

# Trading and Settlement Code

Agreed  
Procedure 6:  
Data Publication  
and Data  
Reporting

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Version 1.0

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## DOCUMENT HISTORY

Version	Date	Author	Comment
1.0	07/04/2017	I-SEM Project Team	

## RELATED DOCUMENTS

Document Title	Version	Date	By
Trading and Settlement Code			
Agreed Procedure 3 "Communication Channel Qualification"			
Agreed Procedure 4 "Transaction Submission and Validation"			
Agreed Procedure 5 "Data Storage and IT Security"			

# **1. INTRODUCTION**

## **1.1. Background and Purpose**

This Agreed Procedure supplements the rules set out in the Trading and Settlement Code (hereinafter referred to as the “**Code**”) in relation to the requirement of the Market Operator to make certain information available to Participants and the general public. It sets out procedures with which Parties to the Code must comply.

## **1.2. Scope of Agreed Procedure**

This Agreed Procedure relates to Data Reporting (accessed via the Balancing Market Interface) and Data Publication (via the Market Operator website). It sets out the following procedures in relation to Data Reporting and Data Publication:

- (a) the data required to be published and reported by the Market Operator and the method by which the Market Operator shall make such data available;
- (b) arrangements for notifying the intended recipients of the reports and publications;
- (c) access to the reports and publications; and
- (d) the timing of reporting or publication and their update arrangements.

The scope of this Agreed Procedure is set out in Appendix E “Data Publication” of the Code. This Agreed Procedure forms an annex to, and is governed by, the Code. It sets out procedures to be followed subject to the rights and obligations of Parties under the Code.

In the event of any conflict between a Party’s obligations set out in the Code and this Agreed Procedure, the Code shall take precedence.

## **1.3. Definitions**

Save as expressly defined in this Agreed Procedure, words and expressions defined in the Code shall have the same meanings when used in this Agreed Procedure.

References to particular sections relate internally to this Agreed Procedure unless specifically noted.

## **1.4. Compliance with Agreed Procedure**

Parties to the Code are required under the terms of the Code to comply with this Agreed Procedure.

## 2. PROCEDURES

The reports and publications required in accordance with the Code are set out in Appendix E “Data Publication” of the Code and Appendix 2 “Report Listing” of this Agreed Procedure.

### 2.1. Market Data Classifications

In this Agreed Procedure, Market Data is categorised according to the applicable timeline, which will be one of:

- Updated periodically as required
- Updated annually and as required
- Updated monthly
- Updated daily, prior to the Trading Day
- Updated within the Trading Day (which may be one or more instances within the Trading Day)
- Updated hourly or half hourly prior to the Imbalance Settlement Period (ISP)
- Updated following each Gate Closure 1
- Updated following each Imbalance Pricing Period (IPP) or Imbalance Settlement Period (ISP)
- Updated daily post Trading Day or Settlement Day
- Updated on a Capacity Period basis post end of Capacity Period
- Ad-hoc Reports

### 2.2. Public Data and Private Data

Market Data will be categorised as either:

- (a) **Private Data Reports:** individual reports generated for individual Participants only (“Member Private”) or all of them (“Member Public”). These reports shall be made available by the Market Operator via the Balancing Market Interface on the basis that access to such reports shall only be available to the relevant recipients in accordance with the access rules detailed in Agreed Procedure 5 “Data Storage and IT Security”.
- (b) **Public Data Publications:** will include market information, market prices and volumes, forecasted data, and current system data that are to be made available by the Market Operator to the general public via the Market Operator website. Access to such publications shall not be conditional upon the relevant user possessing a Digital Certificate. In addition, the Market Operator shall provide Participants with access to a subset of these publications through the Balancing Market Interface, in accordance with the access rules detailed in Agreed Procedure 5 “Data Storage and IT Security”.
- (c) **Market Private Data:** data restricted to the Market Operator staff only in accordance with the access rules detailed in Agreed Procedure 5 “Data Storage and IT Security”.
- (d) **REMIT Data:** data restricted to the European Agency for the Cooperation of Energy Regulators and relevant Participants.

