APPENDIX E: DATA PUBLICATION

Style Definition: TOC 1

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. Further details of data publication will be available in technical specification documents which will be published on the Market Operator's website. Subject to data confidentiality, and the timelines set out in this Appendix, all such reports will be published on the Market Operator's website and/or the Balancing Market Interface as defined in Agreed Procedure 6 "Data Publication and Data Reporting".

4. Agreed Procedure 6 "Data Publication and Data Reporting", will follow the following principles set out in the following sections, 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	Final Recommendation Report		

Time	Item / Data Record	Term	Subscript
issue of Final Recommendation Report to the Regulatory Authorities			
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		e
Within one Working Day of receipt from the Regulatory Authorities	Generator Suspension Delay Period		e
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	yy
Within five Working Days of receipt from the Regulatory Authorities approval or two months before effective day whichever is later	De Minimis Acceptance Threshold		

Time	Item / Data Record	Term	Subscript
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	
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

Time	Item / Data Record	Term	Subscript
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
After every Capacity Auction	Total Capacity Awarded	CCP	Ωc
Within five Working Days of receipt from the Regulatory Authorities	Response Period Duration		

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	Residual Meter Volume Interval Proportion	RMVIP	ey

Time	Item / Data Record	Term	Subscript
Days of its receipt from the Regulatory Authorities, whichever is later			
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
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	u
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

Time	Item / Data Record	Term	Subscript
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, whichever later	Imperfections Price	PIMP	y
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	Days in Historical Assessment Period	DINHAP	
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

Time	Item / Data Record	Term	Subscript
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			
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 once every Month	Registered Capacity	RC	u

Table 3A – Data publication list part 3A: updated Quarterly

Time	Item / Data Record	Term	Subscript
Quarterly			
Within one month from the end of each quarter ending March, June, September and December each year.	Market Operator Performance Report	--	--

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 Trading Day			
By 11:00 on the day of 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 and Solar Wind Power Unit Forecast by Unit		

By 17:00 on the day prior to the Trading Day, plus as updated	Four Day Rolling Wind and Solar Power Unit Forecast aggregated by Jurisdiction	-	-
By 17:00 on the day prior to the Trading Day, plus as updated	Four Day Rolling Wind and Solar Power Unit Forecast by Market	-	-
By 17:00 on the day prior to the Trading Day	Daily Transmission Outage Schedule Report		
By 17:00 on the day prior to the Trading Day	Forecast Availability	-	uγ

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 Settlement Price by ISP	PIMB	γ
Following each IPP	Net Imbalance Volume Quantity by IPP	QNIV	φ
Following each ISP	Net Imbalance Volume Quantity by ISP	QNIV	γ
Following each IPP	Net Imbalance Volume Tag	TNIV	ukφ
Following each IPP	Demand Control Quantity	QDC	Φ
Following each IPP	Marginal Energy Action Price	PMEA	Φ
Following each IPP	Price Average Reference Tag	TPAR	ukφ
Following each IPP	Bid Offer Price	PBO	ukφ

Following each IPP	Accepted Bid Quantity	QAB	ukφ
Following each IPP	Accepted Offer Quantity	QAO	ukφ
Following each IPP	System Operator Flag	FSO	ukφ
Following each IPP	Non-Marginal Flag	FNM	ukφ
Following each ISP	Anonymised Incremental/ Decremental Price Quantity Pairs		

Table 8 – Data publication list part 8: 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	Outturn Availability		uγ
By 16:00 Trading Day +1	Final Physical Notifications		uγ
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	SO Interconnector Trades	PBO, QAO, QAB	u
By 16:00 Trading Day +1	Market Back Up Prices	PMBU	y
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, vγ
By 16:00 Working Day +1 and by 17:00 Trading Day +5	Metered Generation by Jurisdiction	QM,	ue or ve
By 16:00 each Working Day	Credit Assessment Price for the Undefined Exposure Period for Billing Periods	PCA	g
By 16:00 each Working Day	Dispatch Quantity	DQ	uγ

Time	Item	Term	Subscript
By 16:00 each Working Day	Billing Period Undefined Potential Exposure Quantity	QUPEB	pg
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 Charges D+1	CIMB, CPREMIUM, CDISCOUNT, CAOOPO, CABBPO, CCURL, CUNIMB, CII, CFC, CIMP, CTEST, CREV, CCA	uγ, uk or vγ as appropriate
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	Ωγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Obligated Capacity Quantity	QCOB	Ωγ
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	Ωγ
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	Ωγ
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	Ωγ

Time	Item	Term	Subscript
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	Ωγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Day-ahead Difference Charge Metered Quantity	QMDIFFCDA	vγ
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	System Service Flag	FSS	uγ
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	System Service Difference Quantity	QDIFFCSS	uγ
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

Time	Item	Term	Subscript
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(y-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(y-1)
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Total Difference Charge	CDIFFCTOT	py
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 Days after Trading Day	Intraday Trade Price for Trade	PTID	xvhk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Intraday Trade Difference Quantity	QDIFFPTID	vyk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Intraday Trade Difference Payment	CDIFFPTID	vyk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Tracked Difference Quantity	QDIFFTRACK	vyk
By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	Imbalance Difference Quantity	QDIFFPIMB	vy
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	$_{vd}$

Time	Item	Term	Subscript
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 9: 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 Period,	Capacity Payment Price	PCP	Ωn
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	Ωc
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

Table 10 - Data publication list part 10: updated every hour, containing data for the previous hour

Time	Item/Data Record	Term	Subscript
Every hour for the previous hour	Outturn Availability		uγ
Every hour for the previous hour	Hourly Dispatch Instructions	-	u

Time	Item/Data Record	Term	Subscript
Every hour for the previous hour	Hourly SO Interconnector Trades	-	Iγ or Iφ

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 3 to 5 of this Appendix:

(a) Simple Bid Offer Data:

(i) Incremental Price Quantity Pairs; and

(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; and

(v) Shut Down Cost;

(c) Forecast Availability Profile;

(d) Forecast Minimum Output Profile;

(e) Forecast Minimum Stable Generation Profile; and

(f) Energy Limit.

