continuous open acceptance after MXOF.** At Instruction Effective Time set as: - the time when the corresponding MXON Instruction Profile reaches the last effective MWOF Target Instruction Level prior to the corresponding MXON, **Step 1**: create a PMXF to maintain the Generator Unit Output to the specified MXOF Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction; **Step 2**: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
POFF	n/a	n/a	**Continuous open acceptance keeping unit off.** At Instruction Effective Time set as: - the time where the Final Physical Notification Quantity profile rises from zero **Step 1**: create a POFF to maintain the Generator Unit Output to the specified Target Instruction Level (zero) until next Dispatch Instruction or Pseudo Dispatch

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			Instruction;
			Step 2: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
			NOTE: POFF is created where the preceding Dispatch Instruction is not one of the following: MWOF, MXON, SYNC, PGEN, MXOF, DESY.
PCOD	n/a	n/a	**Continuous open acceptance after COD change.**
			At Instruction Effective Time set as:
			- the effective time of a revised set of Unit's Commercial Offer Data set out in sub-paragraphs 9(a) and 9(b)
			Step 1: create a PCOD to maintain the Generator Unit Output to the preceding Target Instruction Level associated with the Accepted Bid Offer Quantity until next Dispatch Instruction or Pseudo Dispatch Instruction;
			Step 2: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
			NOTE: PCOD is created where the preceding Dispatch Instruction is not one of the following: MWOF, MXON, SYNC, PGEN, MXOF, DESY.
PISP	n/a	n/a	**Continuous open acceptance after Imbalance Settlement Period boundary**,
			At Instruction Effective Time set as:
			- the Imbalance Settlement Period boundary time,
			Step 1: create a PISP to maintain the Generator Unit Output to the preceding Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction;
			Step 2: with Instruction Effective Time set at the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities.
			NOTE: PISP is created where the preceding Dispatch Instruction is not one of the following: MWOF, MXON, SYNC, PGEN, MXOF, DESY.

17.   Upon issuance of any Pseudo Dispatch Instruction, the Target Instruction Level of the preceding Dispatch Instruction or Pseudo Dispatch Instruction will be set equal to Final Physical Notifications.

DISPATCH INSTRUCTION AND PSEUDO DISPATCH INSTRUCTION VALIDATION

18. Dispatch Instructions for a Trading Day shall be sorted by Generator Unit, Instruction Effective Time and Instruction Issue Time. Unless otherwise specified, Instruction Issue Time for Pseudo Dispatch Instructions shall be set equal to the Instruction Effective Time.

19. A Dispatch Instruction shall cancel a Pseudo Dispatch Instruction with the same Instruction Effective Time, where that Pseudo Dispatch Instruction is created as a result of a previous corresponding Dispatch Instruction.

20. If multiple Dispatch Instructions with the same Instruction Effective Time but different Instruction Issue Times are issued for a Generator Unit, then the Dispatch Instruction with the latest Instruction Issue Time shall be used. For Dispatch Instructions having the same Instruction Issue Time and Instruction Effective Time, the Dispatch Instructions shall be ordered based on the following sequence of Instruction Codes:

    (a) TRIP;

    (b) GOOP+PUMP;

    (c) MWOF;

    (d) MXON;

    (e) SYNC;

    (f) GOOP;

    (g) WIND;

    (h) MXOF; and

    (i) DESY.

21. If multiple Pseudo Dispatch Instructions are created with the same Instruction Effective Time and Instruction Issue Time, they shall be ordered based on the following sequence of Instruction Codes:

    (a) PCOD;

    (b) PISP;

    (c) POFF; and

    (d) The Pseudo Dispatch Instruction corresponding to the latest Dispatch Instruction or Instruction Combination Code ordered in accordance with paragraph 20.

22. For Dispatch Instructions having a MWOF Instruction Code, equal Instruction Effective Times and equal Instruction Issue Times, the Dispatch Instruction with the largest Target Instruction Level shall be used.

