# DH API documentation for TSO

# Content

# 1 Documentation version history

The table below provides information on document version history:

| Version | Date | Description |
|---------|------|-------------|
| 1.0.0 | 2023-11-08 | Initial document version. |
| 1.0.1 | 2024-04-26 | Updated rule message with error code 1008 in methods:<br><br>• POST /gateway/electricity-transmission-system-operator/order/{balanceOrderType} |
| 1.0.2 | 2024-05-15 | Removed condition "For now, it is possible choose data resolution HOUR." in method:<br><br>• POST /gateway/electricity-transmission-system-operator/order/{balanceOrderType} |
| 1.0.3 | 2024-05-29 | Added rule with 2015 error code in method:<br><br>• POST /gateway/electricity-transmission-system-operator/order/{balanceOrderType} |
| 1.0.4 | 2024-09-04 | Added new values of generationType in method:<br><br>• GET /gateway/electricity-transmission-system-operator/order/{orderId}/balance-by-generation-type |

**Note:** Changes in table marked in white are already deployed, marked in green will be deployed in near future.

## 2  Preface

The Common Data Exchange Platform (hereinafter referred as *DH Platform*) Gateway is a component enabling electricity transmission system operator (TSO) to directly access DH Platform from within their IT systems and thus helps perform their activities more efficiently.

DH Gateway provides open standards-based interfaces allowing electricity transmission system operator themselves (or with outside assistance) integrate their IT systems with DH Platform.

This document provides technical information on DH Gateway interfaces which is needed to integrate electricity transmission system operator's information systems with DH Platform.
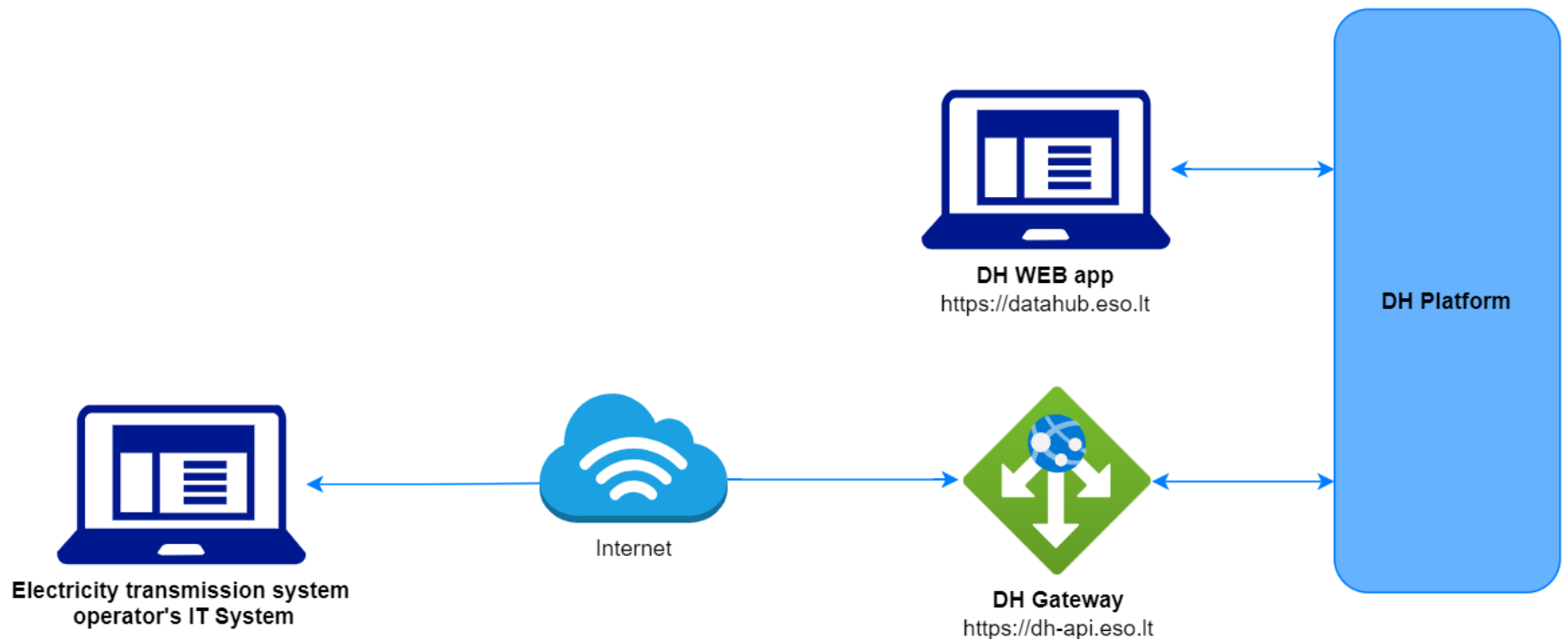
# 3 Definitions and abbreviations

