
Manual of Procedures for the ENTSO-E Central Information Transparency Platform

Version 2.0

1 May 2014

Notice

This document reflects the status of the work of Transmission System Operator experts as of 1 May 2014 in line with the Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council.

It is based on the input received through the public consultation, following extensive informal dialogue with stakeholders, as well as bilateral meetings with ACER.

Such version of the Manual of Procedures is released for submission to ACER in accordance with the provisions of the Article 5 of the Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council.

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Chapter 1. Introduction and overview

1.1 Scope and Purpose

In accordance with Article 5(1) of the Regulation (EU) n°543/2013¹, hereafter referred to as the Transparency Regulation, this document aims at specifying:

- a) details and format of the submission of data by primary owners to TSOs;
- b) standardised ways and formats of data communication and exchange between primary owners of data, TSOs, data providers and the ENTSO for Electricity;
- c) technical and operational criteria which data providers would need to fulfil when providing data to the central information transparency platform; and
- d) appropriate classification of production types.

1.2 Readership

This document particularly addresses primary owners of data, data providers and data consumers. It nevertheless generally aims at providing any party with all the information necessary to submit or extract data to or from the ENTSO for Electricity central information transparency platform (hereafter the “transparency platform”).

This document should consequently become the source to find:

- 1) all information required for a data provider to develop and operate a system to submit data to the transparency platform, or do this interactively through a web browser; and
- 2) all information required to develop and operate a system to extract data from the transparency platform, or to do this interactively through a web browser.

It must nevertheless be noted that this document does not duplicate material published elsewhere. If such material is required, it is included by reference only. This is particularly important for definitions that are common to other domains such as network codes.

This document is constructed as an on-line resource in order to facilitate cross-referencing to other materials, such as the detailed data descriptions, Web Services and MADES [IEC 62325-503], definitions, Implementation Guides and interoperability test specifications. A PDF version of this document can be exported for download, but only the on-line copy is definitive.

1.3 How to use this Manual of Procedures

Chapters 1 to 4 provide general information about the transparency platform and the data it contains. Chapter 5 has information relating to technical standards and Chapter 6 includes additional information specific to data

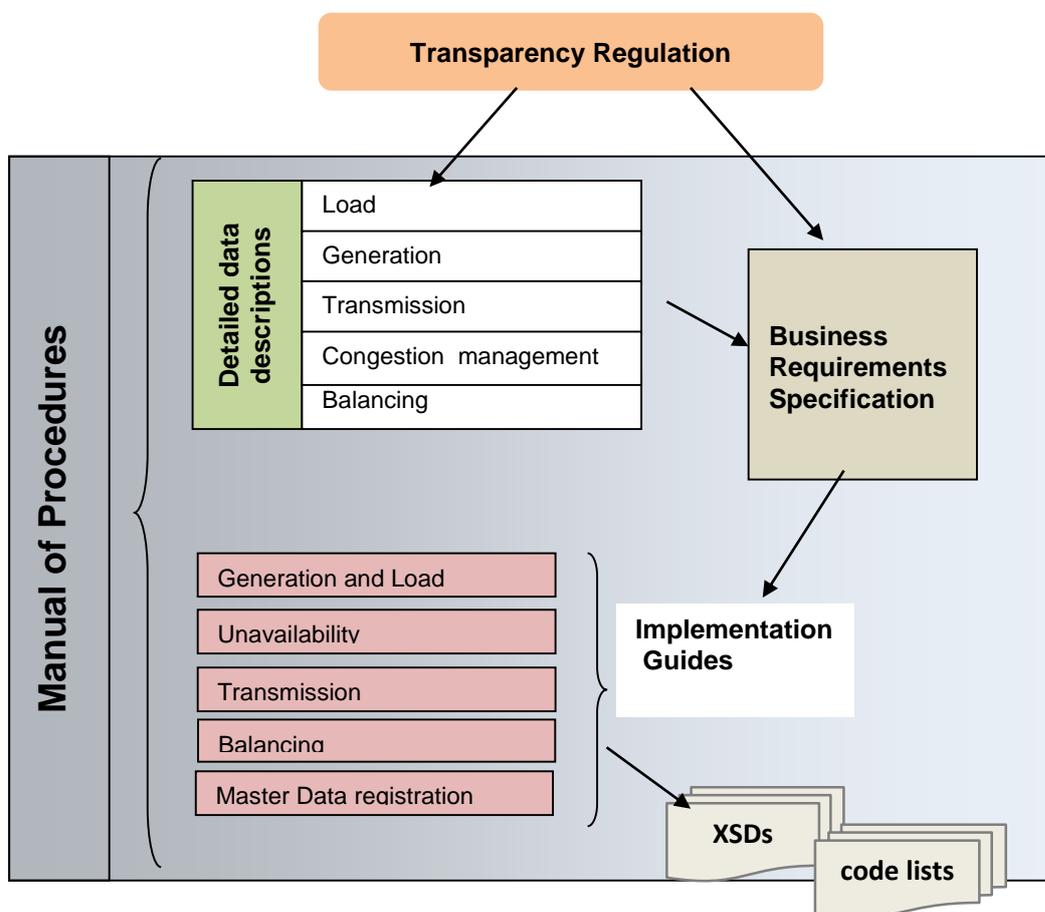
¹ Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council, OJ L 163, 15.6.2013, p. 1–12