23. For any two Dispatch Instructions, having the same Instruction Effective Time, where the first Dispatch Instruction is defined as Dispatch Instruction A and the second Dispatch Instruction is defined as Dispatch Instruction B, the Instruction Code and Instruction Combination Code that shall be used for the resultant Dispatch Instruction are shown in Table 51. For the avoidance of doubt, MWOF(x) is defined as Dispatch Instruction having an Instruction Code of MWOF and a Target Instruction Level of x MW. SYNC(x) is defined as Dispatch Instruction having an Instruction Code of SYNC and a Target Instruction Level of x MW. DESY(x) is defined as Dispatch Instruction having

an Instruction Code of DESY and a Target Instruction Level of x MW. PGEN(x) is defined as a Dispatch Instruction having an Instruction Code of GOOP, an Instruction Combination Code of PGEN and a Target Instruction Level of x MW.

CURL(x) is defined as a Dispatch Instruction having an Instruction Code of WIND, an Instruction Combination Code of CURL and a Target Instruction Level of x MW. CRLO(x) is defined as a Dispatch Instruction having an Instruction Code of WIND, an Instruction Combination Code of CRLO and a Target Instruction Level of x MW. LOCL(x) is defined as a Dispatch Instruction having an Instruction Code of WIND, an Instruction Combination Code of LOCL and a Target Instruction Level of x MW. LCLO(x) is defined as a Dispatch Instruction having an Instruction Code of WIND, an Instruction Combination Code of LCLO and a Target Instruction Level of x MW.

Table 51 – Validation Rules for two Dispatch Instructions issued by the System Operator having the same Effective Time

Instruction Code A	Instruction Combination Code A	Instruction Code B	Instruction Combination Code B	Resultant Instruction Code	Resultant Instruction Combination Code
MWOF(x)	n/a	SYNC	n/a	SYNC (x)	n/a
SYNC	n/a	MWOF(x)	n/a	SYNC (x)	n/a
MWOF(x)	n/a	DESY	n/a	DESY (x)	n/a
DESY	n/a	MWOF(x)	n/a	DESY (x)	n/a
MWOF(x)	n/a	GOOP	PGEN	GOOP	PGEN (x)
GOOP	PGEN	MWOF(x)	n/a	GOOP	PGEN (x)
WIND	CURL	MWOF(x)	n/a	WIND	CURL(x)
WIND	CRLO	MWOF(x)	n/a	WIND	CRLO(x)
WIND	LOCL	MWOF(x)	n/a	WIND	LOCL(x)
WIND	LCLO	MWOF(x)	n/a	WIND	LCLO(x)

24.   The sorted Dispatch Instructions for each Generator Unit shall be validated by the Market Operator using the rules in **Table 52**,Table 53 and Table 54.

Table 52 – Validation Rules for Dispatch Instructions issued by the System Operator

Preceding Instruction Code	Current Instruction Code	Action
SYNC	SYNC	Ignore Dispatch Instruction linked to current Instruction Code.
DESY	DESY	Ignore Dispatch Instruction linked to current Instruction Code.
TRIP	TRIP	Ignore Dispatch Instruction linked to current Instruction Code.

Preceding Instruction Code	Current Instruction Code	Action
SYNC	FAIL	If Instruction Effective Time for Dispatch Instruction having FAIL Instruction Code is up to and including 1 hour after the Instruction Effective Time for a Dispatch Instruction having SYNC Instruction Code, the Dispatch Instruction having the preceding SYNC Instruction Code shall be ignored. Dispatch Instructions having Instruction Effective Times between the Instruction Effective Times for the Dispatch Instructions having the FAIL and the preceding SYNC Instruction Codes shall be ignored.
SYNC	FAIL	If Instruction Effective Time for Dispatch Instruction having FAIL Instruction Code is over 1 hour after the Instruction Effective Time for the Dispatch Instruction having SYNC Instruction Code, profile the Dispatch Instruction having SYNC Instruction Code as normal and discard the Dispatch Instruction having FAIL Instruction Code.
FAIL	SYNC	Ignore Dispatch Instructions having FAIL Instruction Code, if this Dispatch Instruction is not matched with previous Dispatch Instruction having a SYNC Instruction Code. Profile Dispatch Instruction having SYNC Instruction Code as per normal.