| Definition / abbreviation | Description |
|---|---|
| DH Gateway | DH Platform component enabling electricity transmission system operator's IT systems to directly access the platform and achieve a higher-level degree of process automation. |
| DH, DH Platform | Common Data Exchange Platform. |
| DSO, ESO | Energy distribution system operator – AB „Energijos skirstymo operatorius". |
| Electricity transmission system operator | Electricity transmission system operator (TSO) – AB „Litgrid". |
| DH WEB app | It is a web application that provides a graphical user interface (GUI) for working with the DataHub system. |

# 4  Environments

There are two DH Gateway environments the electricity transmission system operator might access:

- "Sandbox" environment
- Production environment

DH Sandbox environment made of Mock API Gateway with mock requests and responses (scenarios). There is no connection to database or any data source, all possible requests and answers are hard coded into mock API source code and has no data selection logic or rules. This data is real depersonalized data from DSO customers. Sandbox requests and responses scenarios will be provided in additional document, and it should be used just for preparation to integrate with DH production API environment or testing purposes.



Electricity transmission system operator's IT System

Internet

DH Gateway
https://dh-sandbox-api-v2.eso.lt

DH MOCK Platform
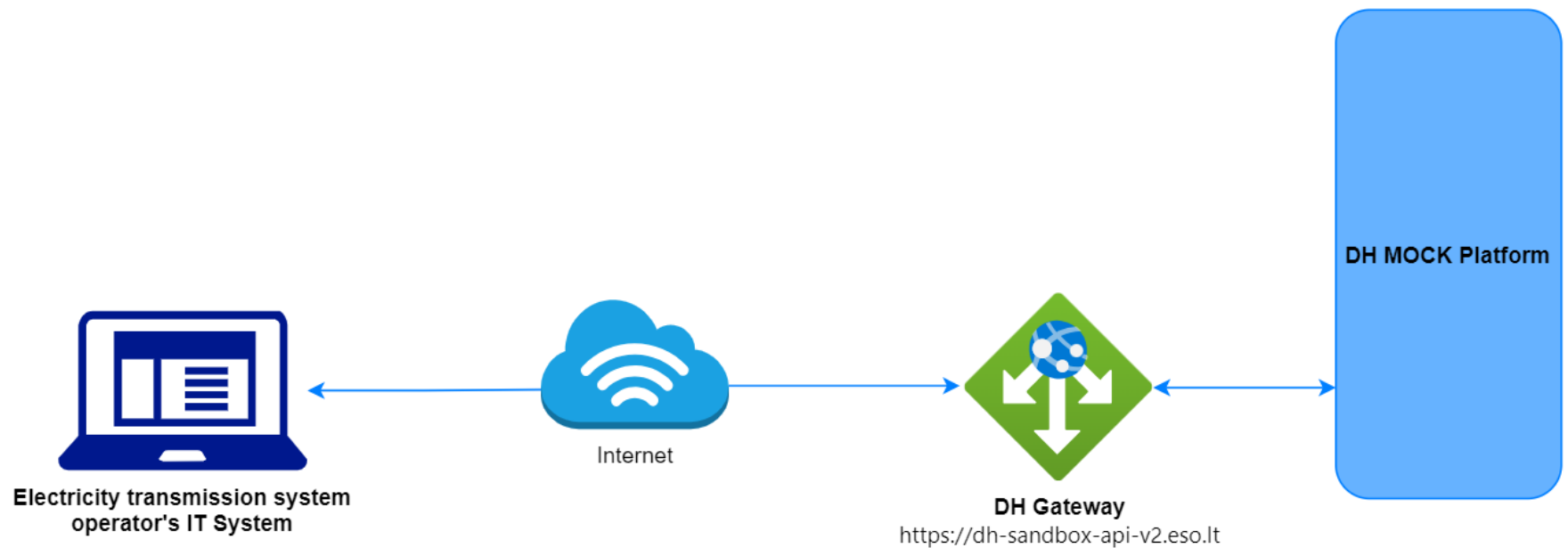
DH Platform also has WEB interface, which is connected to DH Production Gateway. All environments are provided in the table:

| Environment | Swagger Link | WEB Interface |
| --- | --- | --- |
| Production | https://dh-api.eso.lt/swagger-ui.html | https://datahub.eso.lt/ |
| Sandbox | https://dh-sandbox-api-v2.eso.lt/swagger-ui.html | - |

# 5 Digital certificates

In both the testing and production environments of the DH Gateway component, the identity of the electricity transmission system operator is established using a TOKEN, which the electricity transmission system operator's information system must provide each time the DH Gateway network service is called.

