



ENTSO-E CONFIGURATION TRANSPARENCY PROCESS IMPLEMENTATION GUIDE

2024-04-25

VERSION 5 RELEASE 0
APPROVED DOCUMENT

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This document is maintained by the ENTSO-E CIM WG. Comments or remarks are to be provided at cim@entsoe.eu

Revision History

Version	Release	Date	Comments
1	0	2013-06-24	First version
2	0	2013-09-12	Version taking into account the comments issued during the Public Consultation.
3	0	2014-01-24	Version taking into account comments in addition to correcting some typing errors. Alignment of the models and attribute names with the CIM model following integrity check. Clarification of synchronisation possibility in 3.1, 4.3 and 4.4.3. Addition of party connected to the grid in 4.4.5 used only for transmissions to a System Operator. Suppressed unnecessary sequence flows. Clarification of production unit use. Approved by Market Committee on 2014-02-04.
4	0	2015-01-08	This version takes into account the EMFIP corrigendum version 5. The following changes have been made: <ul style="list-style-type: none"> Update of Business Type description in §4.5.2 and of the dependency table in §4.3.2.
4	1	2016-04-28	Maintenance request EMFIP30: The attributes based on ESMP_ActivePower or ESMP_Voltage has the following constraints: <i>The maximum length of this information is 17 numeric characters.</i> <i>The number of decimal places identifying the fractional part of the quantity is limited to one (1) only.</i> Changes have been made in dependency tables.
4	2	2019-02-12	This version takes into account the last changes applied on the Configuration_MarketDocument XSD v3.2. <ul style="list-style-type: none"> Chapter 3 updated. New dependency tables for the new analog class. Chapter 4 updated. New contextual and assembly models. Approved by MC
5	0	2024-04-25	Maintenance request SDP02: For statistical purposes, voltage level mandatory when submitting transmission assets of type AC or DC link. Realigned document with new editorial standards: Added missing table of schema versions and removed chapters describing schemas and their attributes.

			<p>Maintenance request EMFIP90:</p> <p>To facilitate publications of outages under TR art. 10.1.a&b, installed capacity mandatory for all transmission assets except substations.</p> <p>Approved by ICTC.</p>
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Reference Documents

1. Commission Regulation 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.
2. Central Information Transparency Platform - Business Requirements Specification.
3. The ENTSO-E Harmonised Role Model.
4. A Common Identification System for the Energy Industry, The Energy Identification Coding Scheme – EIC.
5. The ENTSO-E Code List.
6. IEC 62325-301, Framework for energy market communications Common information model (CIM) Extensions for markets.
7. IEC 62325-351, Framework for energy market communications CIM European market model exchange profile
8. IEC 62325-450, Profile and context modelling rules.
9. IEC 62361 part 100, Naming and design rules for CIM profiles to XML schema mapping.
10. IEC 62325-451-1 the acknowledgement document.
11. ENTSO-E XML namespace reference document version 2 release 0. This reference shall ensure to have compliant electronic document instance files; and in particular to apply the following recommendations:
 - **In order to enable flexibility, it is recommended that the schema location instruction (and xsi definition) in the schema compliant instance should not be used.**

1 INTRODUCTION

This implementation guide is one of the implementation guides drafted by ENTSO-E to enable the establishment of a common level of fundamental data transparency as per the Regulation on transparency and provision of information in European electricity markets.

This implementation guide focuses on defining the information to be exchanged to enable the a central information platform to be configured with the information necessary to satisfy the requirements defined by the Regulation, the detailed data description and the Transparency Platform Business Requirements Specification.

Its purpose is to provide a means of transmitting basic configuration information to a central information platform. This platform should enable the establishment of a coherent and consistent view of the European wholesale electricity market by all the market participants as well as to interested European consumers.

The implementation guide is one of the building blocks for using UML (Unified Modelling Language) based techniques in defining processes and documents for interchange between actors in the electrical industry in Europe.

This guide provides a standard for enabling a uniform layout for the transmission of configuration data between the European electricity market participants and the Transparency platform via the Data Provider (who may be the Transmission System Operator). The information model within the guide shall ensure that a common interface can be provided between different software solutions.