Table 53 – Validation Rules for Dispatch Instructions issued by the System Operator for all Generator Units

Instruction Code	MWOF(x)	Action
MWOF	x > Maximum Generation	Set x to > Maximum Generation
MWOF	x in Restricted Range	Profile MWOF(x)
SYNC[1]	x > Maximum Generation	Set x to > Maximum Generation
SYNC	x in Restricted Range	Profile MWOF(x)
MWOF	0 < x < Outturn Minimum Stable Generation	Profile MWOF(x)
SYNC	x = NULL	Set x = Outturn Minimum Stable Generation
DESY[2]	x = NULL	Set x = 0

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[1]   A Dispatch Instruction with a SYNC Instruction Code is accompanied by a Dispatch Instruction having a MWOF Instruction Code and an Instructed Quantity greater than or equal to Outturn Minimum Stable Generation.

Table 54 – Validation Rules for Maximisation Instructions

Instructed Quantity	Instruction Code	MWOF(x)	Action
Any	MXON	x = NULL	Set Maximisation Flag for the equivalent Imbalance Settlement Period. Profile to Short Term Maximisation Capability.
NULL	MWOF (after MXON)	x = ANY	Maximisation ends. Profile to Target Instruction Level associated with new MWOF Instruction Code.
NULL	MXOF	x = NULL	Set Maximisation Flag for all or Imbalance Settlement Periods covered. Profile back to Target Instruction Level associated with last MWOF Instruction Code at the latest Ramp Down Rate.

25. A Dispatch Instruction having a MWOF or DESY Instruction Code which follows a Dispatch Instruction having an Instruction Code MXON shall be taken to de-activate the Maximisation Instruction.

26. A Dispatch Instruction having a GOOP Instruction Code and having a SCP Instruction Combination Code may precede a Dispatch Instruction having a GOOP Instruction Code and a PUMP Instruction Combination Code. Validation rules for Pumped Storage Units are detailed in Table 56.

PROFILE OPERATING MODES

27. The normal operating modes for a Synchronised Generator Unit are load up mode, ramp up mode, ramp down mode and deload mode. Each operating mode of a Generator Unit is described by a piecewise linear Operating Trajectory that describes the theoretical Output of a Generator Unit over time.

28. The load up trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from Start Up to Minimum Generation determined by:

(a) The following Technical Offer Data:

(i) Block Load Cold, Block Load Warm and Block Load Hot;

(ii) Loading Rate Hot 1, 2 & 3;

(iii) Loading Rate Warm 1, 2 & 3;

(iv) Loading Rate Cold 1, 2 & 3;

(v) Load Up Break Point Hot 1 & 2;

(vi) Load Up Break Point Warm 1 & 2;

(vii) Load Up Break Point Cold 1 & 2;

(viii) Soak Time Hot 1 & 2;

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[2] A Dispatch Instruction with a DESY Instruction Code is accompanied by a Dispatch Instruction having a MWOF Instruction Code and an Instructed Quantity of 0MW

(ix)   Soak Time Warm 1 & 2;

(x)   Soak Time Cold 1 & 2;

(xi)   Soak Time Trigger Point Hot 1 & 2;

(xii)   Soak Time Trigger Point Warm 1 & 2; and

(xiii)   Soak Time Trigger Point Cold 1 & 2.

(b)   Each segment of the piecewise linear load up trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

29.   The ramp up trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from Minimum Generation to the Maximum Generation for the Generator Unit determined by:

(a)   The following Technical Offer Data:

(i)   Maximum Generation;

(ii)   Minimum Generation;

(iii)   Ramp Up Rates 1, 2, 3, 4 & 5;

(iv)   Ramp Up Break Point 1, 2, 3 & 4;

(v)   Dwell Time Up 1, 2 & 3; and

(vi)   Dwell Time Up Trigger Point 1, 2 & 3.