**To get started:**

1. The DSO responsible person sends the JWT key (JSON Web Token) to be used with each request to the DH API.
2. To make requests to the DH Gateway API - the TOKEN submission in the case of curl takes place.

# 6  Recommendation for API client

## 6.1  ASYNC

Async pattern is mainly used for data orders: https://dh-api.eso.lt/swagger-ui/index.html?urls.primaryName=electricity-transmission-system-operator#/electricity-transmission-system-operator-order-controller (will be deployed in 2023-12-12)

Client side should implement following process with steps:
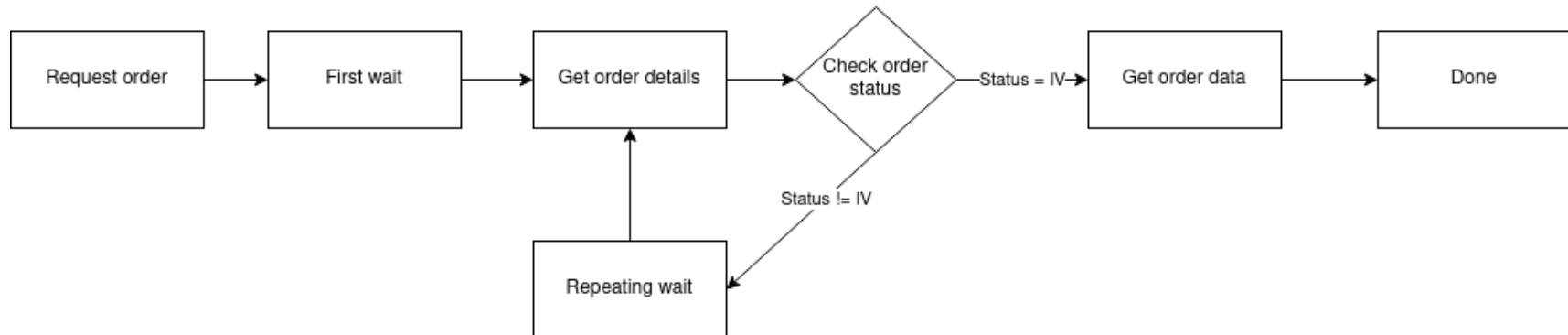


Step descriptions

| Step name | Description | End-point | Request example | Response example |
|---|---|---|---|---|
| Request order | Submit new data order. Request will return order id which will be used in other steps for getting order details and order data. | POST/gateway/electricity-transmission-system-operator/order/**yyyyyyyyy**<br><br>where **yyyyyyyyy** is order type:<br>• balance-by-generation-type<br>• balance-by-supplier | POST/gateway/electricity-transmission-system-operator/order/balance-by-generation-type<br><br>Body:<br>{<br>    "dateFrom": "2023-11-01",<br>    "dateTo": "2023-11-30",<br>    "interval": "HOUR"<br><br>} | HTTP status 201<br><br>{<br><br>"orderId": 10000001<br><br>} |
| First wait | Wait for some period of time after order submission. | | | |

| | | | | |
|---|---|---|---|---|
| | This step is needed because after order request it takes some time to process it and there is no reason to try get status immediately after order submission.<br><br>First wait duration depends on order type and parameters. If order collects more data, it can take minutes to prepare data.<br><br>For duration recommendations look at Recommendations. | | | |
| Get order details | Request to get order details. This request is needed to get order latest status which is stored in field "latestStatus".<br><br>Posible values for "latestStatus":<br>• P - Submitted order<br>• V - Order in progress<br>• IV - Order is finished and data are prepared<br>• K - Order has errors | POST /gateway/electricity-transmission-system-operator/order/list | POST /gateway/electricity-transmission-system-operator/order/list<br><br>Body:<br><br>{<br>   "orderId": 10000001<br>} | HTTP status 200<br><br>[<br>  {<br>    "orderId": 10000001,<br>    "orderType": "balance-by-generation-type",<br>    "submittedDate": "2023-11-08T14:31:27.990Z",<br>    "dateFrom": "2023-11-01",<br>    "dateTo": "2023-11-30",<br>    "orderParametersSearch": "{" nterval":"HOUR"}",<br>    "latestStatus": "V",<br>    "statusDate": "2023-11-08T14:31:27.990Z",<br>    "expireDate": "2023-11-09T14:31:27.990Z"<br>  }<br>] |

