
SUBSCRIPTION SERVICE INTRODUCTION GUIDE FOR DATA CONSUMERS

Version 0.2

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1. Subscribing to a data feed

Data consumer can subscribe to data feed: the platform will then push updates.

Note: Your web service needs to use SOAP 1.2 standard and not 1.1.

The first step is to create an account on the web portal. Then send an email to transparency@entsoe.eu titled "Data Consumer subscription rights request" containing the user name for the previously created account.

Once the access rights have been granted you'll then be able to see on the data items portal a "Subscribe" link as shown below.

The screenshot shows the 'Generation Forecast - Day ahead' page. At the top, there are navigation tabs: Home, Load, Generation, Transmission, Balancing, Outages, Congestion Management, and Administration. Below the title, there are filters for 'Control area', 'Bidding zone', and 'Country'. A date and time range selector is set to '27.02.2015' and 'D'. On the left, there is a list of areas with 'Hungary (HU)' and 'BZN|HU' selected. In the main content area, there are buttons for 'Show fullscreen', 'Export Data', and 'Subscribe' (circled in red). Below these buttons is a table for 'BZN|HU' showing 'Scheduled Generation' and 'Scheduled Consumption' in MW for three time intervals: 00:00 - 00:15, 00:15 - 00:30, and 00:30 - 00:45. The table has columns for D, D+1, and D+2 for both generation and consumption.

MTU	BZN HU					
	Scheduled Generation [MW]			Scheduled Consumption [MW]		
	D	D + 1	D + 2	D	D + 1	D + 2
00:00 - 00:15	3313	N/A	N/A	N/A	N/A	N/A
00:15 - 00:30	3312	N/A	N/A	N/A	N/A	N/A
00:30 - 00:45	3312	N/A	N/A	N/A	N/A	N/A

Before being able to actually subscribe to a data item update, you first have to go to the subscription configuration menu "your@email.com->"My Subscriptions channels" and define a Web service channel or an ECP channel.

The screenshot shows a user account menu for 'cmo@entsoe.eu'. The menu items are: 'My Account Settings', 'My Subscriptions', 'My Subscription Channels', and 'Log Out'. The 'My Subscriptions' and 'My Subscription Channels' items are highlighted with a red box.

The screenshot shows the 'My Subscriptions' configuration page. It contains a table with columns 'Channel', 'URL / End Point', and 'Status'. There are two rows: 'Web Service' and 'ECP'. The 'Web Service' row is highlighted with a red box, and it has a 'Setup' button next to it. The 'ECP' row also has a 'Setup' button.

Channel	URL / End Point	Status	
Web Service	N/A	N/A	Setup
ECP	N/A	?	Setup

Point Close

Setup Web Service

Web service URL:*

Test web service Test not tested yet.

* - required field

Save

Generation ? Transmission ? Balancing ? Outages ? Congestion Management ? System Operations ? Administration

Subscription Channel Management

Specification

Create channel

Create Channel

Name:*

Type:*

EndPoint Code:*

Save channel


Type	Name	Type	EndPoint Code	Actions
O-PROD	ECP	ECP		<input type="button" value="X"/> <input type="button" value="Edit"/>
L_PROD	Web se			<input type="button" value="X"/> <input type="button" value="Edit"/>
F-ECP4	ECP			<input type="button" value="X"/> <input type="button" value="Edit"/>

page 10 25 50

mobile | PC

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 and Developed by Unicorn Systems a.s.

You can see the details by clicking on "My subscriptions":



Central collection and publication of electricity generation, transportation and consumption data and information for the pan-European market.

cmo@entsoe.eu

My Account Settings

My Subscriptions

My Subscription Channels

Log Out

Load ? Generation ? Transmission ? Balancing ? Outages ? Congestion Management

My Subscriptions

Subscription reference	Valid from	Valid to	Type	Subscription channel	Actions
12.1.G - Physical Flows - All	07.12.2015 13:45	Infinity	Per update	ECP	<input type="button" value="X"/> <input type="button" value="Edit"/> <input type="button" value="Add"/>

Items per page 10 25 50 100

1

The platform will then be able to push the data to your endpoint using a web service call to the URL previously configured. Below a sample web service call:

Export requests (based on XML files in form of StatusRequest_MarketDocument) need to be delivered to the platform through one of the following integration channels:

- > ECP
- > Web Services

Submitted Requests are processed asynchronously; found data are delivered using the same channel as the one used for submission of the original Request. See the summary below:

- > ECP
 - Request in form of XML sent through ECP
 - Response in form of XML delivered back to user's ECP original requester' EndPoint.
- > Web Services
 - User call WS Put method with the StatusRequest_MarketDocument in their message payload
 - It is possible to list incoming messages using ws list method and then call ws get method to download exports. Exported files are delivered in compressed element of incoming payload.

2. Requests through ECP

Prerequisites

Download and Install ECP 4.0 following the Installation Guide under Link <https://www.entsoe.eu/data/transparency-platform/data-providers/> . For any questions related to ECP installation and process for acquiring component access please write to us at ecpsupport@entsoe.eu.

