# *ENTSOG Transparency Platform*

# *API*

# *User Manual*

## 1. 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.

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>
<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>
</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>
```

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

Using the same principle for the other APIs, the parameters can be derived.

**Note: "periodFrom" is written as "From" and "periodTo" is written as "To" in the API.**

## 2.2. Complete list of APIs

| Category | API | What it contains |
|---|---|---|
| **Point Data** | Transport Data | Nomination, Renominations, Allocations, Physical Flows, GCV, Wobbe Index, Capacities, Interruptions |
| | CMP Unsuccessful Requests | CMP Unsuccessful requests |
| | CMP Unavailable Firm Capacities | CMP Unavailable Firm Capacity |
| | CMP Auction Premiums | CMP Auction Premiums |
| | Interruptions | Interruptions |
| **Zone Data** | Transport Data | Latest Nominations, Allocations, Physical Flows |
| **Referential Data** | Points | Interconnection points |
| | Operators | All operators connected to the transmission system |
| | Balancing Zones | European balancing zones |
| | Operator Point Directions | All the possible flow directions, being combination of an operator, a point, and a flow direction |
| | Interconnections | All the interconnections between an exit system and an entry system |
| | Aggregate Interconnections | All the connections between transmission system operators and their respective balancing zones |

## 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 using "**&**" as a separator for two parameters
Extending the previous example,
https://transparency.entsog.eu/api/v1/operationaldatas.xml?indicator=Nomination&operatorLabel=Fluxys returns data for the Nomination indicator for Fluxys.

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

## 2.4. Other parameter 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 name | Possible values |
|---|---|
| forceDownload | true, false |

### 2.4.2. Selecting the time zone

Converting all dates to specific time zone

| Parameter name | Possible values |
|---|---|
| timeZone | CET, EET, WET |

### 2.4.3. Limit

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

| Parameter name | Possible values |
|---|---|
| Limit | -1 (no limit), or 10, 100, 1000… |

**Note: However, as mentioned above, 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. There is a timeout value on all queries to be 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 "operationdatas" API

| Parameter name | Possible values |
|---|---|
| Indicator | Nomination |
| | Renomination |
| | Allocation |
| | Firm Available |
| | Firm Booked |
| | Interruptible Booked |
| | Interruptible Available |
| | Firm Technical |
| | Interruptible Total |
| | Physical Flow |
| | GCV |
| | Available through UIOLI short-term |
| | Available through Oversubscription |
| | Available through UIOLI long-term |
| | Available through Surrender |
| | Wobbe Index |
| | Firm Interruption Planned - Booked |
| | Firm Interruption Planned - Interrupted |
| | Firm Interruption Planned - Interrupted % |
| | Firm Interruption Unplanned - Booked |
| | Firm Interruption Unplanned - Interrupted |
| | Firm Interruption Unplanned - Interrupted % |
| | Interruptible Interruption Planned - Booked |
| | Interruptible Interruption Planned - Interrupted |
| | Interruptible Interruption Planned - Interrupted % |
| | Interruptible Interruption Actual - Booked |
| | Interruptible Interruption Actual - Interrupted |
| | Interruptible Interruption Actual - Interrupted % |
| | Interruptible Interruption Planned - Interrupted % |
| | Interruptible Interruption Actual - Booked |
| | Interruptible Interruption Actual - Interrupted |
| | Interruptible Interruption Actual - Interrupted % |

### 2.4.5. Indicators (Balancing Zones)

It's just more of the same, really, except that it is to be used with the Aggregate Data API:

| Parameter name | Possible values |
|---|---|
| Indicator | Nomination/Renomination |
| | Allocation |
| | Physical Flow |

### 2.4.6. Sorting

| Parameter name | Possible values |
|---|---|
| Sorting | 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 name | Possible values |
|---|---|
| hasData | 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 those operator point directions which belong to a TSO, which itself is publishing REG715 information, the parameter hasData can be used, simply set 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 name | Possible values |
|---|---|
| includeExemptions | 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 name | Possible values |
|---|---|
| isNA | 1 (true), 0 (false) |

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