| | | | | |
|---|---|---|---|---|
| Check order status | Logic operation to check order "latestStatus" field value. If value equals to "IV" it means that order data is prepared. Otherwise order data is not ready algorithm should go to step "Repeating wait". | | | |
| Repeating wait | Wait for some period of time after order status check when status was not equal to "IV". This step is needed because repetitive status check without wait can do unneeded load to DH system.<br><br>For duration recommendations look at Recommendations. | | | |
| Get order data | Get order data.<br><br>Note: If order has too many data, then pagination should be used. Default and max page size is 10 000 records. | GET/gateway/electricity-transmission-system-operator/order/**zzzzzzzz**/**yyyyyyyyyy**/first=**oooooo**&count=**ssssss**<br><br>where<br><br>**zzzzzzzz** is order Id<br><br>**oooooo** is offset position<br><br>**ssssss** is page size<br><br>**yyyyyyyyyy** is order type:<br>• balance-by-generation-type<br>• balance-by-supplier | GET/gateway/electricity-transmission-system-operator/order/10000001/balance-by-generation-type/first=0&count=10000 | HTTP status 200 with order data in JSON format.<br><br>If order content is empty get method will return HTTP status 400 with message:<br><br>{<br><br>"code": 2018,<br><br> "text": "There is no data for the selected search parameters, the response is empty."<br><br>}. |

## 6.1.1 DataHub order processing retry policy

If any issues appear during order data processing stage the process stops, and order gets status K. DH uses retry policy for all orders with status K.

- Retries order process after 5 minutes.
- Retries order process 300 times.
- For failed orders retry policy will be working in total 25 hours (5 min * 300).

- Retry policy will stop work after 25 hours and order will be left with status K.

This is needed because issues can appear in data preparation stage of couple reasons:

- DH technical problem - for example one of DH integrations was down or contract was changed, data integrity violations and etc.
- Incompatible business logic - for example order got into not defined use case and use case should be adopted to order.

In most cases order processing retry will solve problem. But there are cases like "Incompatible business logic" when additional human interaction is needed to finish order job. We are tracking such an order and fixing them, but fixing might take some hours or even days. So, some orders might not be completed and left in status K.

### 6.1.2  Order status flows

There are three possible order status flows:

| Flow | Description |
|---|---|
| P → V → IV | This is normal status flow. |
| P → V → K → IV | This is flow when issues appear during data preparation, but later problem was fixed. |
| P → V → K | This is flow when issues appear during data preparation and problem was not fixed during DH retry policy time. |

Order execution duration depends on multiple factors:

- Order type - different order types use different integration services some of them are faster some of them are slower.
- Order parameters - order parameters describe how much data will be generated. Bigger order periods and bigger object quantity will be generated longer.
- Order quantity in queue. If electricity transmission system operator creates too many orders, they will be generated parallelly and will take more time to finish them all.
- Failures - Errors during order data preparation will trigger retry policy so order generation will take more time as usually. Sometimes it will be not generated at all.

### 6.1.3  Recommendations

1. For better performance "Request order" can be implemented as separate process which is able to create multiple orders.
2. For better performance "Get order details" can be implemented as separate process which is able to get details of multiple orders.
3. For better performance "Get order data" can be implemented as separate process which is able to get order data of multiple orders.
4. For better performance process parallelization could be used but with max 3 threads.

