ENTSOG Transparency Platform

API

User Manual

Contents

Introduction

The ENTSOG's Transparency Platform (TP) provides a comprehensive data query mechanism by which all data can be extracted through a REST API. This API is available to the public and anyone has the possibility of extracting the published information on the ENTSOG TP in several formats.

1. The following document provides a short overview of the details of the API and how it can be used.

As the API is publicly available, there are some restrictions in the use of API to ensure that the limited resources of the ENTSOG TP are shared fairly with all TP users. These are also explained in the document.

Any questions or comments are welcome by submitting a question through the Transparency Platform "Submit a Question" form - https://transparency.entsog.eu/#/helps/submitform.

2. Transparency Platform API

2.1. General Format of the API

The general format of the TP API is constructed as follows

https://transparency.entsog.eu/api/v1/operationaldatas

where https://transparency.entsog.eu/api/v1 is URL and "operationaldatas" is the API type. A full list of available APIs is outlined in section 2.2

The result set from this API call is returned in a raw JSON format. Other formats are also available – XML, CSV (comma separated values) and XLSX (MS Excel format). To extract data in these formats, add the extensions ".xml", ".csv" or ".xlsx" as appropriate.

For example, https://transparency.entsog.eu/api/v1/operationaldatas.xml will extract the data in XML format.

Returning (the following extract)

```xml
<xml>
 <meta>
  <item name="limit" value="100"/>
  <item name="offset" value="0"/>
  <item name="count" value="100"/>
  <item name="total" value="100"/>
  <item name="fields">
   <property>id</property>
   <property>dataSet</property>
   <property>indicator</property>
   <property>periodType</property>
   <property>periodFrom</property>
   <property>periodTo</property>
   <property>operatorKey</property>
   <property>tsoEicCode</property>
   <property>operatorLabel</property>
   <property>pointKey</property>
   <property>pointLabel</property>
   <property>tsoItemIdentifier</property>
   <property>directionKey</property>
   <property>unit</property>
   <property>itemRemarks</property>
   <property>generalRemarks</property>
   <property>value</property>
   <property>lastUpdateDateTime</property>
   <property>isUnlimited</property>
   <property>flowStatus</property>
   <property>interruptionType</property>
   <property>restorationInformation</property>
   <property>capacityType</property>
   <property>capacityBookingStatus</property>
   <property>isCamRelevant</property>
   <property>isNA</property>
   <property>originalPeriodFrom</property>
  </item>
```

```xml
    </meta>
  <operationaldatas>
   <operationaldata>
    <item name="id" value="1Firm AvailabledayDE-TSO-0009UGS-00369exitkWh/d2007-09-
    302054-12-31"/>
    <item name="dataSet" value="1"/>
    <item name="indicator" value="Firm Available"/>
    <item name="periodType" value="day"/>
     …
   </operationaldata>
   <operationaldata>
     …
   </operationaldata>
  </operationaldatas>
</xml>
```

All properties in the <meta> section of the extract can be used as parameters to filter the data pulled using the API. These will be described in the next section. Those highlighted in yellow are the commonly used parameters for "operationaldatas".

All the other API calls use the same principle as depicted above. For a complete parameter, and value, listing, please see the last chapter (3: Annex I) from this document.

Note: From the extract above, the "periodFrom" and "periodTo" from the extract are written as "from" and "to" respectively in the API call.

2.2. Complete list of APIs

Base URL: **https://transparency.entsog.eu/api/v1**

Category	API	What it contains
Point Data	Operational Datas /operationalDatas	Nomination, Renominations, Allocations, Physical Flows, GCV, Wobbe Index, Capacities, Interruptions, and CMP CMA
	CMP Unsuccessful Requests /cmpUnsuccessfulRequests	CMP Unsuccessful requests
	CMP Unavailable Firm Capacities /cmpUnavailables	CMP Unavailable Firm Capacity
	CMP Auction Premiums /cmpAuctions	CMP Auction Premiums
	Interruptions /interruptions	Interruptions
Zone Data	Aggregated Data /aggregatedData	Latest Nominations, Allocations, Physical Flows
Tariff Data	Tariffs Simulations /tariffsSimulations.xml	Simulation of all the costs for flowing 1 GWh/day/year for each IP per product type and tariff period
	Tariffs /tariffsFulls.xml	Information about the various tariff types and components related to the tariffs
UMM Data	Urgent Market Messages Data /urgentMarketMessages	Urgent Market Messages
Referential Data	Connection Points /connectionPoints	Interconnection points *as visible on the Map. Please note that this only included the Main points and not the sub points. To download all points, the API for Operator Point Directions should be used.*
	Operators /operators	All operators connected to the transmission system
	Balancing Zones /balancingZones	European balancing zones
	Operator Point Directions /operatorPointDirections	All the possible flow directions, being combination of an operator, a point, and a flow direction
	Interconnections /interconnections	All the interconnections between an exit system and an entry system
	Aggregate Interconnections /aggregateInterconnections	All the connections between transmission system operators and their respective balancing zones