(b)   Each segment of the piecewise linear ramp up trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

30.   The ramp down trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from the Maximum Generation for the Generator Unit to Minimum Generation determined by:

(a)   The following Technical Offer Data:

(i)   Maximum Generation;

(ii)   Minimum Generation;

(iii)   Ramp Down Rate 1, 2, 3, 4 & 5;

(iv)   Ramp Down Break Point 1, 2, 3 & 4;

(v)   Dwell Time Down 1, 2 & 3; and

(vi)   Dwell Time Down Trigger Point 1, 2 & 3.

(b)   Each segment of the piecewise linear ramp down trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

31.   The deloading trajectory of a Generator Unit is a piecewise linear curve that describes the theoretical Output of a Generator Unit over time from Minimum Generation to 0MW determined by:

(a)   The following Technical Offer Data:

(i)   Minimum Generation;

(ii)   0MW;

(iii)   Deloading Rate 1 & 2; and

    (iv)   Deload Break Point.

(b)   Each segment of the piecewise linear deloading trajectory for the Generator Unit which is identified by start MW, end MW, rate in MW/min and the time from start MW to end MW.

CREATE INSTRUCTION PROFILES

32.   The Instruction Profile function calculates a piecewise linear trajectory over time, for each Dispatch Instruction, taking into account a subset of the Generator Unit's input data listed in paragraphs 9 to 17 with the following criteria:.

(a)   In order to derive Dispatch Quantities ($qD_{uoh}(t)$) for each Generator Unit, u, for each Bid Offer Acceptance, o, in Period, h, the following profiles shall be created:

    (i)   Physical Notification Instruction Profile using input data in paragraphs 9 to 14; and

    (ii)   Pseudo Instruction Profile using input data in paragraphs 9 to 13 plus paragraphs 15 to 17.

(b)   In order to derive Dispatch Quantities ($QD_{u\gamma}$) for each Generator Unit, u, in Imbalance Settlement Period, γ, for the purpose of Undelivered Quantity calculation and Uninstructed Imbalance calculation, an Uninstructed Imbalance Instruction Profile shall be created using input data in paragraphs 10 to 13.

33.   Each section of the piecewise linear Instruction Profile for a Generator Unit shall be produced in sequence by stepping through the sequence of Dispatch Instructions and/or Pseudo Dispatch Instructions , for the Generator Unit as follows:

(a)   The MW/Time Co-ordinates from the previous segment of the Instruction Profile shall be retrieved. For the initial segment of the Instruction Profile the MW/Time Co-ordinate is the end MW/Time Co-ordinate from the end segment of the Instruction Profile calculated for the previous Trading Day.

(b)   Where an initial MW/Time Co-ordinate is not available for the Generator Unit from the previous Instruction Profiling run, the Target Instruction Level for the latest Dispatch Instruction for the Generator Unit prior to 23:00 on the Trading Day shall be used as the initial Instructed Quantity for the Generator Unit.

(c)   The active Dispatch Instruction or Pseudo Dispatch Instruction shall be identified using the MW/Time Co-ordinates from the previous segment of the Instruction Profile and the Instruction Effective Time that corresponds to that Dispatch Instruction or Pseudo Dispatch Instruction.

(d)   The active Dispatch Instruction or Pseudo Dispatch Instruction shall be validated by the Market Operator using the MW/Time Co-ordinates from the previous segment of the Instruction Profile, the Target Instruction Level, the Instruction Code and Instruction Combination Code using the rules specified in Table 55and Table 56.

Table 55 – Instruction Profiling Validation Rules for Generator Units that are not Pumped Storage Units