5. Any HTTP request which returns 5xx status can be retried.
6. Any HTTP request which returns 4xx status should stop process because where are business error and manual handling should be used. Except for the step "Get order data" and error "code": 2018, "text": "There is no data for the selected search parameters, the response is empty." It means that order data preparation is finished, and order is empty.
7. Step "Request order" and other steps should have separate retries. Get order data on failure should not trigger Request order one more time.
8. It's up to client to decide how long the "First wait" duration can be but it shouldn't be less than 1 second.
9. It's up to client to decide how long the "Repeating wait" duration can be but it shouldn't be less than 1 second.
10. Use fixed number of times for status check. After 25 hours DH order retry policy will stop working and order will be left in status K. So, it reasonable to have number of times equal ((25 hours) / ("Repeating wait" duration in hours)).
11. Do not recreate orders when orders got status K. DH retry policy will try to generate it later or DH team member interaction is needed to finish order. Client-side solutions will not help to solve status K.

## 6.2 JSON request logic

JSON field usage in requests by type:

| Type | Example | Is value provided | Request result |
|---|---|---|---|
| Integer | orderId: null | No | All orders. |
| Integer | orderId: 4587125 | Yes | Order with ID 4587125. |
| Integer | orderId: "" | Yes | Framework validation error because provided value is not matching Integer format. |
| DateTime | submitedDateFrom: null | No | All orders. |
| DateTime | submittedDateFrom: "" | Yes | Framework validation error because provided value is not matching date format. |
| DateTime | submittedDateFrom: "2023-01-01" | Yes | Orders which submitted date greater than 2023-01-01. |
| List | orderTypes: null | No | All orders. |
| List | orderTypes: [] | Yes | Empty list because provided orderType list is not matching any order type. |

| Type | Example | Is value provided | Request result |
|------|---------|-------------------|----------------|
| List | orderTypes: [""] or orderTypes: ["", ""] | Yes | Empty list because provided orderType list is not matching any order type. |
| List | orderTypes: [null] or orderTypes: [null, null] | Yes | Empty list because provided orderType list is not matching any order type. |
| List | orderType: ["balance-by-generation- type"] or orderType: ["balance-by- generation- type", "balance-by- supplier"] | Yes | Orders with type balance by generation type or balance by supplier. |

If field value is not provided, then field criteria shouldn't be added to query and all lists should be returned.

# 7 DataHub Gateway API documentation

## 7.1 Order controller

### 7.1.1 POST /gateway/electricity-transmission-system-operator/order/list

| | |
|---|---|
| **URL** | POST /gateway/electricity-transmission-system-operator/order/list |
| **Description** | Method will return list of the orders. |
| **Parameters** | **URL parameters:**<br><br>• **first** - the index of the report line, which must be the first in the return list (starting from 0). Optional. The default value is 0.<br>• **count** - the number of order's rows in the return list. Optional. The default value is 30.  If no count value is given, the default value count will be 30.<br>• **sort** – ASC, DSC sorting.<br>    • By default, the reports' orders list must be sorted by the orderId. |
| **Header** | After decrypting the electricity transmission system operator authentication key, the electricity transmission system operator ID is used to select the data. |
| **JSON request** | ```{<br>    "orderId": "integer",<br>    "orderTypes": [<br>        "string"<br>    ],<br>    "submittedDateFrom": "dateTime",<br>    "submittedDateTo": "dateTime",<br>    "dateFrom": "date",<br>    "dateTo": "date",<br>    "latestStatuses": [<br>        "string"<br>    ],<br>    "orderParametersSearch": "string"<br>}``` |

| HTTP response code | HTTP status code | Reason | Description |
|---|---|---|---|
| | 200 | OK | Request completed successfully. |
| | 204 | No content | No data found according to the given parameters. |
| | 400 | Bad Request | Request error. The HTTP response body provides a list of errors in JSON format. |
| | 401 | Unauthorized | An attempt was made to connect to a non-public method that requires authentication, but no user credentials were provided. |
| | 403 | Forbidden | According to the access control policy, the current user does not have access to perform the requested action. |
| | 404 | Not Found | Either there is no API method associated with the request URL path, or the request contains one or more parameters that did not return the data. |
| JSON response | [<br>  {<br>    "orderId": "integer",<br>    "orderType": "string",<br>    "submittedDate": "datetime",<br>    "dateFrom": "date",<br>    "dateTo": "date",<br>    "orderParameters": "string",<br>    "latestStatus": "string",<br>    "statusDate": "datetime",<br>    "expireDate": "datetime"<br>  }<br>] | | |
| JSON error response | {<br>  "errorMessages": [<br>    {<br>      "code": "integer",<br>      "text": "string"<br>    } | | |

| | | ]<br>} | | | |
|---|---|---|---|---|---|
| **Rules** | **No.** | **Rule description** | **Error code** | **Error message** | **Attributes** |
| | 1. | If an attribute has defined possible values, the value index can be specified by specifying the value of the attribute in the request. Indices of all possible values start from 0. | - | - | All attributes with specified values. |
| | 2. | The date from cannot be later than the date to but can be equal. | 1002 | Date from cannot be later than date to. | dateFrom, dateTo, submittedDateFrom, submittedDateTo |
| | 3. | Submitted date cannot be later than the current date but can be equal. | 1010 | Submitted date cannot be later than the current date. | submittedDateFrom, submittedDateTo |