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providers, while Chapter 7 provides information for users of the data. Both Chapters 6 and 7 include references to standardised ways and formats of data communication for submitting and obtaining data.

The material referenced in this document builds on the Transparency Regulation as follows:

- the detailed data descriptions [2] (see Chapter 3) define further the content and structure of the data which must be published in accordance with the Transparency Regulation.
- the business requirements specification [12] (see Chapter 4) explains how master data is pre-configured on the transparency platform, what are the business validation rules (both general and per data item) and how monitoring is carried out; and
- the implementation guides [5] to [9] (see Chapter 5) define the formats and structures for data submission and download.



1.4 Historical Data

In accordance with the Transparency Regulation, the data shall be available for at least five years. The transparency platform will thus preserve these data for a period of five years from the effective date of their submission. It will be possible to select data within that time span directly on the transparency platform. In order to access older data or data collected by the ENTSO for Electricity prior to the launch of the transparency platform, please contact the transparency platform administration team at the ENTSO for Electricity.

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1.5 Data Quality

The quality of data published on the transparency platform is assured in the following ways:

- a) XML schemas required by the implementation guides (see Chapter 5) constrain the values and data types that can be submitted; and
- b) submitted data is subject to business validation rules as described in the business requirements specification [12]. Erroneous data is rejected.

In the event that a data provider inadvertently submits numerically incorrect data it can be corrected by re-submission machine-to-machine or by human user from data provider, having the necessary privileges (see Chapter 6).

1.6 Data Security

The integrity of data is assured in the transparency platform in two respects:

- a) data transfer methods used for submission are secure (see section 5.1) and only authenticated submitters can submit data to the transparency platform; and
- b) access controls prevent unauthorised modification of data once stored.

The use of web services and MADES [IEC 62325-503], access methods require the use of digital certificates. The ENTSO for Electricity operates a Certificate Authority function for control of the MADES [IEC 62325-503], access. Digital Certificates issued by Certification Authorities duly validated by national or EU bodies will be accepted for Web Services (see section 6.4 on data channels for further information).

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Chapter 2. Terms

For the purpose of this document, the definitions established in the Union legislation apply, i.e. definitions established in the Directive 2009/72/EC, in Regulation (EC) N° 714/2009, in Commission Regulations establishing network codes that have been adopted according to Article 6(11) of Regulation (EC) N° 714/2009 and in the Transparency Regulation.

In addition, many definitions are provided on the ENTSO for Electricity Metadata Repository website. (See [14]).

This is the master repository for definition of terms and covers the majority of terms found in this document.

The following additional terms may be useful to readers of the document:

a) **Master Data:**

Master Data means the details of key business entities referenced on the transparency platform, such as parties, areas, resource objects (such as production and generation units). Master data changes slowly compared to the market, operational and forecast data submitted to the transparency platform and is managed either by the transparency platform administration team or by data providers where appropriate (in particular the resource objects).

b) **Reference Data:**

Reference Data means static codings of common entities or values, often externally defined, such as country codes, currencies, measurement units, and also production (fuel) types, and other coded value lists included in EDI code lists. Reference data changes rarely and is managed by the transparency platform administration team. Reference data will be used to validate data submitted to the transparency platform and to enrich the published data.

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Chapter 3. Detailed Data Descriptions

The Detailed Data Description [2] specifies the details and format of the submission of data in accordance with Article 5(1)(a) of the Transparency Regulation.

Based on the description of the data to be published as established in the Articles 6 to 17 of the Transparency Regulation, the detailed data descriptions define further the content and structure of such data.