Some elements of Market Data shall first be subject to Data Reporting (and shall for this purpose be Private Data), and shall subsequently be required to be published by the Market Operator (and shall upon such become Public Data).

Confidential Information is Member Private information. If it is made available through a report, it shall only be made available through Private Data Reports for a single Participant.

The Market Operator shall not be obliged to publish any material that it reasonably believes may be of an obscene or libellous nature.

## 2.3. Data Publication

The reports and publications required in accordance with the Code are set out in Appendix E “Data Publication” of the Code and Appendix 2 “Report Listing” of this Agreed Procedure.

The Data Publication process set out in this Agreed Procedure will be the procedure by which the Market Operator discharges its obligations under the Code to make certain information available to the general public. The Market Operator shall provide such information through the Market Operator website as set out in this Agreed Procedure.

Data Publications consist of such market information, market prices and volumes, forecasted data, and current system data that are required by the Code to be made available by the Market Operator to the general public.

### 2.3.1. Elements of Data Publication

Data Publication covers the publication by the Market Operator of the following items:

- (a) **Items and Data Record publication:** - The Market Operator shall publish any data that the Code requires it to publish in a timely manner after it has been received by the Market Operator or calculated by the Market Operator in accordance with the timings specified in the report listing in Appendix E “Data Publication” of the Code, or elsewhere in the Code.
- (b) **Code Publication:** The Code sets out the rules and procedures that govern the operation of the Single Electricity Market. The Market Operator shall publish the latest version of the Code, and shall update this published version, in accordance with the timelines as set out in the Code.

### 2.3.2. Publication Timelines and Format of Publications

Data Publications may be published on periodically within the Trading Day, daily, weekly, monthly, annually, or on an ad-hoc basis, in accordance with the timelines set out in Appendix E “Data Publication” of the Code. All data shall be published in one of the following formats: PDF, CSV, XLS, XML, or HTML (depending on the nature of the publication).

### 2.3.3. Notification

The Market Operator shall provide access to Data Publications through the Market Operator website and, where required, may also provide such data as Data Reports through the Balancing Market Interface. In the case of Data Publications via the Market Operator website, the Market Operator shall not require that such access is conditional upon the relevant user possessing a Digital Certificate.

#### *2.3.4. Viewing and Access*

The viewing of Data Publications online shall be carried out by selecting the appropriate menu item on the Market Operator website.

#### *2.3.5. Publication Updates*

In cases where data that is required by the Code to be published by the Market Operator has been recalculated by the Market Operator or re-submitted to the Market Operator after being updated, improved, or corrected, the Market Operator must publish the updates in a timely manner as soon as reasonably practicable or as otherwise required by the Code.

### **2.4. Data Reporting**

The reports and publications required in accordance with the Code are set out in Appendix 2 “Report Listing” of this Agreed Procedure.

The Data Reporting process set out in this Agreed Procedure will be the procedure by which the Market Operator discharges its obligations under the Code to make certain information available to a specific Participant. The Market Operator shall provide such information through the Balancing Market Interface, as set out in this Agreed Procedure.

#### *2.4.1. Elements of Data Reporting*

Data Reporting covers the making available, by the Market Operator to certain Participants only (or all of them), data reports as set out in Appendix 2 “Report Listing”. Data Reporting is the term given to the provision of reports that contain data that is available to a specific Participant (or all of them) and is confidential to that Participant (or all of them). Data Reports include market reports or settlement reports.

#### *2.4.2. Availability*

Daily and weekly Data Reports will be available through the Balancing Market Interface for up to a month following their initial posting by the Market Operator. Monthly and annual reports will be available through this channel for up to two years following their initial posting by the Market Operator. For Participants requiring older data this will be available to download from the Market Operator website.

Participants may submit a request for a specific Data Report through the Balancing Market Interface, via Type 2 Channel and or Type 3 Channel.