### 7.1.1.1 JSON request structure

The table below describes the structure of the JSON request:

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| orderId | integer | not required | The report ordering primary surrogate key. |
| orderTypes | ["string"] | not required | The order types. Possible meanings:<br><br>• balance-by-generation-type;<br>• balance-by-supplier |
| submittedDateFrom | dateTime | not required | Order's submission date from. |
| submittedDateTo | dateTime | not required | Order's submission date to. |

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| dateFrom | date | not required | The beginning of the reporting period:<br><br>• The format: YYYY-MM-DD. |
| dateTo | date | not required | The end of the reporting period:<br><br>• The format: YYYY-MM-DD. |
| latestStatuses | ["string (20) "] | not required | The status of the order. Possible meanings:<br><br>• IV – Completed;<br>• V – In progress;<br>• P – Submitted;<br>• K – Error.<br><br>More than one type can be submitted. |
| orderParametersSearch | string | not required | The order parameters. |

## 7.1.1.2 JSON response structure

The table below describes the structure of the JSON response:

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| orderId | integer | required | The report ordering primary surrogate key. |
| orderType | string (100) | required | The order types. Possible meanings:<br><br>• balance-by-generation-type<br>• balance-by-supplier |
| submittedDate | dateTime | required | The date of the order submission. |
| dateFrom | date | required | The beginning of the reporting period:<br><br>• The format: YYYY-MM-DD. |

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| dateTo | date | required | The end of the reporting period:<br><br>• The format: YYYY-MM-DD. |
| orderParameters | string (4000) | required | The search parameters by which the data in the ordered order was filtered. |
| latestStatus | string (20) | required | The current status of the order. |
| statusDate | dateTime | required | The latest status date. |
| expireDate | dateTime | required | Date of validity of the order.<br><br>• The ordered report with **status = Completed** by default, is available only for 24 hours. |

### 7.1.1.3 Error response structure

The following table describes the JSON structure in the event of a response error:

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| code | integer | required | Error code. |
| text | string (4000) | required | Error message. |

## 7.1.2 POST /gateway/electricity-transmission-system-operator/order/{balanceOrderType}

| URL | POST /gateway/electricity-transmission-system-operator/order/{balanceOrderType} |
|---|---|
| **Description** | Method will order the chosen report. |
| **Parameters** | **URL parameters:**<br><br>• **balanceOrderType -** the method is used for specified report type. Possible report types:<br>    ○ **balance-by-generation-type**<br>    ○ **balance-by-supplier** |
| **Header** | After decrypting the electricity transmission system operator authentication key, the electricity transmission system operator ID is used to select the data. |
| **JSON request** | {<br>   "dateFrom": "date",<br>   "dateTo": "date",<br>   "interval": "string"<br>} |

| **HTTP response code** | **HTTP status code** | **Reason** | **Description** |
|---|---|---|---|
| | 201 | Created | Request completed successfully. |
| | 400 | Bad Request | Request error. The HTTP response body provides a list of errors in JSON format. |
| | 401 | Unauthorized | An attempt was made to connect to a non-public method that requires authentication, but no user credentials were provided. |
| | 403 | Forbidden | According to the access control policy, the current user does not have access to perform the requested action. |

| | 404 | Not found | Either there is no API method associated with the request URL path, or the request contains one or more parameters that did not return the data. |
|---|---|---|---|
| **JSON response** | {<br>   "orderId": "integer"<br>} | | |
| **JSON error response** | {<br>   "errorMessages": [<br>      {<br>         "code": "integer",<br>         "text": "string"<br>      }<br>   ]<br>} | | |

| **Rules** | **No.** | **Rule description** | **Error code** | **Error message** | **Attributes** |
|---|---|---|---|---|---|
| | 1. | The date from cannot be later than the date to but can be equal. | 1002 | Date from cannot be later than date to. | dateFrom, dateTo |
| | 2. | The date from and / or date to cannot be later than the current date but can be equal. | 1008 | The date from and / or date to cannot be later than the current date. | dateFrom, dateTo |
| | 3. | Date cannot be older than 36 months old. | 2012 | Date from cannot be older than 36 months old. | dateFrom |
| | 4. | The period date from and date to must be less than date from configurable parameter. | 2015 | Data is not currently available for the selected reporting period. | dateFrom, dateTo |
| | 5. | Report can be ordered maximum for 1 accounting month. | 2024 | The report can only be ordered for 1 accounting month or less. | dateFrom, dateTo |