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 4 and 5 of this Appendix; and

(b) before Gate Closure 2 in respect of the Imbalance Settlement Period, in accordance with paragraphs 4 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 (excluding Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch).

5. A Participant shall only submit Commercial Offer Data to the Market Operator in respect of its Generator Units, as provided for in Table 1.

Table 1 – Commercial Offer Data Elements

Data Element	**Energy Limited Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 4 of this Appendix**
Simple Incremental Price Quantity Pairs (MW quantities and € / MWh or £ / MWh prices)	Yes	Yes	Yes
Simple Decremental Price Quantity Pairs (MW quantities and € / MWh or £ / MWh prices)	Yes	Yes	Yes
Complex Incremental Price Quantity Pairs (MW quantities and € / MWh or £/MWh prices)	Yes	Yes	Yes
Complex Decremental Price Quantity Pairs (MW quantities and € / MWh or £ / MWh prices)	Yes	Yes	Yes
No Load Costs (€ / hr or £ / hr)	Yes		Yes
Start Up Costs (€ or £)	Yes		Yes
Shut Down Cost (€ or £)		Yes	
Energy Limit (MWh)	Yes		
Forecast Availability Profile (MW)	Yes	Yes	Yes
Forecast Minimum Output Profile (MW)	Yes	Yes	Yes
Forecast Minimum Stable Generation Profile (MW)	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 7 to 12 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 10 to 12 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 10 to 12 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 7 to 9 of this Appendix inclusive and paragraph 12 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 12 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 (excluding of Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch).

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 2.

Table 2 – Technical Offer Data Elements

	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Minimum On Time (hours)	Yes		Yes	Yes	Yes		Yes
Minimum Off Time (hours)	Yes		Yes	Yes	Yes		Yes
Maximum On Time (hours)	Yes		Yes	Yes	Yes		Yes
Synchronous Start Up Time Hot (hours)	Yes			Yes	Yes		Yes
Synchronous Start Up Time Warm (hours)	Yes			Yes	Yes		Yes
Synchronous Start Up Time Cold (hours)	Yes			Yes	Yes		Yes
Block Load Cold (MW)	Yes			Yes	Yes		Yes
Block Load Hot (MW)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Block Load Warm (MW)	Yes			Yes	Yes		Yes
Deload Break Point (MW)	Yes			Yes	Yes		Yes
Deloading Rate 1 (MW / minute)	Yes			Yes	Yes		Yes
Deloading Rate 2 (MW / minute)	Yes			Yes	Yes		Yes
Dwell Time Up 1 (minutes)	Yes			Yes	Yes		Yes
Dwell Time Up 2 (minutes)	Yes			Yes	Yes		Yes
Dwell Time Up 3 (minutes)	Yes			Yes	Yes		Yes
Dwell Time Down 1 (minutes)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Dwell Time Down 2 (minutes)	Yes			Yes	Yes		Yes
Dwell Time Down 3 (minutes)	Yes			Yes	Yes		Yes
Dwell Time Up Trigger Point 1 (MW)	Yes			Yes	Yes		Yes
Dwell Time Up Trigger Point 2 (MW)	Yes			Yes	Yes		Yes
Dwell Time Up Trigger Point 3 (MW)	Yes			Yes	Yes		Yes
Dwell Time Down Trigger Point 1 (MW)	Yes			Yes	Yes		Yes
Dwell Time Down Trigger Point 2 (MW)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Dwell Time Down Trigger Point 3 (MW)	Yes			Yes	Yes		Yes
End Point of Start Up Period (MW)	Yes			Yes	Yes		Yes
Load Up Break Point Cold 1 (MW)	Yes			Yes	Yes		Yes
Load Up Break Point Cold 2 (MW)	Yes			Yes	Yes		Yes
Load Up Break Point Hot 1 (MW)	Yes			Yes	Yes		Yes
Load Up Break Point Hot 2 (MW)	Yes			Yes	Yes		Yes
Load Up Break Point Warm 1 (MW)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Load Up Break Point Warm 2 (MW)	Yes			Yes	Yes		Yes
Loading Rate Cold 1 (MW / minute)	Yes			Yes	Yes		Yes
Loading Rate Cold 2 (MW / minute)	Yes			Yes	Yes		Yes
Loading Rate Cold 3 (MW / minute)	Yes			Yes	Yes		Yes
Loading Rate Hot 1 (MW / minute)	Yes			Yes	Yes		Yes
Loading Rate Hot 2 (MW / minute)	Yes			Yes	Yes		Yes
Loading Rate Hot 3 (MW / minute)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Loading Rate Warm 1 (MW / minute)	Yes			Yes	Yes		Yes
Loading Rate Warm 2 (MW / minute)	Yes			Yes	Yes		Yes
Loading Rate Warm 3 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Down Break Point 1 (MW)	Yes		Yes	Yes	Yes		Yes
Ramp Down Break Point 2 (MW)	Yes			Yes	Yes		Yes
Ramp Down Break Point 3 (MW)	Yes			Yes	Yes		Yes
Ramp Down Break Point 4 (MW)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Ramp Down Rate 1 (MW / minute)	Yes		Yes	Yes	Yes		Yes
Ramp Down Rate 2 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Down Rate 3 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Down Rate 4 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Down Rate 5 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Up Break Point 1 (MW)	Yes		Yes	Yes	Yes		Yes
Ramp Up Break Point 2 (MW)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Ramp Up Break Point 3 (MW)	Yes			Yes	Yes		Yes
Ramp Up Break Point 4 (MW)	Yes			Yes	Yes		Yes
Ramp Up Rate 1 (MW / minute)	Yes		Yes	Yes	Yes		Yes
Ramp Up Rate 2 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Up Rate 3 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Up Rate 4 (MW / minute)	Yes			Yes	Yes		Yes
Ramp Up Rate 5 (MW / minute)	Yes			Yes	Yes		Yes
Soak Time Cold 1 (minutes)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Soak Time Cold 2 (minutes)	Yes			Yes	Yes		Yes
Soak Time Trigger Point Cold 1 (MW)	Yes			Yes	Yes		Yes
Soak Time Trigger Point Cold 2 (MW)	Yes			Yes	Yes		Yes
Soak Time Hot 1 (minutes)	Yes			Yes	Yes		Yes
Soak Time Hot 2 (minutes)	Yes			Yes	Yes		Yes
Soak Time Trigger Point Hot 1 (MW)	Yes			Yes	Yes		Yes
Soak Time Trigger Point Hot 2 (MW)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Soak Time Warm 1 (minutes)	Yes			Yes	Yes		Yes
Soak Time Warm 2 (minutes)	Yes			Yes	Yes		Yes
Soak Time Trigger Point Warm 1 (MW)	Yes			Yes	Yes		Yes
Soak Time Trigger Point Warm 2 (MW)	Yes			Yes	Yes		Yes
Start of Restricted Range 1 (MW)	Yes			Yes	Yes		Yes
End of Restricted Range 1 (MW)	Yes			Yes	Yes		Yes
Start of Restricted Range 2 (MW)	Yes			Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
End of Restricted Range 2 (MW)	Yes			Yes	Yes		Yes
Hot Cooling Boundary (hours)	Yes			Yes	Yes		Yes
Warm Cooling Boundary (hours)	Yes			Yes	Yes		Yes
Block Load Flag (True or False)	Yes		Yes	Yes	Yes		Yes
Short-Term Maximisation Capability (MW)	Yes			Yes	Yes		Yes
Short-Term Maximisation Time (minutes)	Yes			Yes	Yes		Yes
Registered Minimum Stable Generation (MW)	Yes		Yes	Yes	Yes		Yes