#### *2.4.3. Updates*

Where Data Reports are updated by the Market Operator, the time at which the updated Data Report was created will form part of the timestamp of the message displayed in the Market Messages window. If an event is rerun in order to recreate a Data Report, the original report will be overwritten. Each time a Data Report is created or recreated, a message shall be sent to the Balancing Market Interface to inform the Participants that the Data Report is available.

#### *2.4.4. Scheduled and Requested Reports*

Scheduled Data Reports are published in accordance with the timelines set out in Appendix 2 “Report Listing”. Requested reports, if not available through the Balancing Market Interface or Market Operator website, shall be responded to by the Market Operator as soon as practicable.

#### *2.4.5. Notification*

For the purpose of Data Reporting, the Market Operator shall make data available to a specific Participant for download from the Balancing Market Interface, and shall notify the relevant Participant that such data is available for download as appropriate. Access to such reports shall only be available to Participants in accordance with the access rules detailed in Agreed Procedure 5 “Data Storage and IT Security”.

#### *2.4.6. Viewing and Access*

All connections are initiated externally to the SEM systems i.e. by Participants, Meter Data Providers etc. and operate in a synchronous request-response mode. In relation to Type 2 Channel, the Participant connects to the Balancing Market Interface and is authorised by selecting the appropriate Digital Certificate (Agreed Procedure 3 “Communication Channel Qualification” sets out the procedure in relation to obtaining a digital certificate) and entering a valid password.

The technology behind the Balancing Market Interface and Meter Data interface is Java based. All data submitted by Participants to the Balancing Market Interface using Type 3 Channel is required to be in XML format.

The Type 2 Channel is screen based, to provide a human-to-computer interface. These requests are processed by the same web service as is used for the Type 3 Channel. Type 3 Channel communications use web services to provide an automated, computer-to-computer interface

In certain cases, the Type 2 Channel (screens) may have additional configuration to appropriately present the information returned by the web service. Some additional information is available via the Type 2 Channel that is not available on Type 3 Channel.

#### *2.4.7. Security*

Agreed Procedure 3 “Communication Channel Qualification” and Agreed Procedure 5 “Data Storage and IT Security” detail the security and access requirements of the Market Operator’s Isolated Market System.



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## APPENDIX 1: DEFINITIONS

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<b>Balancing Market Interface</b>	means the function within the Market Operator's systems that interfaces to the Type 2 Channel and Type 3 Channel communications as required under the Code.
<b>Data Publication</b>	means the provision of the most relevant and recent information to the general public through the Market Operator website and also, where appropriate, making a subset of the same information available to Participants only through the Balancing Market Interface.
<b>Data Reporting</b>	means the process used by the Market Operator to report data to certain Participants only (or all of them).
<b>Digital Certificate</b>	means an electronic credential issued and digitally signed by a Certificate Authority. The international standard upon which most commercial certificates are based is the ITU-T X.509 certificate. The digital certificate represents the certification of an individual, business, or organizational public key.
<b>Market Data</b>	means the information relating to the operation of the Single Electricity Market and which the Market Operator is required to publish, or make available to one or more Participants, pursuant to the Code and this Agreed Procedure.
<b>Market Private Data</b>	means the class of Market Data that is only accessible by Market Operator staff.
<b>Member Private</b>	means the class of Market Data for which reports are generated for Individual Participants only and made available by the Market Operator via the Balancing Market Interface.
<b>Member Public</b>	means the class of Market Data for which individual reports are generated for all Participants and made available by the Market Operator via the Balancing Market Interface.
<b>Private Data</b>	means Member Private data and Member Public data.

<b>Public Data</b>	means market information, market prices and volumes, forecasted data, and any other system data required by the Code to be published by the Market Operator targeted for the general public
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## APPENDIX 2: REPORT LISTING

### LEGENDS

Please use the following legends when interpreting the subsequent report listing.