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Chapter 4. Business Requirements Specification

The business requirements specification (BRS) describes how data is submitted to and acknowledged by the transparency platform, what validations are performed and how data is processed and eventually published.

Similarly to the Chapter 3 on detailed data descriptions, the business requirements specification contains a dedicated Chapter for each of the Article 6 to 17 of the Transparency Regulation describing the data to be published.

The BRS also describes the master data and reference data that must be recorded on the transparency platform prior to any data submission.

The business requirements specification is provided in a separate document [12].

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Chapter 5. Implementation Guides and EDI Standards

5.1 Introduction

The implementation guides define standardised ways and formats of data communication and exchange between primary owners of data, TSOs, data providers and the ENTSO for Electricity as required by Article 5(1)(b) of the Transparency Regulation. The described data exchange formats within the implementation guides shall ensure that a common interface can be provided between different software solutions. These documents make use of XML schemas and code lists defined by the ENTSO for Electricity which can be found on the ENTSO-E web site [11].

The detailed data descriptions (see Chapter 3) distinguishes four categories of data (load, generation, transmission and balancing) to be reported under the Transparency Regulation and includes data on unavailability under each of these categories. While there is an implementation guide for each of these four categories, a fifth implementation guide is dedicated to data on unavailability. This reflects the commonality of data structures for exchange.

5.2 Electronic Document Interchange (EDI) Standards

5.2.1 Implementation Guide for Generation and Load Transparency Process

The implementation guide for the generation and load transparency process is provided in a separate document [5].

5.2.2 Implementation Guide for Unavailability Transparency Process

The implementation guide for the unavailability transparency process is provided in a separate document [6].

5.2.3 Implementation Guide for Balancing Transparency Process

The implementation guide for the balancing transparency process is provided in a separate document [7].

5.2.4 Implementation Guide for Transmission Transparency Process

The implementation guide for the transmission transparency process is provided in a separate document [8].

5.2.5 Implementation Guide for Configuration Transparency Process

The implementation guide for configuration transparency process is provided in a separate document [9].

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5.3 Other applicable Standards

The following other standards further define the operational characteristics of the transparency platform:

- IEC Acknowledgement document (see [15])
- ENTSO for Electricity EDI problem statement document (see [16])

5.4 Identification Coding

Certain data whose publication is foreseen by the Transparency Regulation require identification of the specific asset they refer to. This is the case for instance for forecast generation (Art14. (1)(a) and (b) of the Transparency Regulation) or for information relating to the unavailability of generation and production units (Art 15 (1)(a) to (d) of the Transparency Regulation) and Actual Generation (Art 16(1)(b) Transparency Regulation).

To identify those assets, the transparency platform uses the Energy Identification Coding (EIC) Scheme (see [11]).

To obtain EIC identifiers for your assets whose information should be reported in accordance with the Transparency Regulation, please contact:

- your Local Issuing Office (LIO);
- the ENTSO for Electricity, whenever no LIO is established in your area. Please contact the transparency platform administration team for details.

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Chapter 6. Information for Data Providers

6.1 Assessment of a Data Provider and Prior Agreement

Introduction

In accordance with Article 4(1) of the Transparency Regulation, primary owners of data should normally submit their data to their TSOs in a manner that allows TSOs to process and deliver the data to the ENTSO for Electricity. This is without prejudice to the right of TSOs to delegate this activity to a third party.

The Article 4(2) of the Transparency Regulation opens an alternative to the submission of data by the primary owner of data to the TSO. Indeed, the Article 4(2) foresees the possibility for primary owner of data to “*fulfil their obligation [...] by submitting data directly to the central information transparency platform provided they use a third party acting as data provider on their behalf.*”

This opportunity is open “*in order to make best use of existing sources of transparency, [so that] the ENTSO for Electricity [is] able to receive information for publication through third parties such as power exchanges and transparency platforms*”².

The Article 4(2) further states that “*this way of submitting data shall be subject to the prior agreement of the TSO in whose control area the primary owner is located. When providing its agreement the TSO shall assess whether the data provider fulfils the requirements referred to in point (b) and (c) of Article 5(1).*”

This section therefore establishes the requirements referred to in point (b) and (c) of the Article 5(1) Transparency Regulation and the process which TSOs should follow when assessing the compliance of a data provider with the above-mentioned requirements.

Requirements to be complied with by Data Provider

The requirements referred to in point (b) and (c) of Article 5(1) Transparency Regulation relate to:

- “*standardised ways and formats of data communication and exchange between primary owners of data, TSOs, data providers and the ENTSO for Electricity*” ; and
- “*technical and operational criteria which data providers would need to fulfil when providing data to the central information transparency platform*”.