Instructed Quantity from previous segment of Instruction Profile	Instruction Code for active Dispatch Instruction or Pseudo Dispatch Instructions	Target Instruction Level	Action
0	SYNC	Null	Set Target Instruction Level of accompanying Dispatch Instruction having Instruction Code MWOF to Outturn Minimum Stable Generation.
0	SYNC	< Outturn Minimum Stable Generation	Set Target Instruction Level of accompanying Dispatch Instruction having Instruction Code MWOF to Outturn Minimum Stable Generation.
0	MWOF	0	Ignore Dispatch Instruction.
0	MWOF	> 0	Use Cold Start Up Operating Characteristics.
0	DESY		Ignore Dispatch Instruction.
>0	SYNC		Ignore Dispatch Instruction.
>0	MWOF	0	Profile to zero.
>0	DESY	>0	Profile to MWOF(0).
0	TRIP		Ignore Dispatch Instruction.
Any	PSYN	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	PSYN	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to the specified SYNC Target Instruction Level
Any	PMWO	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	PMWO	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to the specified SYNC Target Instruction Level
Any	PDES	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	PDES	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to the specified DESY Target Instruction Level

Instructed Quantity from previous segment of Instruction Profile	Instruction Code for active Dispatch Instruction or Pseudo Dispatch Instructions	Target Instruction Level	Action
Any	PMXN	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	PMXN	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to the specified MXON Target Instruction Level
Any	PMXF	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	PMXF	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to the specified MXOF Target Instruction Level
Any	POFF	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	POFF	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to 0MW
Any	PCOD	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	PCOD	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to preceding Target Instruction Level
Any	PISP	$qFPN_{uh}(t)$	Profile to $qFPN_{uh}(t)$
Any	PISP	Null or <> $qFPN_{uh}(t)$	Maintain the Generator Unit Output to preceding Target Instruction Level

Table 56 – Instruction Profiling Validation Rules for Pumped Storage Units

Instructed Quantity from previous segment of Instruction Profile	Instruction Code for active Dispatch Instruction	Instruction Combination Code	Action.
0	SYNC	n/a	Profile to Instructed Quantity.
0	MWOF(0)	n/a	Ignore Dispatch Instruction.
0	DESY	n/a	Ignore Dispatch Instruction.
0	GOOP	SCP	Ignore Dispatch Instruction.

Instructed Quantity from previous segment of Instruction Profile	Instruction Code active for Dispatch Instruction	Instruction Combination Code	Action.
0	GOOP	SCT	Ignore Dispatch Instruction.
0	GOOP	PUMP	Profile to MWOF(Pumping Capacity).
> 0	SYNC	n/a	Ignore Dispatch Instruction.
> 0	MWOF(0)	n/a	Profile to zero.
> 0	GOOP	PGEN	Ignore Dispatch Instruction.
> 0	GOOP	PUMP	Profile to MWOF(Pumping Capacity).
< 0	SYNC	n/a	Ignore Dispatch Instruction.
< 0	MWOF(0)	n/a	Profile to zero.
< 0	GOOP	PUMP	Ignore Dispatch Instruction.
< 0	MWOF(> 0)	n/a	Profile to zero, then profile to Target Instruction Level associated with MWOF Instruction Code.
0	MWOF(> 0)	n/a	Profile to Target Instruction Level associated with MWOF Instruction Code.
< 0	GOOP MWOF (0)	PGEN	Set Target Instruction Level associated with MWOF Instruction Code to Outturn Minimum Stable Generation.
< 0	GOOP MWOF(NULL)	PGEN	Set Target Instruction Level associated with MWOF Instruction Code to Outturn Minimum Stable Generation.
< 0	GOOP MWOF(NOT= (0 OR NULL))	PGEN	Profile to zero, then profile to Target Instruction Level associated with MWOF Instruction Code.
0	TRIP	n/a	Ignore Dispatch Instruction.

Instructed Quantity from previous segment of Instruction Profile	Instruction Code active for Dispatch Instruction	Instruction Combination Code	Action.
Any	GOOP	PPGE	maintain the Generator Unit Output to the specified PGEN Target Instruction Level until next Dispatch Instruction or Pseudo Dispatch Instruction; then adjust Target Instruction Level to Final Physical Notification Quantities.

34.   The Warm Cooling Boundary, Hot Cooling Boundary, the Instructed Quantity from the previous segment of the piecewise linear Instruction Profile and the Target Instruction Level for the current Dispatch Instruction shall be used to determine the appropriate operating mode of the Generator Unit. (The normal operating modes for a synchronised Generator Unit are load up mode, ramp up mode, ramp down mode and deload mode).