Classification	Description
<b>A</b>	Updated periodically as required
<b>B</b>	Updated annually and as required
<b>C</b>	Updated monthly
<b>D</b>	Updated daily, prior to the Trading Day
<b>E</b>	Updated hourly or half hourly prior to the Imbalance Settlement Period (ISP)
<b>F</b>	Updated following each Gate Closure 1
<b>G</b>	Updated following each Imbalance Pricing Period (IPP) or Imbalance Settlement Period (ISP)
<b>H</b>	Updated daily post Trading Day or Settlement Day
<b>I</b>	Updated on a Capacity Period basis post end of Capacity Period
<b>J</b>	Ad-hoc Reports

Subscript	Description
d	Settlement Day.
e	Currency Zone.
h	Trading Period (when used in context of Day-ahead Market or Intraday Market Trade quantities or prices), or generalised Period (referring to either Imbalance Pricing Period, or Imbalance Settlement Period, as may be the case in the context of the process being considered).
i	Band. For offer and bid price quantity pair submissions, and for balancing market volumes resulting individually in each of those bands, it is the number of a price quantity pair.
k	Temporary use in general:

Subscript	Description
	<ul style="list-style-type: none"> <li>- Position in the ranked set for Calculation of Payments and Charges;</li> <li>- Rank in the ranked set for Imbalance Pricing;</li> </ul> Contiguous Operating Period for Calculation of Fixed Cost Payments or Charges.
l	Interconnector.
m	
n	Temporary use in general: <ul style="list-style-type: none"> <li>- Used to denote an integer value;</li> </ul> Contract Register Entry for Calculation of payments and Charges.
p	Participant.
s	Trading Site.
t	Trading Day.
u	Generator Unit.
v	Supplier Unit.
x	Trade.
y	Year.
β	(Lowercase Beta) Temporary use: PN Submissions Period
γ	(Lowercase Gamma) Imbalance Settlement Period.
Θ	(Capital Theta) Reserve Scarcity Price Quantity Pair.
φ	(Lowercase Phi) Imbalance Pricing Period.
Ω	(Capital Omega) Capacity Market Unit.

## DATA REPORTS

The following list identifies each Data Report produced as scheduled reports exclusively for Participants via the Balancing Market Interface.

Publication / Data Report Name	Class	Timing	Subscriber	Available via BMI	Confidentiality	Validity
List of Registered Units	A	Daily, only when a new Unit Registration is approved.	-	Y	Member Public	
List of Registered Participants	J	Daily, only when a new Party Registration is approved.	-	Y	Member Public	
Settlement Statement	A	Defined Schedule by the Settlement Calendar (Daily by Business Day)	-	Y	Member Private	
Settlement Report	A	Defined Schedule by the Settlement Calendar (Daily by Business Day)	-	Y	Member Private	
Settlement Document	A	As defined by Settlement Calendar (Weekly, Ad hoc as required)	-	Y	Member Private	
Collateral Report	A	Daily, ad hoc as required	-	Y	Member Private	
Annual Combined Loss Adjustment Factor	B	Once every year, in August and ad hoc upon new Unit registration	uy for Generator Units, ly for Interconnector	Y	Member Public	
Annual Load Forecast	B	Once every year, in August	-	Y	Member Public	
Settlement Calendar	B	Four Months before start of Year	-	Y	Member Public	
Discount for Over Generation	B	At least two Months before start of Year	uy	Y	Member Public	
Premium for Under Generation	B	At least two Months before start of Year	uy	Y	Member Public	
Monthly Load Forecast and Assumptions	C	Once every Month	-	Y	Member Public	
Registered Capacity	C	Once every Month	u	Y	Member Public	