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Registered Minimum Output (MW)		Yes		Yes	Yes		Yes
Pumped Storage Cycle Efficiency (percentage)	Yes				Yes		
Battery Storage Efficiency (percentage)	Yes			Yes			
Pumping Capacity (MW)	Yes				Yes		
Off to Generating Time (minutes)	Yes				Yes		
Off to Spin Pump Time (minutes)	Yes				Yes		

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Spin Pump to Pumping Energy Time (minutes)	Yes				Yes		
Battery Storage Capacity (MW)	Yes			Yes			
Minimum Battery Storage Quantity (MWh)		Yes		Yes			
Maximum Battery Storage Quantity (MWh)		Yes		Yes			
Maximum Storage Quantity (MWh)		Yes			Yes		
Minimum Storage Quantity (MWh)		Yes			Yes		
Maximum Ramp Down Rate (MW / minute)	Yes					Yes	

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	TYPE OF DATA		SUBMISSION REQUIREMENT BY UNIT				
	Validation Technical Offer Data	**Validation Registration Data**	**Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch**	**Battery Storage Unit**	**Pumped Storage Unit**	**Demand Side Unit**	**Other Generator Units not included in paragraph 11 of this Appendix**
Maximum Ramp Up Rate (MW / minute)	Yes					Yes	
Minimum Down Time (hours)	Yes					Yes	
Maximum Down Time (hours)	Yes					Yes	

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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 14 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 16 and 17 of this Appendix;

(b) before Gate Closure 2 in respect of the Imbalance Settlement Period, in accordance with paragraphs 16 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. A Participant submitting Physical Notification Data to the Market Operator in respect of each of its Generator Units and Supplier Units in accordance with paragraphs 13 to 15 of this Appendix inclusive and paragraph 17 of this Appendix, shall do so 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 required under subparagraph (d):

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

(ii) Each From MW Level and To MW Level submitted in respect of a Dispatchable Generator Unit cannot be less than the Registered Minimum Output for the Unit, and cannot be greater than the Maximum Generation for the Unit, submitted in accordance with Appendix H “Data Requirements for Registration”.

(d) A Participant submitting Physical Notification Data shall submit Physical Notification Data for a Supplier Unit, 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 shall 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 MW Time and To MW Time must be at the start of a minute which corresponds to the start of a thirty minute period, starting on each hour, and half hour;

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

(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 Registered Minimum Output for the Unit, and cannot be greater than the Maximum Generation for the Unit, submitted in accordance with Appendix H “Data Requirements for Registration”; and

(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 3.