2 THE CONFIGURATION PROCESS OVERVIEW

2.1 BREAKDOWN OF THE CONFIGURATION PROCESS

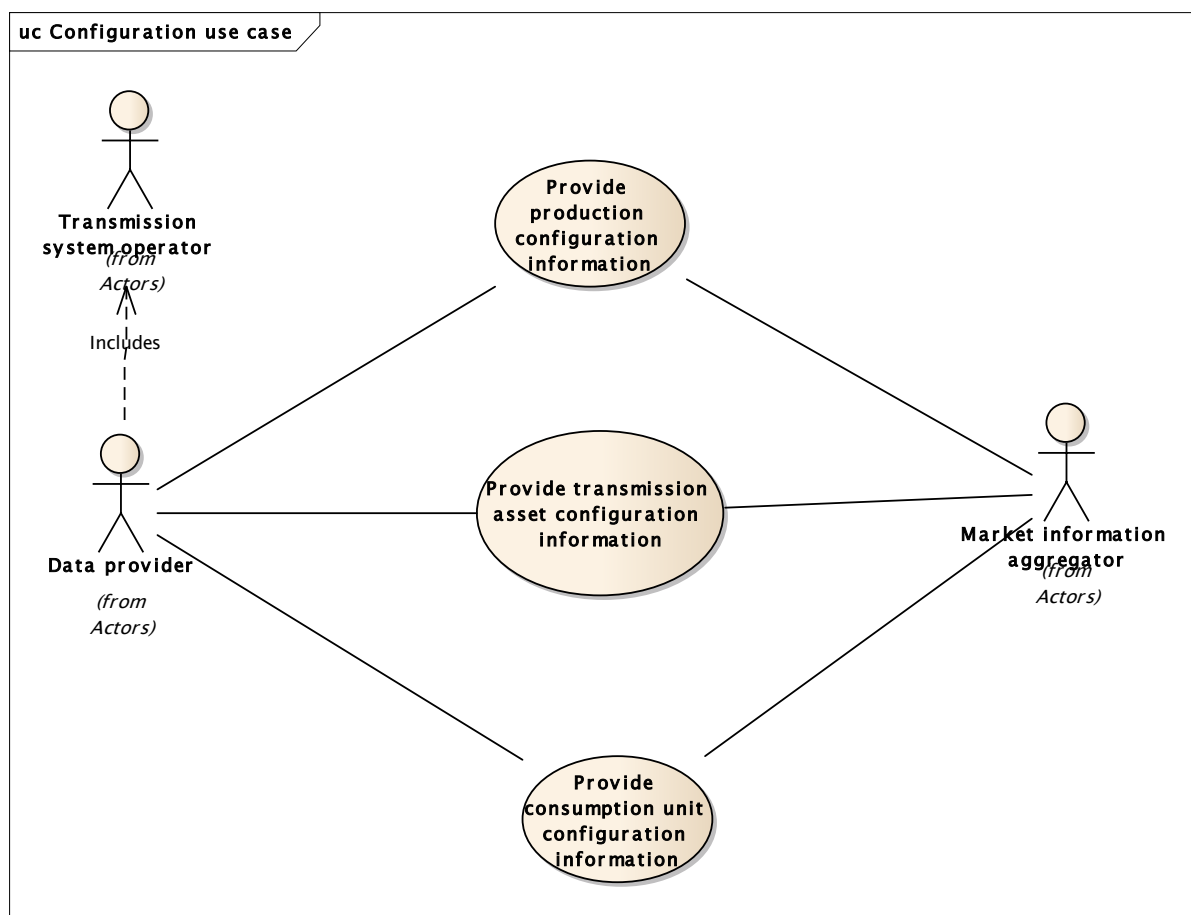


FIGURE 1 - INFORMATION EXCHANGE FOR THE PROVISION OF CONFIGURATION INFORMATION

The provision of configuration information is relatively straightforward and is basically broken down into three use cases as follows:

1. Provide production configuration information this includes both production unit configuration information and may include generation unit configuration information. The management of a generation unit is handled through the production unit. Consequently if there is an addition of a generation unit or change to a generation unit this requires that the change is carried out as a change of the production unit.
2. Provide Transmission asset configuration information.
3. Provide consumption unit configuration information.

The platform requires this basic configuration in order to ensure the validation and coherence of the information that is transmitted by the data providers for publication. The configuration

information may evolve over time and consequently modifications or deactivations will have to be provided.

3 THE CONFIGURATION PROCESSING SEQUENCE

3.1 GENERIC PROCESSING SEQUENCE

The configuration process consists of an initial transmission of all information required for the configuration of the platform when the platform is set up. After this initial transmission, configuration information can be sent as required to provide the creation, modification or deactivation of the configuration information or for its synchronisation where the Data Provider may send the complete set of configuration information whenever it changes.