These requirements are detailed in Chapter 4 on business requirement specification and Chapter 5 on implementation guides and EDI standards.

Assessment of Compliance with the Requirements

The TSO in whose control area the primary owner of data is located should assess whether the data provider fulfils the requirements and, in the affirmative, provide its agreement for the primary owner of data to submit its data via the data provider acting on their behalf.

² See Recital (12) of Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets.

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The process should respect the following steps:

- 1) Submission by the primary owner of data of a request to the TSO, for its prior agreement. The request should:
 - a. clearly identify the data provider which would provide its services to the primary owner of data;
 - b. provide the necessary contact details allowing the TSO to directly contact the data provider;
 - c. indicate the data the primary owner of data will provide through this data provider;
- 2) Assessment by the TSO of the data provider's compliance with the requirements referred to above. This assessment should take the form of an interoperability test organised with the support of the ENTSO for Electricity in accordance with the specifications established in the sub-section 6.2.2;
- 3) Registration with the ENTSO for Electricity of the data provider which successfully passed the interoperability test, in accordance with the requirements established in the sub-section 6.2.1.; and
- 4) Agreement of the TSO for the primary owner of data to submit its data via the data provider.

TSOs should proceed to the assessment within a period of two months from the submission of the request.

6.2 Data Provider Responsibilities

6.2.1 Registration

Data providers are required to register with the ENTSO for Electricity and to provide contact information for technical and business queries. Data providers must also indicate for which Area(s), border(s) and data items they will submitting data for.

Once the ENTSO for Electricity has recorded the Data provider in the platform, data providers can create and update user accounts, including those for machine-to-machine submission to the transparency platform. A name and email address are required for user accounts.

Contact details for the service desk and for the transparency platform administration team at the ENTSO for Electricity will be provided.

6.2.2 Interoperability and Compliance Testing Regime

Before submitting data, data providers are requested to complete interoperability and compliance testing with the transparency platform. This includes also connection and transfer methods. A public test environment is available for this purpose. To arrange testing, contact must be made with the transparency platform service desk.

The transparency platform interoperability test specification is provided in a separate document [10].

6.2.3 Registration and maintenance of Master Data

Data providers must register certain static information on generation and consumption units and transmission assets, prior to submitting the data items referencing those resource objects. The master data shall be synchronised or updated on the platform whenever it changes. Registration and maintenance shall be performed according to the Configuration Implementation Guide (see [9]).

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6.2.4 Monitoring of Data Submissions

Data providers are encouraged to make regular checks that their data is received and published as expected. The transparency platform will, where appropriate, monitor data arrival against expected submission times as defined in the Transparency Regulation.

When submission of data by a data provider becomes overdue, the data provider is notified by transparency platform using the methods described in the EDI Problem Statement Document [see 16] and optionally also by email.

Each data provider can access on the transparency platform an overview of his pending and erroneous data submission, per data item. The user interface allows data provider to query each data instance for further details. Data providers can turn the monitoring option on and off as they wish for each data item. The monitoring is activated per default.

6.3 Data Submission Channels (machine-to-machine)

Introduction

The transparency platform has three communication channels through which data can be submitted by external systems. These communication channels are:

- a) Market Data Exchange Standard (MADES) [IEC 62325-503] (see [3])
- b) Web Services (see [4]); and
- c) Secure File Transfer (*ftps*).

These are described in more detail in the following sub-sections. Normally, a data provider is expected to use only one of these channels for all data submissions. Nevertheless it is possible to use a combination of several channels if necessary.

Communication Channels

a) MADES [IEC 62325-503]

MADES specifies a framework for asynchronous communication, providing reliable message delivery, independently of underlying communication infrastructure. It relies on non-proprietary standards for communication protocols, data integrity, signing and confidentiality, peer access point and party authentication and identification (https, SOAP, x.509 etc.)

A reference package implementation of the MADES software (“Energy Communication Platform” - ECP) necessary to implement MADES connection locally is available from the ENTSO for Electricity. The ECP software is validated for common operating environments and the license for local use for the purpose of connection to the transparency platform is free of charge to data providers.

Data providers are of course also free to develop their own implementation of the MADES standard. This would nevertheless require more extensive validation to demonstrate compliance with the MADES standard in addition to the transparency platform connection compliance.

b) Web Services

The transparency platform supports a set of web services that provide all the functionality required to interact with the transparency platform in a secure and reliable form.