### 7.1.2.1 JSON request structure

The table below describes the structure of the JSON request:

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| dateFrom | date | required | The beginning of the reporting period:<br><br>• The format: YYYY-MM-DD. |
| dateTo | date | required | The end of the reporting period:<br><br>• The format: YYYY-MM-DD. |
| interval | string | required | Data resolution. Possible meanings:<br><br>• HOUR<br>• QUARTER |

### 7.1.2.2 JSON response structure

The table below describes the structure of the JSON response:

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| orderId | integer | required | The report ordering primary surrogate key. |

### 7.1.2.3 Error response structure

The following table describes the JSON structure in the event of a response error:

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| code | integer | required | Error code. |
| text | string (4000) | required | Error message. |

### 7.1.3 GET /gateway/electricity-transmission-system-operator/order/{orderId}/balance-by-generation-type

| URL | GET /gateway/electricity-transmission-system-operator/order/{orderId}/balance-by-generation-type |
|---|---|
| **Description** | The method for receive the order report "Balance by generation type". |
| **Parameters** | **URL parameters:**<br><br>• **orderId** – order identification number.<br>• **first** - the index of the report line, which must be the first in the return list (starting from 0). Optional. The default value is 0.<br>• **count** - the number of order's rows in the return list. Optional. The default value is 10000.  If no count value is given, the default value count will be 10 000. |
| **Header** | After decrypting the electricity transmission system operator authentication key, the electricity transmission system operator ID is used to select the data. |
| **JSON request** | - |

| HTTP response code | HTTP status code | Reason | Description |
|---|---|---|---|
| | 200 | OK | Request completed successfully. |
| | 400 | Bad Request | Request error. The HTTP response body provides a list of errors in JSON format. |
| | 401 | Unauthorized | An attempt was made to connect to a non-public method that requires authentication, but no user credentials were provided. |
| | 403 | Forbidden | According to the access control policy, the current user does not have access to perform the requested action. |
| | 404 | Not Found | Either there is no API method associated with the request URL path, or the request contains one or more parameters that did not return the data. |

| JSON response | [<br>  { |
|---|---|

| | | | | | |
|---|---|---|---|---|---|
| | "generationType": "string",<br>"timeSeriesData": [<br>  {<br>    "intervalDateTime": "dateTime with timeZone",<br>    "valueofGeneration": "double(10.3)"<br>  }<br>  ]<br> }<br>] | | | | |
| **JSON error response** | {<br>  "errorMessages": [<br>    {<br>      "code": "integer",<br>      "text": "string"<br>    }<br>  ]<br>} | | | | |

| Rules | No. | Rule description | Error code | Error message | Attributes |
|---|---|---|---|---|---|
| | 1. | The order status must be **Completed**. | 2010 | Invalid report order status. | orderId |
| | 2. | Report order doesn't exist in the system. | 2016 | According to the submitted order number: **[orderId]**, the order does not exist. | orderId |
| | 3. | Invalid method selected or parameter specified incorrectly. According to the submitted order number: [**orderId**] report type is: [**orderType**]. | 2017 | Invalid method selected for report data or incorrect parameter. | orderId, orderType |
| | 4. | No data found based on the search parameters submitted in the POST method. | 2018 | There is no data for the selected search parameters, the response is empty. | oderId |

### 7.1.3.1 JSON request structure

The table below describes the structure of the JSON request:

| Attribute | Type | Obligation | Description |
|-----------|------|------------|-------------|
|  |  |  |  |