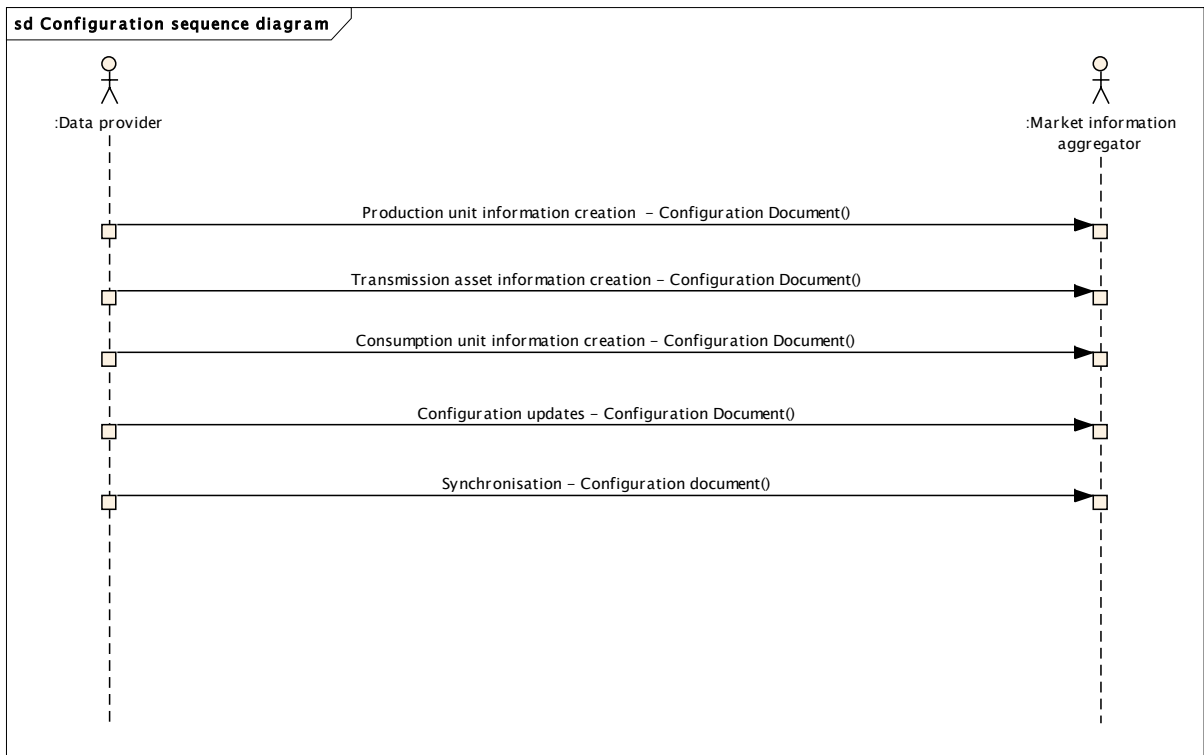


FIGURE 2 - GENERIC CONFIGURATION PROCESS SEQUENCE

The initial flows cover the creation of production units with their related generation units, transmission assets and consumption units.

The configuration updates flow covers the modification or deactivation of previously transmitted information.

The last flow covers the synchronisation of the configuration information between the Data Provider and the Market Information Provider.

The creation of a production unit shall be composed of all dependent generation units. The creation, modification or deactivation of a generation unit represents a change in the production unit configuration and consequently a modification to the production unit is necessary with all the valid generation units.

Following the reception of a configuration document, the acknowledgement business process as per IEC 62325-451-1 shall be applied. In particular, the Data provider shall receive an acknowledgement stating whether the document has been accepted or rejected and the reasons for the rejection.

3.2 APPLICABLE ESMP DOCUMENTS

This implementation guide assumes the use of the following EDI documents and contextual and assembly models (also referred to as XSD or schema versions):

Table 1 – Applicable ESMP documents

ESMP document		version
Configuration document	market	urn:iec62325.351:tc57wg16:451-6:configurationdocument:3:2

3.3 RULES GOVERNING THE CONFIGURATION MARKET DOCUMENT

3.3.1 THE TRANSMISSION OF CONFIGURATION INFORMATION

The Configuration Market Document is used to transmit the information necessary to permit the validation of production units, transmission assets and consumption units when market information is provided by the Data Providers to the Market Information Aggregator for publication.

The Configuration Market Document is also used to transmit modifications or deactivations that evolve the initial configuration information over time. In the specific case of a production unit it should be noted that all evolutions take place in respect to the production unit as a whole. That is to say that an evolution of a production incorporates any associated generation units that belong to it. For example if a production unit changes its name then all associated generation units must be changed as well.

3.3.1 CODING SCHEME

A01 = EIC coding scheme is the single supported coding scheme.