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The web services specification for the ENTSO for Electricity Transparency Platform is provided in a separate document [4]

c) **Secure File Transfer (ftps)**

For data providers who are expected to submit only small number of data or to submit on an irregular basis, secure file transfer will be made available as an alternative to the two previous communication channels. As this method does not provide the same degree of reliability and security (e.g. non-repudiation), this method is not preferred for regular and/or large-scale data submission. A digital signature of a message which is included in MADES and the WebServices specification adds additional security measures over an FTPS connection, such as non-repudiation

6.4 Submission Acknowledgement

Data submission is acknowledged in accordance with the IEC Acknowledgement process.

The IEC Acknowledgement document is provided in a separate document [15].

6.5 Data Submission via Website

In addition to the machine-to-machine interface for submission of data, it is also possible to load data through the transparency platform web portal. This includes uploading of files, and entering and modifying individual values through web forms. Access to these facilities on the web portal requires login using a username to which the necessary privileges are granted.

6.6 Validation of Submitted Data

The submitted data is subject to two stages of validation:

- a) against EDI standards as described in the implementation guides – XML schema compliance; and
- b) against business rules configured on the transparency platform.

Examples of business rules are:

- Is the submitter registered as permitted to submit this data for this area?
- What is the expected number of time periods per business day?

The complete set of business rules is provided in the business requirements specification, (see [12]).

6.7 Version Control and Updating of submitted Data Files

Data providers are able to update previously submitted data. This is done by re-submitting the XML document. A replacement XML document for the same data item submission should have the version number incremented. Technical rules for versioning are provided in detail in the implementation guides (see Chapter 5). All versions of submitted files are retained by the platform.

6.8 Checking and Updating Data Values

Data providers are able to access the administration section of the platform to check logs of the processing of their data. Data providers can also select submitted data directly through the platform GUI to view underlying values and to modify the data (such updates are logged and validated as if a new file was submitted).

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6.9 Managing Users

Users are able to create and administer their own user accounts. The transparency platform administration team can grant additional privileges to enable data providers to undertake monitoring and checking of data, and correction of data items directly through the web pages.

<this section will be completed once the design of the web forms is completed>

- *How to request new users for your organisation; how to reset passwords; etc.*

6.10 Configuration Management – Reference and Master Data

Any changes in shared information about market participants, market areas, borders, bidding zones or other master or reference data applying to more than one data provider will be managed by the transparency platform administration team.

Changes will be announced to the relevant parties in advance and updated values will be available for download from the transparency platform.

The transparency platform administration team should be informed if data providers observe that any values in the shared master or reference data require an update.

<this section will be completed once the design of the web forms is completed>

- *How to check and modify values of reference /master data for which you are the data custodian.*

6.11 System Messages

Information for data providers concerning the operation of the transparency platform, such as changes to reference data, planned unavailability of any function on the transparency platform is available through a number of channels. A notice board can be accessed by registered data provider users and it is also possible to subscribe to message delivery through email or SMS.

<this section will be completed once the design of the web forms is completed>

- *How to see system messages*
- *How to subscribe/unsubscribe to message delivery to email/SMS*

6.12 Support and Service Levels

The transparency platform is in operation 24/7. Scheduled downtime should normally not exceed 30 minutes and will be notified normally not less than 24 hours in advance, to data providers.

In case of technical problems for with data submission, please contact the service desk using the contact details provided to you as a data provider.

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Chapter 7. Information for data consumers

7.1 Registration

It is not necessary to register to access the transparency platform. Nevertheless some advantages are provided with registration. When registering, a user can for instance specify a default selection of data to be displayed when logging in. The user can also specify preferences for the display; time zone for example.

7.2 Website

The transparency platform is designed to be easy to use without any training, allowing a smooth navigation between the subject areas.

The transparency platform is tested for compatibility with the following browsers types and versions (to be revised in future):

- Internet Explorer 8;
- Mozilla Firefox 19;
- Google Chrome 25; and
- Safari 6.

The transparency platform can also be accessed using mobile devices and tablets.

The transparency platform will by default display the most recent data. Users are able to expand the view, thereby accessing additional information such date and time of submission and older versions of the data.

7.3 Direct Data Downloads

As well as reading individual data items from the transparency platform datasets can be downloaded on demand through forms on the web pages. Downloads are formatted in XML in accordance with the implementation guide for the data area (Load, Generation, Unavailability, Balancing and Transmission – see Chapter 5).