Table 3 – 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 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) Short Term Reserves (qSTR and qORR)

(e) System Operator Flags (FSO and FNM)

(f) Demand Control (QDC)

(g) System Characteristics (FRQAVG and FRQNOR)

(h) Dispatch Instructions

(i) SO Interconnector Trades

(j) SO Interconnector Physical Notifications

(k) Annual Load Forecast

(l) Four Day Load Forecast

(m) Wind and Solar Power Unit Forecast

(n) Uninstructed Imbalance Parameters (FPUG, FDOG, FUREG, TOLMW, TOLENG)

(o) Testing Tariffs

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

(p2) DS3 System Services Provider Flag

Data Transactions from Interconnector Administrator to Market Operator

(q) 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.

CONTINGENCY DATA

4. Contingency Data rules for these Market Data Transactions are summarised in Table 1.

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 and Solar Power Unit Forecast

6. Contingency Data only applies to Data Transactions that are listed in paragraph 5 of this Appendix K.

7. Table 1 sets out the Contingency Data values for the Data Transaction listed in respect of each Ex-ante Gate Closure.

Table 1 – Contingency Data Rules for Market Data Transactions

Transaction	Associated Ex-ante Gate Closure	Contingency Data
Wind and Solar Power Unit Forecast	DAM	Most recent Wind and Solar Forecast Accepted by DAM Gate Closure
Wind and Solar Power Unit Forecast	IDM	Most recent Wind and Solar 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 2 and the Submission Protocol in Table 3.

Table 2 – System Parameters Data Transaction Data Records

Participant Name
Unit ID
Trading Day
Imbalance Settlement Period
Combined Loss Adjustment Factor, $FCLAF_{uy}$

Table 3 – System Parameters Data Transaction Submission Protocol

Sender	System Operators

Recipient	Market Operator
Number of Data Transactions	One, containing data for each Generator Unit 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 4 and the Submission Protocol in Table 5.

Table 4 – 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 5 – 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 a 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 6 and the Submission Protocol in Table 7.

Table 6 – 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 7 – 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 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

Short Term Reserve Data Transaction

12. The Data Records for the Short Term Reserve Data Transaction are described in Table 8 and the Submission Protocol in Table 13.

Table 8 – Short Term Reserve Data Transaction Data Records

Trading Day
Imbalance Pricing Period
Short Term Reserve Quantity ($qSTR_{\varphi}$)
Operating Reserve Requirement Quantity ($qORR_{\varphi}$)

Table 9 – Short Term Reserve Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One, containing a value for Short Term Reserve Quantity ($qSTR_{\varphi}$) and Operating Reserve Requirement Quantity ($qORR_{\varphi}$) for the Imbalance Pricing Period
Frequency of Data Transactions	One for every Imbalance Pricing 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
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

System Operator Flags Data Transaction

13. The Data Records for the System Operator Flags Data Transaction are described in Table 10 and the Submission Protocol in Table 11.

Table 10 –System Operator Flags Data Transaction Data Records

Trading Day

Imbalance Pricing Period
Participant Name
Unit ID
System Operator Flag ($FSO_{u\varphi}$)
Non-Marginal Flag ($FNM_{u\varphi}$)

Table 11 – System Operator Flags Data Transaction Submission Protocol

Sender	System Operators
Recipient	Market Operator
Number of Data Transactions	One, containing a System Operator Flag ($FSO_{u\varphi}$), a Non-Marginal Flag ($FNM_{u\varphi}$) for each Generator Unit for the Imbalance Pricing Period.
Frequency of Data Transactions	Imbalance Pricing 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
Valid Communication Channels	Type 3 (computer to computer)
Process for data validation	None

Demand Control Data Transaction

14. 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

15. The Data Records for the System 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

16. 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
Instruction Issue Time
Instruction Effective Time
Instruction Effective Until Time
Instruction Code
Instruction Combination Code
Dispatch Ramp Up Rate
Dispatch 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

17. 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

18. 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 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 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

19. 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

20. Intentionally Blank

Table 24 – Intentionally Blank

Table 25 – Intentionally Blank

Four Day Load Forecast Data Transaction

21. 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 and Solar Power Unit Forecast Data Transaction

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

Table 28 – Wind and Solar 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 and Solar Power Unit, in MW
Assumptions

Table 29 – Wind and Solar 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 and Solar 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

23. 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 Data Transaction Data Records

Engineering Tolerance ($TOLENG_u$) for each Generator Unit u
MW Tolerance ($TOLMW_t$) for each Trading Day t
System per Unit Regulation parameter (UREG)
Discount for Over Generation Factor ($FDOG_{uγ}$) for each Generator Unit u in each Imbalance Settlement Period γ
Premium for Under Generation Factor ($FPUG_{uγ}$) 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

24. 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 Data Transaction Data Records

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

Table 33 – Testing Tariffs Data 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

25. 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 Data 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 Data 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

DS3 System Services Provider Flag Data Transaction

25A The Data Records for the DS3 System Services Provider Flag Data Transaction are described in Table 35A and the Submission Protocol in Table 35B.

Table 35A – System Services Provider Flag Data Records

Jurisdiction
Trading Site Unit
Trading Day
Imbalance Settlement Period
DS3 System Services Provider Flag Value

Table 35B – System Services Provider Flag Data Submission Protocol

Sender	System Operator(s)
Recipient	Market Operator
Frequency of Data Transactions	As Available
First Submission time	As available
Last Submission time	As available
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

26. 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

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 O: INSTRUCTION PROFILING CALCULATIONS

1. The following timing conventions applies to provisions within this Appendix O, in line with their use in the Code:

   (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 Pricing", 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 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 ($QD_{uγ}$)

   as required by Chapter F "Calculation of Payments and Charges" for each

   i. -Dispatchable Generator Unit and;

   ii. Generator Unit which is Controllable and not Dispatchable and does not have Priority Dispatch

   for each period, h.