3.3.2 RULES GOVERNING THE NAME ATTRIBUTE

The maximum length of the name is 35 alphanumeric characters. This is due to Transparency Platform limitations and not the schema.

3.3.3 RULES REGARDING THE PROCESS.PROCESSTYPE ATTRIBUTE

The creation of a production unit shall be composed of all dependent generation units. The creation, modification or deactivation of a generation unit represents a change in the production unit configuration and consequently a modification to the production unit is necessary with all the valid generation units.

3.3.4 RULES GOVERNING THE TIME SERIES CLASS

A time series shall exist to describe a specific production unit, transmission asset or consumption unit. It conveys the data related to the configuration of the defined information.

3.3.5 RULES REGARDING THE

IMPLEMENTATION_DATEANDORTIME.DATE ATTRIBUTE

This determines the date of the effective implementation of the information provided in the time series:

- In the case of a creation this signifies that the object will be operational at this date
- In the case of modification this signifies that the changes will be operational at this date

- In the case of a deactivation this signifies that the deactivation will be effective at this date

3.3.1 RULES REGARDING THE ANALOGVALUES.VALUE ATTRIBUTE

It's recommended to provide round float values with maximum three decimals.

3.3.1 RULES REGARDING THE PRODUCTION_POWERSYSTEMRESOURCES.HIGHVOLTAGELIMIT ATTRIBUTE

This represents the voltage connection level of the production unit or transmission asset being described. This value shall always be provided in KVT. Value must be situated between 0 and 999. Recommended values are:
400, 380, 225, 220, 150, 132, 110, 100, 90, 70, 63, 50.
All quantities are non-signed values.

3.3.2 RULES REGARDING THE NOMINALIP_POWERSYSTEMRESOURCES.NOMINALP ATTRIBUTE

This represents the installed capacity for a production unit or a consumption unit. This value shall always be provided in MAW. All quantities are non-signed values.

3.3.3 RULES GOVERNING THE MKTGENERATINGUNIT CLASS

The MktGeneratingUnit Class provides the information for a generation unit. There may be multiple generation units per production unit.

A MktGeneratingUnit class is not mandatory.

3.3.1 RULES REGARDING THE NOMINALP ATTRIBUTE

This represents the installed generation capacity for the generation unit, AC link or DC link, transformer or converter being described. This value shall always be provided in MAW. All quantities are non-signed values.

3.3.2 DOCUMENT ATTRIBUTE DEPENDENCIES

Article involved Attribute		Production	Transmission assets	Consumption
	type	A95: configuration document		
	process.processType	A36 = Creation A37 = Modification A38 = Deactivation A39 = Synchronisation		
	sender_MarketParticipant.marketRole.type	A04 = System Operator or TSO A20 = Party connected to the grid ¹⁾ A39 = Data Provider		
	receiver_MarketParticipant.marketRole.type	A04 = System Operator or TSO A32 = Market Information Aggregator		
TimeSeries	businessType	B11: production unit	B16: transmission asset	B17: consumption unit
	biddingZone_Domain.mRID	Used	Not used	Used
	controlArea_Domain mRID	Only one occurrence permitted	Multiple occurrence permitted	Only one occurrence permitted
	provider_MarketParticipant mRID	Only one occurrence permitted	Multiple occurrence permitted	Only one occurrence permitted
MktPSRType	psrType	Used ²⁾	B21 = AC link B22 = DC link B23 = substation B24 = transformer B75= ACDC converter	A05 = Load
	production_PowerSystemResources.highVoltageLimit	Used	Used when psrType=B21 or B22	Not used
	nominalP	Used	Used unless psrType=B23	Used
MktGeneratingUnit	mRID	Used when generation units are specified	Not used	Not used
	Name	Used when generation units are specified	Not used	Not used
	nominalP	Used when generation units are specified	Not used	Not used
	generatingUnit_Location.name	Used when generation units are specified	Not used	Not used
	generatingUnit_PSRType.psrType	Used when generation units are specified ²⁾	Not used	Not used
Analog	measurementType	Not Used	A17: Loss Factor (Only for interconnectors)	Not Used
	unitSymbol	Not Used	P1: Percent (Only for interconnectors)	Not Used
	analogValues.value	Not Used	Used (Only for interconnectors)	Not Used

FIGURE 3 - CONFIGURATION DEPENDENCY TABLE

Note¹⁾: The role party connected to the grid (A20) can only be used as a sender in an exchange to a receiver who has the role of System Operator (A04).

Note²⁾: The permitted production types are enumerated in Manual of Procedures' cover document. The corresponding AssetType code values are listed in the ENTSO-E codelist.