7.4 Data Subscriptions

Most data on the transparency platform can be received through a publish/subscribe system. To subscribe, the registration of a receiving web service is required which will be associated with certain data sets. When new data in the areas subscribed is published, a corresponding download file will be pushed to the registered service.

The web services specification for the ENTSO for Electricity transparency platform is provided in a separate document [4].

7.5 Enquiries – Support and Service Levels

The transparency platform is in operation 24/7. Scheduled downtime will be notified normally not less than 24 hours in advance through the noticeboard and will normally not exceed 30 minutes duration. Scheduled downtime will normally be notified not less than 24 hours ahead. In the event of transparency platform unavailability, data submissions and publication will be queued.

For further information please see the contact information section of the transparency platform website.

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Chapter 8. Classification of Production Types

Article 5 of the Transparency Regulation specifies that the ENTSO for Electricity develops a Manual of Procedures specifying “*appropriate classification of production types referred to in Articles 14(1), 15(1) and 16(1).*”

Production types will be required for information related to forecast generation (Art14(1)(a) and (b)), information relating to the unavailability of generation and production units (Art 15(1)(a), to (d)) and Actual Generation (Art 16(1)(b)).

Production Type

Type Number	Class	Sub-Class	Complete Term
1	Biomass		Biomass
2	Fossil	Brown coal/Lignite	Fossil Brown coal/Lignite
3	Fossil	Coal-derived gas	Fossil Coal-derived gas
4	Fossil	Gas	Fossil Gas
5	Fossil	Hard coal	Fossil Hard coal
6	Fossil	Oil	Fossil Oil
7	Fossil	Oil shale	Fossil Oil shale
8	Fossil	Peat	Fossil Peat
9	Geothermal		Geothermal
10	Hydro	Pumped Storage	Hydro Pumped Storage
11	Hydro	Run-of-river	Hydro Run-of-river and poundage
12	Hydro	Water Reservoir	Hydro Water Reservoir
13	Marine		Marine
14	Nuclear		Nuclear
15	Other renewable		Other renewable
16	Solar		Solar
17	Waste		Waste
18	Wind	Offshore	Wind Offshore
19	Wind	Onshore	Wind Onshore
20	Other non-renewable		Other

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REFERENCED DOCUMENTS

- [1] Transparency Regulation (Commission Regulation (EU) No 543/2013)
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:163:0001:0012:EN:PDF>
- [2] Detailed Data Descriptions
[MoP Ref02 - EMFIP-Detailed Data Descriptions V1R4-2014-02-24](#)
- [3] Market Data Exchange Standard (MADES) v1r0
[MoP Ref03 - Market Data Exchange Standard \(MADES\) V1R0-2011-11-07](#)
- [4] Web Services specification for the ENTSO for Electricity Transparency Platform
[MoP Ref04 - AF 284 Electronic data interchanges on the Internal Electricity Market v0.4.pdf](#)
- [5] Implementation Guide for the Generation and Load Transparency Process
[MoP Ref05 - EMFIP-1-gl-market-document V3R0-2014-01-24](#)
- [6] Implementation Guide for the Unavailability Transparency Process
[MoP Ref06 - EMFIP-2-outage-market-document-V3R0-2014-01-24](#)
- [7] Implementation Guide for the Balancing Transparency Process
[MoP Ref07 - EMFIP-3-balancing-market-document-V3R0-2014-01-24](#)
- [8] Implementation Guide for the Transmission Transparency Process
[MoP Ref08 - EMFIP-4-transmission-market-document-V3R0-2014-01-24](#)
- [9] Implementation Guide for the Configuration Transparency Process
[MoP Ref09 - EMFIP-5-Configuration-market-document-V3R0-2014-01-24](#)
- [10] Transparency Platform Interoperability test specification
(Available circa mid- 2014)
- [11] Energy Identification Coding Scheme
<https://www.entsoe.eu/data/energy-identification-codes-eic/eic-code-lists/>
- [12] Business Requirements Specification
[MoP Ref12 - BRS-V1R3-2014-01-28](#)
- [13] EDI code list ENTSO for Electricity-CODE-LIST
[MoP Ref13 - entso-e-code-list-v27r0.pdf](#)
- [14] ENTSO for Electricity Metadata Repository
<https://emr.entsoe.eu/glossary/bin/view/Main/>
- [15] IEC Acknowledgement document
http://webstore.iec.ch/Webstore/webstore.nsf/Artnum_PK/48684
- [16] Problem statement document (draft)
[MoP Ref16 - The problem statement document](#)

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