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3. Physical Notification Instruction Profiling and Pseudo Instruction Profiling for the purpose of Bid Offer Acceptance Quantity calculation, as set out in section F.6.2, shall be performed after each Imbalance Pricing Period for the purpose of being used in the Imbalance Price calculation and 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 sections F.6.6 and F.9, shall be performed 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 Controllable, 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 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 3, shall be used for each period, h, for each Dispatchable Generator Unit and Generator Unit which is Controllable and not Dispatchable and does not have Priority Dispatch in accordance with paragraph 31.

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 Market Operator shall, for each Settlement Day, use the following Registration Data and Accepted Technical Offer Data for each Trading Day which falls within that Settlement Day in whole or in part, provided in accordance with Appendix H: "Data Requirements for Registration" and Appendix I: "Offer Data" respectively, to calculate all Instruction Profile types for that Settlement Day:

(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;

(ii) Short Term Maximisation Capability;

(jj) Registered Minimum Stable Generation;

(kk) Registered Minimum Output;

(ll) Pumping Capacity;

(mm) Pumped Storage and Battery Storage Flag;

(nn) Battery Storage Capacity; and

(oo) Fuel Type.

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 Table 3, are listed and described in Table 1.

Table 1 – 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 or a Battery Storage Unit at the specified Instruction Effective Time.
GOOP	PUMP	Instruct negative Output from a Pumped Storage Unit or a Battery Storage Unit at the specified Instruction Effective Time.
GOOP	SCT	Instruct Synchronisation in generating mode and 0MW Output for a Pumped Storage Unit or a Battery Storage Unit at the specified Instruction Effective Time.
GOOP	SCP	Instruct Synchronisation in Pumping Mode and 0MW Output from a Pumped Storage Unit or a Battery Storage Unit at the specified Instruction Effective Time.
TRIP	n/a	Retrospectively issued Dispatch Instruction to indicate that a Generator Unit Desynchronised unexpectedly.

Instruction Code	Instruction Combination Code	Description
WIND	LOCL	Instruction for a Wind Power Unit or Solar 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 or Solar 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 or Solar 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 or Solar Power Unit to cease the reduction of Output due to an All-Island Curtailment at the specified Instruction Effective Time.
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. How the Instruction Codes and Instruction Combination Codes are used for the calculation of Physical Notification Instruction Profiles is described in Table 2.

Table 2 – 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 Time or until the Target Instruction Level must be maintained in order to comply with the Generator Unit's Accepted Technical Offer Data, whichever is later; **Step 2 for Generator Units which are Dispatchable**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC

Instruction Code	Instruction Combination Code	Description
		Dispatch Instruction; however if a new Dispatch Instruction is issued by the System Operator with an Instruction Effective Time equal to or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 1 or Table 2 as appropriate. **Step 2 for Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch:** With the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the active CURL or LOCL Dispatch Instruction with latest Effective Time. If there is no Physical Notification Instruction Profile associated with an active CURL or LOCL Dispatch Instruction, adjust Target Instruction Level to Final Physical Notification Quantities.
GOOP	PGEN	**Step 1**: Instruct positive Output from a Pumped Storage Unit or a Battery 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 Time or until the Target Instruction Level must be maintained in order to comply with the Generator Unit's Accepted Technical Offer Data, whichever is later; **Step 2**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction; however if a new Dispatch Instruction is issued by the System Operator with an Instruction Effective Time equal to or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 1 or Table 2 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 Time or until the Target Instruction Level must be maintained in order to comply with the Generator Unit's Accepted Technical Offer Data, whichever is later; **Step 2**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction

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Instruction Code	Instruction Combination Code	Description
		Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction; however if a new Dispatch Instruction is issued by the System Operator with an Instruction Effective Time equal to or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 1 or Table 2 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 Time or until the Target Instruction Level must be maintained in order to comply with the Generator Unit's Accepted Technical Offer Data, whichever is later; **Step 2**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction; however if a new Dispatch Instruction is issued by the System Operator with an Instruction Effective Time equal to or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 1 or Table 2 as appropriate.
SYNC	n/a	If there is no MWOF Dispatch Instruction issued with the same Instruction Effective Time, and the Target Instruction Level for the SYNC Dispatch Instruction is less than or equal to the Registered Minimum Stable Generation: **Step 1**: Synchronise the Generator Unit at the specified Instruction Effective Time and adjust the Generator Unit Output to a Target Instruction Level equal to the Registered Minimum Stable Generation until a specified Effective Until Time or until the Target Instruction Level must be maintained in order to comply with the Generator Unit's Accepted Technical Offer Data, whichever is later; **Step 2**: with the Instruction Effective Time set equal to 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 an Instruction Effective Time equal to or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 1 or Table 2 as appropriate. Otherwise if there is no MWOF Dispatch Instruction issued with the same Instruction Effective Time, and the Target

Instruction Code	Instruction Combination Code	Description
		Instruction Level for the SYNC Dispatch Instruction is greater than the Registered Minimum Stable Generation, then follow Step 3: **Step 3**: Synchronise the Generator Unit at the specified Instruction Effective Time and adjust the Generator Unit Output as described in Steps 1 and 2. For the purposes of calculating Physical Notification Instruction Profiles, create an additional Dispatch Instruction with Instruction Code "MWOF" with the same Instruction Effective Time and Instruction Issue Time as the associated SYNC Dispatch Instruction, and for the Physical Notification Instruction Profile applicable to this Dispatch Instruction adjust the Generator Unit Output as described in Steps 1 and 2 of the MWOF Instruction Code entry in Table 2.