ECP 4 Documentation

DOCUMENT	VERSION / RELEASE
Download ECP 4 Software	
Installation Guide 4.4.0	4.4.0
Administration Guide 4.4.0	4.4.0
Upgrade Guide 4.4.0	4.4.0
Release Notes 4.4.0	4.4.0
Migration ECP3 to ECP4. ECP switch procedure	
Registration Keystore	

3. Request / Exports through Web Service

Please note, Webservices Endpoint where subscribed data is sent to is the responsibility of Data subscriber and ENTSOE is not responsible for Data providers location implementations.

Refer to the sample Data Feed Project repository for your reference, <https://github.com/Laxmikanth-p/Subscriptions>.

4. Response with Data

The response format is defined by the download scenarios described in the **Implementation guides**, which are an integral part of the transparency platform's **Manual of procedures**.

Also in the response, time is always expressed in UTC. System returns both partially and exactly matching data. Amount of returned data depends on regulation article. For example, a query for one day of a weekly forecast will always return a whole week. Likewise, if the requested time interval in a query for a day-ahead forecast covers the last hours of one day and the first hours of the following day, the response will contain complete data for both days.

For the following regulation articles the query response will contain data for a whole day (or a multiple of days, depending on the length of the requested time interval): 6.1.b, 12.1.b, 12.1.d, 12.1.f, 14.1.c and 14.1.d. For the following regulation articles, the query response will contain data for the requested MTU or BTU period(s): 6.1.a, 12.1.g, 16.1.a, 16.1.b&c, 17.1.d-h and 17.1.j.

When querying for daily, weekly, monthly or yearly data, the time interval in the response corresponds to the day in the timezone for which the transparency platform publishes the data. For example: A query for article 6.1.b Day-ahead load forecast for April 6 2016 in Czech republic will yield a response with a time interval starting at 2016-04-05T22:00Z and ending at 2016-04-06T22:00Z. In general, this is the timezone in which the area or border is physically located, however for articles 12.1.d Day-ahead Prices and 12.1.e Net Positions there are exceptions to this rule due to regional arrangements for capacity allocations.

Curve type in response is A01 for all data items except Production/Generation unit outages, where A03 is used.

5. Negative Acknowledgement

Reasons for negative answer from ENTSO-E Transparency platform may be following

- > Request does not contain all mandatory parameters
- > Request contains duplicate parameters
- > Parameters contain forbidden characters or letter case does not match
- > No data could be found

In these cases the system returns Acknowledgement_MarketDocument with reasons of rejection.

Reasons are not distinguished by a Reason code (value always fixed to 999). Only the Reason text differs. See example below:

```
<?xml version="1.0" encoding="UTF-8"?>
<Acknowledgement_MarketDocument
  xmlns="urn:iec62325.351:tc57wg16:451-1:acknowledgementdocument:7:0">
  <mRID>be3917c7-0704-4</mRID>
  <createdDateTime>2016-03-30T10:45:36Z</createdDateTime>

  <sender_MarketParticipant.mRID codingScheme="A01">10X1001A1001A450</sender_MarketParticipant.mRID>
  <sender_MarketParticipant.marketRole.type>A32</sender_MarketParticipant.marketRole.type>

  <receiver_MarketParticipant.mRID codingScheme="A01">10X1001A1001A450</receiver_MarketParticipant.mRID>
  <receiver_MarketParticipant.marketRole.type>A39</receiver_MarketParticipant.marketRole.type>

  <received_MarketDocument.createdDateTime>2016-03-30T10:45:35Z</received_MarketDocument.createdDateTime>

  <Reason>
    <code>999</code>
    <text>No matching data found</text>
  </Reason>
</Acknowledgement_MarketDocument>
```