35.   The appropriate segment from the piecewise linear Operating Trajectory shall be selected.

36.   Where a Dispatch Ramp Up Rate accompanies a Dispatch Instruction, the Dispatch Ramp Up Rate shall be used in place of the Ramp Up Rates submitted as part of Technical Offer Data in the Ramp Up Operating Trajectory for the Generator Unit.

37.   Where a Dispatch Ramp Down Rate accompanies a Dispatch Instruction the Dispatch Ramp Down Rate shall be used in place of the Ramp Down Rates submitted as part of Technical Offer Data in the Ramp Down Operating Trajectory for the Generator Unit.

38.   The MW/Time Co-ordinates for the current segment of the piecewise linear Instruction Profile shall be calculated based on the MW/Time Co-ordinates from the previous segment of the Instruction Profile, the Instruction Code, the Instruction Combination Code, the Target Instruction Level, and the appropriate segment from the piecewise linear Operating Trajectory and the Imbalance Pricing Period and Imbalance Settlement Period Boundaries subject to the following rules:

(a)   In the case of a Dispatch Instruction having a GOOP Instruction Code and PUMP Instruction Combination Code, the Instructed Quantity for a Pumped Storage Unit will remain at the specified Target Instruction Level until a DESY Instruction Code is issued at which time the Instructed Quantity will go instantaneously to 0MW.

(b)   The MW/Time Co-ordinates for a Dispatch Instruction having a GOOP Instruction Code and SCT Instruction Combination Code will be determined in the same manner as if a Dispatch Instruction having a MWOF Instruction Code and a very low positive Target Instruction Level were issued.

(c)   A Dispatch Instruction having a GOOP Instruction Code and a SCP Instruction Combination Code shall have no actual effect on the Instruction

Profile of the Generator Unit except that a PUMP Instruction Code may follow.

(d) The Instructed Quantity at the Instruction Effective Time specified with the Dispatch Instruction having a TRIP Instruction Code will be zero. Ramp Rates, Deloading Rates and Dwell Times will be ignored in the calculation of the Instruction Profile.

(e) The default Instructed Quantity for a Wind Power Unit shall be set to its Output based on its Meter Data. The Instructed Quantity for a Wind Power Unit having a WIND Instruction Code and a LOCL or CURL Instruction Combination Code shall be set to the minimum of the Outturn Availability of the Wind Power Unit and the Target Instruction Level of the Wind Power Unit.

(f) The Target Instruction Level for a Generator Unit with a Dispatch Instruction having a MXON Instruction Code shall be the Short Term Maximisation Capability. The Instruction Profile shall be calculated from the last Ramp Up Rate specified for the Generator Unit.

(g) The Target Instruction Level for a Generator Unit with a Dispatch Instruction having a MXOF Instruction Code shall be the Target Instruction Level associated with the last Dispatch Instruction having a MWOF Instruction Code. The Instruction Profile shall be calculated from Ramp Down Rate 1 for the Generator Unit.

39. A Lag Time shall be applied when defining the MW/Time Co-ordinates for all Dispatch Instructions except Dispatch Instructions having SYNC, TRIP or FAIL Instruction Codes. No Lag Time shall apply to Pseudo Dispatch Instructions. The Lag Time shall be included in the Instruction Profile to account for the time required for a Generator Unit to make the control adjustments necessary to implement a Dispatch Instruction. The Lag Time shall be set to 0.

CALCULATE DISPATCH QUANTITY FOR UNINSTRUCTED IMBALANCE CALCULATION

40. A time weighted MW value for the Generator Unit for each Imbalance Settlement Period shall be set to be equal to double the calculated area per Imbalance Settlement Period between the piecewise linear Uninstructed Imbalance Instruction Profile for the Generator Unit and 0 MW. Areas calculated between the piecewise linear Uninstructed Imbalance Instruction Profile with negative MW values are negative.

41. The Dispatch Quantity ($QD_{u\gamma}$) for Pumped Storage Units in Pumping Mode shall be calculated as set to Outturn Minimum Output.