Note: We advise you to use limitations on the API. For instance, the Zone Data needs to be limited since the normal call runs too long due to the aggregations done. If no restrictions are used, the API call will be halted due to a timeout as the maximum execution time for any API query is set to 60 seconds.

2.3.   Parameters

As mention in Section 2.1, the result set can be filtered by any field passed as a parameter in the URL.

The character "**?**" separates the body of the API from the parameters.

>For example, https://transparency.entsog.eu/api/v1/operationaldatas.xml**?**indicator=Nomination returns data for the Nomination indicator.

There is no limit to the number of parameters used. By using "**&**" as a separator for multiple parameters, the previous example can be extended; https://transparency.entsog.eu/api/v1/operationaldatas.xml?indicator=Nomination&operatorLabel=Fluxys returns data for the Nomination indicator for Fluxys.

In some cases, multiple values for a single parameter are also allowed. In this case, a comma-separated listing should be used.
To extend the previous example even further, https://transparency.entsog.eu/api/v1/operationaldatas.xml?indicator=Nomination,Allocation&operatorLabel=Fluxys returns data for the Nomination OR the Allocation indicator for Fluxys.

Note: "=" is the only operator allowed to filter data. Other operators such as "<" or ">" are not allowed

2.4. Other parameters not listed in the API fields

2.4.1. Forcing the download

While using a browser, this parameter forces a download of a file rather than returning data to the browser

Parameter	API	Possible values
forceDownload	?forceDownload=*value*	true false

2.4.2. Selecting the time zone

Converting all dates to specific time zone

Parameter	API	Possible values
timeZone	?timeZone=*value*	EST CET CEST WET … *https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations*

2.4.3. Limit

By default, all APIs limit the result set returned to 100 rows. But this can be overridden:

Parameter	API	Possible values
limit	?limit=*value*	-1: no limit 10 100 1000 ….

Note: However, as mentioned above, the API is publicly available and there are some restrictions in the use of API to ensure that the limited resources of the ENTSOG TP are shared fairly with all TP users. There is a timeout value on all queries set to 60 seconds. Additional filters should be used such as data ranges, specific points, operators and/or indicators to return a successful result set.

2.4.4. Indicators (Points)

Used in "operationalDatas" API

Parameter	API	Possible values
indicator *(transport data)*	?indicator=*value,value,value,…*	Actual interruption of interruptible capacity
		Allocation
		Firm Available
		Firm Booked
		Firm Interruption Planned - Interrupted
		Firm Interruption Unplanned - Interrupted
		Firm Technical
		Firm available
		Firm booked
		Firm technical
		GCV
		Interruptible Available
		Interruptible Booked
		Interruptible Interruption Actual – Interrupted
		Interruptible Interruption Planned - Interrupted
		Interruptible Total
		Nominations
		Physical Flow
		Planned interruption of firm capacity
		Renomination
		Unplanned interruption of firm capacity
		Wobbe Index
indicators *(CMP CMA)*		Available through Oversubscription
		Available through Surrender
		Available through UIOLI long-term
		Available through UIOLI short-term

2.4.5. Indicators (Balancing Zones)

It is the same as 2.4.4 Indicators (Points), except that it is to be used with the Aggregate Data API:

Parameter	API	Possible values
indicator *(transport data)*	?indicator=*value,value,value,…*	Allocation
		Nomination/Renomination
		Physical Flow

2.4.6. Sorting

Parameter	*API*	Possible values
sorting	?sorting=*value*	any API field

Using this will sort in ascending order, based on the API field selected.

2.4.7. Get only the TSO points

Parameter	*API*	Possible values
hasData	?hasData=*value*	1 *(true)* 0 *(false)*

"Flow directions" are synonymous for operator point directions.