6. FAQ on Subscriptions:

1. What If the Subscriptions channel is not working?
 - Platform retry at least 10 time before inactivating the your channel . The subscribed data for an inactive channel will be held for 2 days and the subsequently archives the data.
 - A message is delivered which should appear in your registered user id dashboard about the inactive subscription channel, so that the user can take respective action. Apprently, Plaform administrator can also check the status of the inactive channel. In case the channel is active and data is not sent, please send us request to transparency@entsoe.eu with the your registered user login and WS endpoint URL.
2. List of Certification Authority is supported by Transparency Platform Subscription Process?
 - In order to ensure secure access to data consumer's the Endpoint URL configured against Web Service channel via HTTPS protocol, the endpoint should be comply with listed default Certification Authority supported by Transparency platform.
 - America Online Root Certification Authority
 - Japanese Government/OU=ApplicationCA
 - Atos TrustedRoot 2011/O=Atos/C=DE
 - Greater Manchester/L=Salford/O=COMODO CA Limited/CN=COMODO Certification Authority
 - AC Camerfirma SA CIF A82743287/OU=http://www.chambersign.org/CN=Chambers of Commerce Root
 - AC Camerfirma SA CIF A82743287/OU=http://www.chambersign.org/CN=Global Chambersign Root
 - Certplus/CN=Class 2 Primary CA
 - Unizeto Sp. z o.o./CN=Certum CA
 - Unizeto Technologies S.A./OU=Certum Certification Authority/CN=Certum Trusted Network CA
 - Madrid (see current address at www.camerfirma.com/address/)/serialNumber=A82743287/O=AC Camerfirma S.A./CN=Chambers of Commerce Root - 2008
 - China Internet Network Information Center/CN=China Internet Network Information Center EV Certificates Root
 - ComSign CA/O=ComSign/C=IL
 - Cybertrust, Inc/CN=Cybertrust Global Root
 - US/O=Digital Signature Trust/OU=DST ACES/CN=DST ACES CA X6
 - DE/O=D-Trust GmbH/CN=D-TRUST Root Class 3 CA 2 2009
 - Digital Signature Trust Co./CN=DST Root CA X3
 - Deutsche Telekom AG/OU=T-TeleSec Trust Center/CN=Deutsche Telekom Root CA 2
 - DigiCert Inc/OU=www.digicert.com/CN=DigiCert Assured ID Root CA
 - Digital Signature Trust Co./OU=DSTCA E1
 - Elektronik Bilgi Guvenligi A.S./CN=e-Guven Kok Elektronik Sertifika Hizmet Saglayicisi
 - E-Tugra Certification Authority
 - EBG Elektronik Sertifika Hizmet Sa\xC4\x9Flay\xC4\xB1c\xC4\xB1s\xC4\xB1/O=EBG Bili\xC5\x9Fim Teknolojileri ve Hizmetleri A.\xC5\x9E./C=TR

- Agencia Catalana de Certificacio (NIF Q-0801176-I)/OU=Serveis Publics de Certificacio/OU=Vegeu <https://www.catcert.net/verarrel> (c)
- AS Sertifitseerimiskeskus/CN=EE Certification Centre Root CA/emailAddress=pki@sk.ee
- Entrust.net Certification Authority (2048)
- Equifax Secure Certificate Authority
- Equifax Secure Global eBusiness CA-1
- Equifax Secure eBusiness CA-1
- DigiNotar/CN=DigiNotar Cyber CA/emailAddress=info@diginotar.nl
- DigiNotar/CN=DigiNotar Cyber CA

APPENDIX: Elements of Request

Element	Description
mRID	Each Status Request Document has to use a new unique mRID. Please note, request with already processed mRID's will be rejected by the platform.
type	Fixed value A59 (i.e. Status request for a status within a process, taken from DocumentTypeList of ENTSO-E Code List)
sender_MarketParticipant.mRID	Energy Identification Code (EIC code) of sender's Organization which is registered in ENTSO-E Transparency platform. If the sender of a Request is not related to any Organization, the EIC code is not relevant. However the sender is mandatory field and therefore fake value with 16 characters has to be used (e.g. 1234567890123456).
sender_MarketParticipant.marketRole	Sender role is not relevant for the functionality, however it is mandatory field and therefore certain value shall be provided. One of values in RoleTypeList of ENTSO-E Code List should be used, following codes are typical A01 (Trade responsible party) A04 (System Operator) A07 (Transmission capacity allocation) A13 (Consumer) A29 (Capacity Trader) A33 (Information Receiver)
receiver_MarketParticipant.mRID	Energy Identification Code (EIC code) of receiver's Organization. In this case it is always Transparency platform and therefore organization ENTSO-E. The code is therefore 10X1001A1001A450 (ENTSO-E, i.e. European Network of Transmission System Operators for Electricity)
receiver_MarketParticipant.marketRole	Receiver role is always fixed because ENTSO-E Transparency platform still keeps a single code A32 (Market information aggregator)

Attribute Instance Component class	This class contains two elements (attribute and attributeValue) and can be present many times within single StatusRequest_MarketDocument. The number of occurrences depends on number of attributes that are required for a search (See the attached Implementation Guide for a list of those attributes).
attribute	A name of an attribute which is part of metadata used for search of data. See the attached Implementation Guide for a name of attributes.
attributeValue	A value corresponding to attribute name present in the same instance of AttributeInstanceComponent class. Value is used for search of data.

References

1. ENTSO-E Transparency platform

- [Implementation Guides](#)
- [Manual of Procedures](#)

2. EC 62325-451-5 Problem statement and status request business process, contextual and assembly models for European market

Available at IEC stores: <https://webstore.iec.ch/publication/21818>

3. REE WS Connection Kit for IEC 62325-504

TSO REE has developed the application "Connection Kit" that implements an IEC 62325-504 web service client. This application is an open source project that can be accessed from the bitbucket repository: <https://bitbucket.org/smree>. Installation files as well as user guides and other documents can be downloaded at: <https://bitbucket.org/smree/eemws-core/downloads>

REE support line at soportesios@ree.es can be consulted for any technical queries or issues on installation procedure and further configuration for the Connection Toolkit.