15. In addition to Dispatch Instructions issued by the System Operator, Pseudo Dispatch Instructions, corresponding to a subset of the Dispatch Instructions listed in Table 1, shall also be created by the Market Operator and used in accordance to the description in Table 3 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 3 – 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 Registered Minimum Stable Generation if the time to ramp up is greater than the Minimum On Time; or - the corresponding SYNC Instruction Effective Time plus Min On Time; or - if the MW value of the Registered Minimum Stable Generation corresponds to the MW value of a Soak Time Trigger Point in the applicable Accepted Technical Offer Data, then the time when the corresponding SYNC Instruction Profile

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			reaches Registered Minimum Stable Generation plus the applicable Soak 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 an Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities. PSYN is not created where the Target Instruction Level of the associated SYNC Dispatch Instruction is greater than the Registered Minimum Stable Generation, or where there is a MWOF Dispatch Instruction issued at the same Instruction Effective Time as the associated SYNC Dispatch Instruction with a Target Instruction Level which is not equal to the Registered Minimum Stable Generation. If a subsequent DESY Dispatch Instruction has an Instruction Effective Time which is between the Instruction Effective Time of a prior SYNC Dispatch Instruction and the Instruction Effective Time of the corresponding PSYN Pseudo Dispatch Instruction that would nominally be created, but after the time when the Physical Notification Instruction Profile for the SYNC Dispatch Instruction reaches the Registered Minimum Stable Generation, then the PSYN Pseudo Dispatch Instruction that would nominally be created for the corresponding SYNC Dispatch Instruction shall be created.
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 adjacent Dispatch Instruction or Pseudo Dispatch Instruction that isn't a LOCL, CURL, LCLO or CRLO. A Dispatch Instruction or Pseudo Instruction is considered adjacent with another Dispatch Instruction or Pseudo Instruction if there is no active CURL or LOCL Physical Notification Instruction Profile with a Target Instruction Level between the Target Instruction Levels of those Dispatch Instructions or Pseudo Instructions at the effective time of the Dispatch Instruction being applied.

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			Step 2 for Generator Units which are Dispatchable: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction. **Step 2 for Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch:** With the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the active CURL or LOCL Dispatch Instruction with latest Effective Time. If there is no Physical Notification Instruction Profile associated with an active CURL or LOCL Dispatch Instruction, 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 time when the corresponding DESY Instruction Profile reaches the Target Instruction Level 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 the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction.
GOOP	PPGE	PGEN	**Continuous open acceptance after PGEN**. At Instruction Effective Time set as:

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			- the time when the corresponding PGEN Instruction Profile reaches the specified Target Instruction Level, **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 the Instruction Effective Time set equal to the time Step 1 is achieved, Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction.
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 the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction.
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,

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			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 the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction.
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 Instruction; **Step 2**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction. 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

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			adjacent Dispatch Instruction or Pseudo Dispatch Instruction that isn't a LOCL, CURL, LCLO or CRLO. A Dispatch Instruction or Pseudo Instruction is considered adjacent with another Dispatch Instruction or Pseudo Instruction if there is no active CURL or LOCL Physical Notification Instruction Profile with a Target Instruction Level between the Target Instruction Levels of those Dispatch Instructions or Pseudo Instructions at the effective time of the Dispatch Instruction being applied. **Step 2 for Generator Units which are Dispatchable**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction. **Step 2 for Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch:** With the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the active CURL or LOCL Dispatch Instruction with latest Effective Time. If there is no Physical Notification Instruction Profile associated with an active CURL or LOCL Dispatch Instruction, adjust Target Instruction Level to Final Physical Notification Quantities. PCOD is created where the preceding Dispatch Instruction is not one of the following: MWOF, MXON, SYNC, PGEN, MXOF, DESY. PCOD is not created where the Target Instruction Level of the preceding Dispatch Instruction is greater than the Target Instruction Level of an active CURL or LOCL instruction.
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 adjacent Dispatch Instruction or Pseudo Dispatch

Pseudo Dispatch Instruction Code	Pseudo Dispatch Instruction Combination Code	Corresponding Instruction Code or Instruction Combination Code	Description
			Instruction that isn't a LOCL, CURL, LCLO or CRLO. A Dispatch Instruction or Pseudo Instruction is considered adjacent with another Dispatch Instruction or Pseudo Instruction if there is no active CURL or LOCL Physical Notification Instruction Profile with a Target Instruction Level between the Target Instruction Levels of those Dispatch Instructions or Pseudo Instructions at the effective time of the Dispatch Instruction being applied. **Step 2 for Generator Units which are Dispatchable**: with the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to Final Physical Notification Quantities, or if at the time that profile would have reached the Final Physical Notification Quantities the Physical Notification Instruction Profile associated with a previous SYNC Dispatch Instruction has not achieved Step 1 in accordance with the SYNC Instruction Code entry in Table 2, then adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the SYNC Dispatch Instruction. **Step 2 for Generator Units which are Controllable and not Dispatchable and do not have Priority Dispatch:** With the Instruction Effective Time set equal to the time Step 1 is achieved, adjust Target Instruction Level to the Physical Notification Instruction Profile associated with the active CURL or LOCL Dispatch Instruction with latest Effective Time. If there is no Physical Notification Instruction Profile associated with an active CURL or LOCL Dispatch Instruction, adjust Target Instruction Level to Final Physical Notification Quantities. PISP is created where the preceding Dispatch Instruction is not one of the following: MWOF, MXON, SYNC, PGEN, MXOF, DESY. PISP is not created where the Target Instruction Level of the preceding Dispatch Instruction is greater than the Target Instruction Level of an active CURL or LOCL instruction.