It designates all the known combinations of interconnection points, operators, and flow directions. So, for instance, if operator A can take gas at point X, it means that there is an operator point direction "**Operator A / Point X / Entry**".

If operator A takes its gas from operator B, then there should be a symmetrical operator point direction "**Operator B / Point X / Exit**".

The list of all such combinations, which form the core of the Transparency Platform's network model, can be accessed through the API Operator Point Directions: https://transparency.entsog.eu/api/v1/operatorpointdirections.xml.

This list contains all known operator point directions, including the ones involving non-Transmission System operators; i.e. this list can contain also storage system operators, or LNG system operators, all of which do not in any way send data to ENTSOG's Transparency Platform.

To filter the list only with those operator-point-directions which belong to a TSO, which itself is publishing REG715 information, the parameter **hasData** can be used by simply setting it to 1:

https://transparency.entsog.eu/api/v1/operatorpointdirections.xml?hasData=1

2.4.8. Not Applicable

When specified, the API will return not only the actual data, but also the exemptions that match the query parameters. In case of an exemption, the Value field will be empty; the reason for the exemption will be included in the field "Specific Remarks".

 If the N/A cases are not required, the following parameter can be used

Parameter	API	Possible values
includeExemptions	?includeExemptions=*value*	1 *(true)* 0 *(false)*

Setting the parameter to 0 will return only populated data. Setting to 1 will return populated data as well as the N/A instances.

To include only the N/A items

Parameter	API	Possible values
isNA	?isNA=*value*	1 *(true)* 0 *(false)*

And set this parameter to 1. This will retrieve only N/A cases.

Annex I – Complete TP API CALL LIST

Base URL: https://transparency.entsog.eu/api/v1**/operationalData**

Returns the list of operationalData document records

3.

Parameter	API	Possible values
allIndicatorsChecked	?allIndicatorsChecked=*value*	0 *(false)* 1 *(true)*
from	?from=*value*	YYYY-MM-DD *(datestamp)*
indicator	?indicator=*value,value,value,..*	*(Transport data)* Actual interruption of interruptible capacity Allocation Firm Available Firm Booked Firm Interruption Planned - Interrupted Firm Interruption Unplanned - Interrupted Firm Technical Firm available Firm booked Firm technical GCV Interruptible Available Interruptible Booked Interruptible Interruption Actual – Interrupted Interruptible Interruption Planned - Interrupted Interruptible Total Nominations Physical Flow Planned interruption of firm capacity Renomination Unplanned interruption of firm capacity Wobbe Index *(CMP CMA)* Available through Oversubscription Available through Surrender Available through UIOLI long-term Available through UIOLI short-term
limit	?limit=*value*	-1: no limit 10 100 1000 ….
nonIndicatorsChecked	?nonIndicatorsChecked=*value*	0 *(false)* 1 *(true)*
periodType	?periodType=*value*	hour day

periodize	?periodize=*value*	0 *(false)* 1 *(true)*
pointDirection	?pointDirection=*value*	https://transparency.entsog.eu/api/v1/operatorpointdirections.xml *Example:* NO-TSO-0001ITP-00022exit%2CundefinedITP-00022entry UK-TSO-0001ITP-00022entry
timezone	?timezone=EST	EST CET CEST WET … *https://en.wikipedia.org/wiki/List_of_time_zone_abbreviations*
to	?to=*value*	YYYY-MM-DD *(datestamp)*

Base URL: https://transparency.entsog.eu/api/v1**/connectionPoints**

Parameter	*API*	Possible values
extended	?extended=*value*	0 *(false)* 1 *(true)*
include	?include=*value*	0 *(false)* 1 *(true)*
isInterconnection	?isInterconnection=*value*	0 *(false)* 1 *(true)*
isPlanned	?isPlanned=*value*	0 *(false)* 1 *(true)*
limit	?limit=*value*	*-1: no limit* *10* *100* *1000* *….*
macropoint	?macropoint=*value*	…
pointKey	?pointKey=*value*	*Returns the list of connection points records for recently viewed items by pointKey*
pointLabel	?pointLabel=*value*	*Returns the list of connection points records for search bar matching by pointLabel*
pointType	?pointType=*value*	Aggregated Point - Final Consumers Distribution Point
virtualPointKey	?virtualPointKey=*value*	…