Publication / Data Report Name	Class	Timing	Subscribe	Available via BMI	Confidentiality	Validity
Unit Under Test	D	By 17:00 on the day prior to the Trading Day, plus as updated	-	Y	Member Public	
Daily Load Forecast Summary	D	Following receipt of each Four Day Load Forecast	-	Y	Member Public	
Four Day Rolling Wind Unit Forecast	D	Four times per day, following receipt of each Wind Unit Forecast	-	Y	Member Public	
Four Day Aggregated Rolling Wind Unit Forecast	D	Four times per day	-	Y	Member Public	
Outage Adjusted Wind Unit Forecast Report	D	Four times per day, following receipt of each Wind Unit Forecast	-	Y	Member Public	
Outage Adjusted Solar Unit Forecast Report	D	Four times per day, following receipt of each Solar Unit Forecast	-	Y	Member Public	
Aggregated Wind Forecast	D	Four times per day, following receipt of each Wind Unit Forecast	-	Y	Member Public	
Daily Interconnector NTC	D	Event driven for the TD following receipt of new NTC values, following receipt of results from the Co-ordinated Capacity Calculator for TD+1 and TD+2	-	Y	Member Public	
Daily Transmission Outage Schedule	D	Day prior to the Trading Day, by 17:00	-	Y	Member Public	
Daily Trading Exchange Rate	D	Two days prior to the Trading Day	-	Y	Member Public	
Forecast Imbalance	E	Every hour prior to each ISP	Y	Y	Member Public	
Net Imbalance Volume Forecast	E	Every hour prior to each ISP	Y	Y	Member Public	

Publication / Data Report Name	Class	Timing	Subscript	Available via BMI	Confidentiality	Validity
Credit Cover Requirements	F	Daily, Ad hoc as necessary	pr	Y	Member Private	Valid until the next Credit Cover Requirements Report is produced
Aggregated Contracted Quantities For Generation	F	Updated every hour for All Imbalance Settlement Periods for which the Balancing Market Gate Window is still open in the Trading Day	-	Y	Member Public	
Aggregated Contracted Quantities For Demand	F	Updated every hour for All Imbalance Settlement Periods for which the Balancing Market Gate Window is still open in the Trading Day	-	Y	Member Public	
Aggregated Contracted Quantities For Wind	F	Updated every hour for All Imbalance Settlement Periods for which the Balancing Market Gate Window is still open in the Trading Day	-	Y	Member Public	
Commercial Offer Data Report – Member Private	E	Every Half-Hour	uy	Y	Member Private	
System Shortfall Imbalance Index and Flattening Factor	E	Hourly up to the first IDM Gate Closure for the Trading Day		Y	Member Public	
Net Imbalance Volume Forecast	E	Every half hour prior to each ISP	y	Y	Member Public	
Physical Notifications – Member Private	F	After each Balancing Market Gate Closure		Y	Member Private	
Aggregated Final Physical Notifications	F	After each Balancing Market Gate Closure	y	Y	Member Public	
LTS Operational Schedule – Member Private	F	Following each LTS Operational Schedule Run		Y	Member Private	

Publication / Data Report Name	Class	Timing	Subscribe	Available via BMI	Confidentiality	Validity
RTIC Operational Schedule – Member Private	F	Following approval of each RTIC Operational Schedule Run		Y	Member Private	
RTID Operational Schedule – Member Private	F	Following approval of each RTID Operational Schedule Run		Y	Member Private	
Imbalance Price Report (Imbalance Pricing Period)	G	End of imbalance price calculation process for the corresponding Imbalance Pricing Period		Y	Member Public	
Imbalance Price Report (Imbalance Settlement Period)	G	After the end of each Imbalance Settlement Period on the Trading Day		Y	Member Public	
Imbalance Price Supporting Information	G	End of Imbalance Price calculation process for the corresponding Imbalance Pricing Period		Y	Member Public	
Anonymised Inc / Dec Curves	G	Following each ISP		Y	Member Public	
LTS Operational Schedule – Member Public	H	One day after Trading Day		Y	Member Public	
RTIC Operational Schedule – Member Public	H	One day after Trading Day		Y	Member Public	
RTID Operational Schedule – Member Public	H	One day after Trading Day		Y	Member Public	
Final Physical Notifications	H	One day after Trading Day	uy	Y	Member Public	
Technical Offer Data	H	One day after Trading Day, by 16:00	ut	Y	Member Public	
Commercial Offer Data Report – Member Public	H	One day after Trading Day, by 16:00	uy	Y	Member Public	