### 7.1.3.2 JSON response structure

The table below describes the structure of the JSON response:

| Attribute | Type | Obligation | Description |
|-----------|------|------------|-------------|
| generationType | string (2) | required | Generation type. Possible values:<br><br>• SG – Solar generation from generating user.<br>• S – Solar generation.<br>• V – Wind generation.<br>• B – Biomass generation.<br>• H – Hydroelectric generation.<br>• A – Waste fuel.<br>• K – Other generation.<br>• T – TEC generation.<br>• P – Storage device.<br>• I – Fossil.<br>• D – Biogas.<br>• R – Hybrid generation. |
| timeSeriesData: [] | | | |
| intervalDateTime | dateTime with timeZone | required | Date interval. |
| valueOfGeneration | double (10.3) | required | Total generated electricity in MWh. |

### 7.1.3.3 Error response structure

The following table describes the JSON structure in the event of a response error:

| Attribute | Type | Obligation | Description |
|-----------|------|-----------|-------------|
| code | integer | required | Error code. |
| text | string (4000) | required | Error message. |

## 7.1.4 GET /gateway/electricity-transmission-system-operator/order/{orderId}/balance-by-supplier

| | |
|---|---|
| **URL** | GET /gateway/electricity-transmission-system-operator/order/{orderId}/balance-by-supplier |
| **Description** | The method for receive the order report "Balance by supplier". |
| **Parameters** | **URL parameters:**<br><br>• **orderId** – order identification number.<br>• **first** - the index of the report line, which must be the first in the return list (starting from 0). Optional. The default value is 0.<br>• **count** - the number of order's rows in the return list. Optional. The default value is 10000.  If no count value is given, the default value count will be 10 000. |
| **Header** | After decrypting the electricity transmission system operator authentication key, the electricity transmission system operator ID is used to select the data. |
| **JSON request** | - |

| HTTP response code | HTTP status code | Reason | Description |
|--------------------|------------------|--------|-------------|
| | 200 | OK | Request completed successfully. |
| | 400 | Bad Request | Request error. The HTTP response body provides a list of errors in JSON format. |

| | 401 | Unauthorized | An attempt was made to connect to a non-public method that requires authentication, but no user credentials were provided. |
|---|---|---|---|
| | 403 | Forbidden | According to the access control policy, the current user does not have access to perform the requested action. |
| | 404 | Not Found | Either there is no API method associated with the request URL path, or the request contains one or more parameters that did not return the data. |

| JSON response | [<br>  {<br>    "independentSupplierName": "string",<br>    "independentSupplierEic": "string",<br>    "timeSeriesData": [<br>      {<br>        "intervalDateTime": "dateTime with timeZone",<br>        "valueOfGeneration": "double(10.3)",<br>        "valueOfConsumption": "double(10.3)"<br>      }<br>    ]<br>  }<br>] |
|---|---|

| JSON error response | {<br>  "errorMessages": [<br>    {<br>      "code": "integer",<br>      "text": "string"<br>    }<br>  ]<br>} |
|---|---|

| Rules | No. | Rule description | Error code | Rule message | Attributes |
|---|---|---|---|---|---|
| | 1. | The order status must be Completed. | 2010 | Invalid report order status. | orderId |

| | 2. | Report order doesn't exist in the system. | 2016 | According to the submitted order number: **[orderId]**, the order does not exist. | orderId |
| --- | --- | --- | --- | --- | --- |
| | 3. | Invalid method selected or parameter specified incorrectly. According to the submitted order number: [**orderId**] report type is: [**orderType**]. | 2017 | Invalid method selected for report data or incorrect parameter. | orderId, orderType |
| | 4. | No data found based on the search parameters submitted in the POST method. | 2018 | There is no data for the selected search parameters, the response is empty. | orderId |

### 7.1.4.1 JSON request structure

The table below describes the structure of the JSON request:

| Attribute | Type | Obligation | Description |
| --- | --- | --- | --- |
| | | | |

### 7.1.4.2 JSON response structure

The table below describes the structure of the JSON response:

| Attribute | Type | Obligation | Description |
| --- | --- | --- | --- |
| independentSupplierName | string | required | Supplier name. |
| independentSupplierEic | string | required | Supplier energy identification code. |
| timeSeriesData: [] | | | |
| intervalDateTime | dateTime with timeZone | required | Date interval. |

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| valueOfGeneration | double (10.3) | required | Total generated electricity in MWh. |
| valueOfConsumption | double (10.3) | required | Total consumed electricity in MWh. |

### 7.1.4.3  Error response structure

The following table describes the JSON structure in the event of a response error:

| Attribute | Type | Obligation | Description |
|---|---|---|---|
| code | integer | required | Error code. |
| text | string (4000) | required | Error message. |