DISPATCH INSTRUCTION AND PSEUDO DISPATCH INSTRUCTION VALIDATION

17. Dispatch Instructions for a Settlement Day available to the Market Operator at the time of applying the process for the calculation of the Imbalance Price, or the time of applying the process for the calculation of settlement quantities, as applicable, shall be sorted by Generator Unit, Instruction Effective Time, Instruction Issue Time and the MW value of the Target Instruction Level (in order of increasing quantity).

Unless otherwise specified, Instruction Issue Time for Pseudo Dispatch Instructions shall be set equal to the Instruction Effective Time. The rules for the validation and merging of Dispatch Instructions shall be applied in the following order: paragraph 18, paragraph 19 first sentence relating to MWOF Instruction Codes only, paragraph 21, paragraph 22, paragraph 19 first sentence relating to all Instruction Codes, paragraph 19 second sentence, paragraph 32(d), paragraph 23.

18. A Dispatch Instruction (with the exception of LOCL, CURL, LCLO or CRLO Dispatch Instructions) 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.

19. 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.

20. 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) The Pseudo Dispatch Instruction corresponding to the latest Dispatch Instruction or Instruction Combination Code ordered in accordance with paragraph 19;

(b) PISP;

(c) POFF; and

(d) PCOD.

21. 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.

22. 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 4. 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. PUMP(x) is defined as a Dispatch Instruction having an Instruction Code of GOOP, an Instruction Combination Code of PUMP 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 4 – 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	MWOF(x)	n/a
GOOP	PGEN	MWOF(x)	n/a	MWOF(x)	n/a
GOOP	PUMP	Any type(x)	n/a	GOOP	PUMP(x)
Any type(x)	n/a	GOOP	PUMP	GOOP	PUMP(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)

23. The sorted Dispatch Instructions for each Generator Unit shall be validated by the Market Operator using the rules in Table 5, Table 6 and Table 7.

Table 5 – Validation Rules for Dispatch Instructions issued by the System Operator

Preceding Instruction Code	Current Instruction Code	Action
SYNC	DESY	If a subsequent DESY Dispatch Instruction has an Instruction Effective Time which is between the Instruction Effective Time of a prior SYNC Dispatch Instruction and the time when the Physical Notification Instruction Profile for the SYNC Dispatch Instruction reaches the Generator Unit's Registered Minimum Stable Generation, then the Dispatch Instruction having the preceding SYNC Instruction Code shall be ignored.
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.
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 6 – 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)

Instruction Code	MWOF(x)	Action
SYNC[1]	x > Maximum Generation	Set x to > Maximum Generation
SYNC	x in Restricted Range	Profile MWOF(x)
SYNC	x = Registered Minimum Stable Generation	**Step 1**: Remove the MWOF Dispatch Instruction as part of validation in accordance with Table 4. For the Physical Notification Instruction Profile related to the SYNC Dispatch Instruction, synchronise the Generator Unit at the specified Instruction Effective Time and adjust the Generator Unit Output to a Target Instruction Level equal to the Registered Minimum Stable Generation until a specified Effective Until Time or until the Target Instruction Level must be maintained in order to comply with the Generator Unit's Accepted Technical Offer Data, whichever is later; **Step 2**: with the Instruction Effective Time set equal to 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 an Instruction Effective Time equal to or before the time Step 1 is achieved, profile the new Dispatch Instruction as per Table 1 or Table 2 as appropriate.
SYNC	x ≠ Registered Minimum Stable Generation	Synchronise the Generator Unit at the specified Instruction Effective Time and adjust the Generator Unit Output as described in Steps 1 and 2 of the SYNC with x = Registered Minimum Stable Generation entry to Table 6. For the purposes of calculating Physical Notification Instruction Profiles, keep the associated MWOF Dispatch Instruction rather than removing it as part of validation in accordance with Table 4, create an additional Physical Notification Instruction Profile for the MWOF Dispatch Instruction, and adjust the Generator Unit Output as described in Steps 1 and 2 of the MWOF Instruction Code entry to Table 2.
MWOF	0 < x < Registered Minimum Stable Generation	Profile MWOF(x)

[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 Registered Minimum Stable Generation.

Instruction Code	MWOF(x)	Action
SYNC	x = NULL	Set x = Registered Minimum Stable Generation
DESY[2]	x = NULL	Set x = 0

Table 7 – Validation Rules for Maximisation Instructions

Instructed Quantity	Instruction Code	MWOF(x)	Action
Any	MXON	x = NULL	Maximisation starts. 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 (after MXON)	x = NULL	Maximisation ends. Profile back to Target Instruction Level associated with last MWOF Instruction Code at the latest Ramp Down Rate.

24. 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.

25. 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 and Battery Storage Units are detailed in Table 9.

PROFILE OPERATING MODES

26. 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. The Technical Offer Data used to determine the piecewise linear Operating Trajectory shall be the Accepted Technical Offer Data for the Trading Day containing the Instruction Effective Time of the Dispatch Instruction.