Publication / Data Report Name	Class	Timing	Subscript	Available via BMI	Confidentiality	Validity
Forecast Availability	H	Day after Trading Day, by 16:00	uy	Y	Member Public	
Daily Generator and DSU Outage Schedules	H	Day after Trading Day, by 16:00		Y	Member Public	
Initial Interconnector Flows and Residual Capacity	H	Five days after Trading Day, by 17:00	-	Y	Member Public	
Daily Dispatch Instructions (D+1)	H	Day after Trading Day, by 16:00	-	Y	Member Public	
Daily Dispatch Instructions (D+4)	H	Four days after Trading Day, by 17:00	-	Y	Member Public	
Daily Demand Control Data Transaction	H	Day after Trading Day, by 16:00	φ	Y	Member Public	
Daily Generator Unit Technical Characteristic Data Transaction	H	Day after Trading Day, by 16:00	-	Y	Member Public	
Daily Energy Limited Generator Unit Technical Characteristic Data Transaction	H	Day after Trading Day, by 16:00	-	Y	Member Public	
Tolerance for Over Generation	H	By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	uy	Y	Member Public	
Tolerance for Under Generation	H	By 16:00 Two Working Days after Trading Day and by 17:00 Five Working Days after Trading Day	uy	Y	Member Public	
Daily Meter Data Detail D+1	H	Day after Trading Day, by 17:00	-	Y	Member Public	
Daily Meter Data Detail D+4	H	Four days after Trading day, by 17:00	-	Y	Member Public	

Publication / Data Report Name	Class	Timing	Subscript	Available via BMI	Confidentiality	Validity
Average System Frequency	H	Day after Trading Day, by 16:00	y	Y	Member Public	
SO Interconnector Trades	H	Day after Trading Day, by 16:00	-	Y	Member Public	
Unit Data	H	Day after Trading Day, by 16:00		Y	Member Public	
Metered Volumes by Jurisdiction	H	By 16:00 Working Day +1 and by 17:00 Working Day +5	uy	Y	Member Public	
Average Outturn Availability	H	Day after Trading Day, by 16:00	uy	Y	Member Public	
AoLR Unit Report	H	[Day after Trading Day tbc]		Y	Member Private	
Energy Market Financial Publication - Indicative	H	Daily, Settlement Day + One working day by HH:MM	-	Y	Member Public	
Energy Market Financial Publication - Initial	H	Daily, Settlement Day + Five Working days, as updated, at HH:MM the day of recalculation	-	Y	Member Public	
Energy Market Information Publication - Indicative	H	Daily, Settlement Day + One Working Day by HH:MM	-	Y	Member Public	
Energy Market Information Publication - Initial	H	Daily, Settlement Day + Five Working Days by HH:MM	-	Y	Member Public	
Metered Generation Information Publication - Indicative	H	Daily, Settlement Day + One Working Day by HH:MM	-	Y	Member Public	
Metered Generation Information Publication - Initial	H	Daily, Settlement Day + Five Working Days by HH:MM	-	Y	Member Public	
Capacity Market Financial Publication - Indicative	I	Capacity Period + Three Working days at HH:MM	-	Y	Member Public	
Capacity Market Financial Publication - Initial	I	Capacity Period + Seven Working days at HH:MM	-	Y	Member Public	
Capacity Market Information Publication - Indicative	I	Capacity Period + Three Working days at HH:MM	-	Y	Member Public	

Publication / Data Report Name	Class	Timing	Subscript	Available via BMI	Confidentiality	Validity
Capacity Market Information Publication - Initial	I	Capacity Period + Seven Working days at HH:MM	-	Y	Member Public	