27. 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 Registered Minimum Stable 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;

[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

(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;

(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.

28. 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 Registered Minimum Stable Generation to the Maximum Generation for the Generator Unit determined by:

(a) The following Technical Offer Data:

(i) Maximum Generation;

(ii) Registered Minimum Stable 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.

29. 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 Registered Minimum Stable Generation determined by:

(a) The following Technical Offer Data:

(i) Maximum Generation;

(ii) Registered Minimum Stable 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.

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

(a) The following Technical Offer Data:

(i) Registered Minimum Stable 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

31. 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 16 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 16.

(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.

32. 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 Settlement 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 00:00 on the Settlement 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 8 and Table 9.

Table 8 – Instruction Profiling Validation Rules for Generator Units that are not Pumped Storage Units or Battery 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 Registered Minimum Stable Generation.
0	SYNC	< Registered Minimum Stable Generation	Set Target Instruction Level of accompanying Dispatch Instruction having Instruction Code MWOF to Registered 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

Instructed Quantity from previous segment of Instruction Profile	Instruction Code for active Dispatch Instruction or Pseudo Dispatch Instructions	Target Instruction Level	Action
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
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 9 – Instruction Profiling Validation Rules for Pumped Storage Units and Battery 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.
0	GOOP	SCT	Ignore Dispatch Instruction.
0	GOOP	PUMP	Profile to MWOF(Pumping Capacity or Battery Storage Capacity, as applicable).
> 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 or Battery Storage Capacity, as applicable).
< 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 Registered Minimum Stable Generation. Create PPGE Pseudo Dispatch Instruction in accordance with the GOOP PGEN entry of Table 3.

Instructed Quantity from previous segment of Instruction Profile	**Instruction Code for active Dispatch Instruction**	**Instruction Combination Code**	**Action.**
< 0	GOOP MWOF(NULL)	PGEN	Set Target Instruction Level associated with MWOF Instruction Code to Registered 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.
Any	GOOP	PGEN	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.

33. 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).

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

35. 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.

36. 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.

37. 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 or Battery 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 or Solar Power Unit (whether or not the Wind Power Unit or Solar Power Unit has Priority Dispatch) or a Generator Unit which has Priority Dispatch and which is not Dispatchable, shall be set to its Final Physical Notification Quantity ($qFPN_{uh}(t)$). Where a CURL and/or a LOCL Instruction Combination Code is issued for the Generator Unit, a Physical Notification Instruction Profile shall be created for each Instruction Combination Code type. Wind Power Units and Solar Power Units without Priority Dispatch may receive MWOF Dispatch Instructions and Pseudo Dispatch Instructions which shall create Physical Notification Instruction Profiles and Pseudo Instruction Profiles as described in this Appendix O. Multiple simultaneous Physical Notification Instruction Profiles and Pseudo Instruction Profiles may be created for MWOF Dispatch Instructions and Pseudo Instructions if they are not adjacent when a new Dispatch Instruction is applied. A Dispatch Instruction or Pseudo Instruction is considered adjacent with another Dispatch Instruction or Pseudo Instruction if there is no active CURL or LOCL Physical Notification Instruction Profile with a Target Instruction Level between the Target Instruction Levels of those Dispatch Instructions or Pseudo Instructions at the effective time of the Dispatch Instruction being applied. When a CRLO Dispatch Instruction is issued, any preceding issued CURL Dispatch Instructions shall be deemed to be no longer applicable, and when a LCLO Dispatch Instruction is issued, any preceding issued LOCL Dispatch Instructions shall be deemed to be no longer applicable. For the purposes of the Physical Notification Instruction Profile resulting from a LOCL or CURL Dispatch Instruction the Instructed Quantity shall be the minimum of the Outturn Availability of the Generator Unit and the Target Instruction Level of the latest Dispatch Instruction of that Instruction Combination Code type effective from the Instruction Effective Time of that Dispatch Instruction, and for the purposes of the Uninstructed Imbalance Instruction Profile the Instructed Quantity for the Generator Unit shall be the minimum of the Outturn Availability of the Generator Unit and the Target Instruction Levels of all Dispatch Instructions issued for the Generator Unit if the minimum Target Instruction Levels is associated with a LOCL or CURL Physical Notification Instruction Profile, and shall be the minimum of the Target Instruction Levels of all Dispatch Instructions issued for the Generator Unit if the lowest Target Instruction Level is not associated with a LOCL or CURL Physical Notification Instruction Profile. Where Dispatch Instructions are deemed to be no longer applicable, the Instructed Quantity of the Physical Notification Instruction Profile relating to those Dispatch Instructions shall be

the minimum of the Instructed Quantity of the latest Dispatch Instruction still applicable with a greater Target Instruction Level than that of the Dispatch Instruction no longer applicable and the default Instructed Quantity. Ramp Up and Ramp Down Rates, Load Up Rates and Deloading Rates are assumed to be infinite (creating stepwise linear curves), and Dwell Times and Soak Times are assumed to have a value equal to zero, in the calculation of the Instruction Profile.

(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.

38. 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

39. The Dispatch Quantity (QD_{uy}) for a Generator Unit, u, shall be calculated as a time weighted MWh value for the Generator Unit for each Imbalance Settlement Period, set to be equal to the calculated time-weighted 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.

40. The Dispatch Quantity (QD_{uy}) for Pumped Storage Units in Pumping Mode and Battery Storage in Charging Mode shall be calculated as set out in Paragraph 39.