

**Technical specification of external interfaces**

**V2.7**

**CLEARING AGENT INFORMATION SYSTEM XMtrade®/ISZO V2.25**

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**History of changes**

| **Date** | **Version** | **Description** | **Author** |
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| 11/30/2008 | 1.0 | Document processing | Libor Láznička, Miroslav Galajda |
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| 7/15/2010 | 1.5 | * Renaming of ETSO to ENTSO-E. * Redirection of links from  <http://www.etso-net.org> pages to  <http://www.entsoe.eu> pages. * Addition of structure specification for VO-02 Input of RE evaluation. * Removal of specification for unused *BO-01* data flow. * Modification of requests for input of cross-border diagrams within *RD-01* and *RD-03* data flows. | Libor Láznička, Miroslav Galajda |
| 9/6/2010 | 1.6 | * Extension of data structures for *VO-01* data flow, Input of measured details. * Change of EIC OKTE. * Addition of data flows for SR-01 for retrieval of details from clearing of imbalances and regulating electricity. | Libor Láznička |
| 12/15/2010 | 1.7 | * Addition of data flows for SR-01 for retrieval of details on discrepancies of day-ahead diagrams and their acceptance from the side of clearing agent. | Libor Láznička |
| 7/8/2011 | 1.8 | * Addition of meaning of *Settlement Amount* element in *SR-01-03* and *SR-01-04* messages. | Anton Weissensteiner |
| 2/28/2013 | 1.9 | * Addition of Business Types in *SR-01-03* and *SR-01-04* messages. * Addition of *AnalyticalAccounts* web service. | Miroslava Šurinová,  Anton Weissensteiner |
| 7/9/2013 | 1.10 | * Addition of option to report negative losses into *AnalyticalAccounts* web service. | Anton Weissensteiner |
| 11/20/2013 | 2.0 | * Addition of Business Types into *SR-01-03* and *SR-01-04* data flows. * Addition of RE evaluation for the entire system in *SR-01-04* data flow. * Addition of *SR-01-07* data flow for retrieval of details from imbalance clearing. * Cancellation of *BS-01* data flow for administration of balance groups in ISZO. | Miroslava Šurinová,  Anton Weissensteiner |
| 4/24/2014 | 2.1 | * Addition of Business Type into *SR-01-03* data flow. | Miroslava Šurinová,  Anton Weissensteiner |
| 7/28/2014 | 2.2 | * Modification of maximal permitted interval for retrieval of details from clearing of imbalances and regulating electricity in *SR-01* data flow. | Miroslava Šurinová,  Anton Weissensteiner |
| 12/3/2014 | 2.3 | * Change the hyperlinks to a new web address <http://iszo.okte.sk>, <http://test-iszo.okte.sk>. * Cancellation of VO-01 data - Input of measured details. | Svetlana Pražienková |
| 10/3/2018 | 2.4 | * Sign convenction according to Commission Regulation (EU) 2017/2195 (EBGL) in the information system of imbalance settlement. | Miroslava Šurinová,  Anton Weissensteiner |
| 10/21/2020 | 2.5 | * Addition of new type of regulated electricity supplied through an aggregator. Enabling of optional indication of marginal price values in the data stream VO-02 Entering the RE evaluation. | Anton Weissensteiner |
| 11/9/2022 | 2.6 | * Termination of submission of source data for analytical accounts | Anton Weissensteiner |
| 12/7/2023 | 2.7 | * Modification of SR-01-03 and SR-01-04 messages due to the TSO becoming responsible for evaluation of system imbalance. | Pavol Kianička, Anton Weissensteiner |
| 6/13/2024 | 2.7 | * Specification of RD-03, RD-04 a VO-02 data flows allocated into a separate document. | Pavol Kianička, Anton Weissensteiner |

# INTRODUCTION

## Characteristics of the document

### Purpose of the document

The purpose of this document is to provide all necessary technical information for implementation of automated data exchange between an external system and the imbalance clearing information system XMtrade®/ISZO. This document contains specification of means of communication as well as data structures that are used for data exchange.

### Specification of the document

The document is intended for system implementers who are preparing integration with the imbalance clearing information system XMtrade®/ISZO.

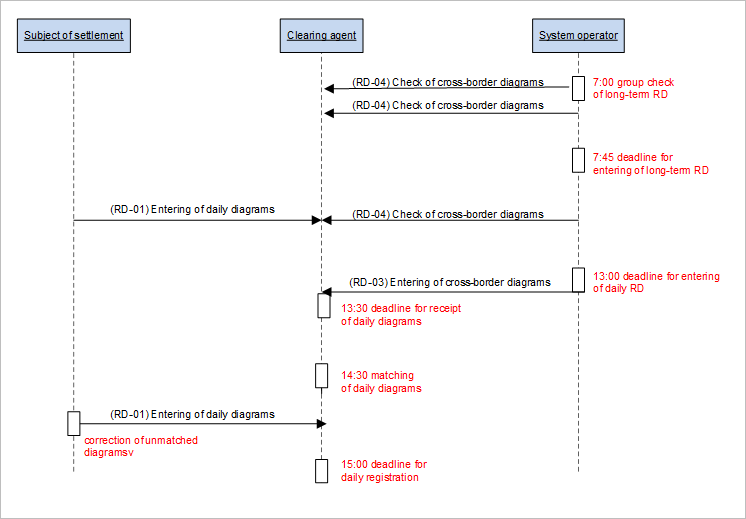
# OVERVIEW OF EXTERNAL INTERFACES

The imbalance clearing information system XMtrade®/ISZO provides an automated interface for data exchange within processes of daily and intraday registration of day-ahead diagrams and submission of details for the purpose of imbalance clearing.

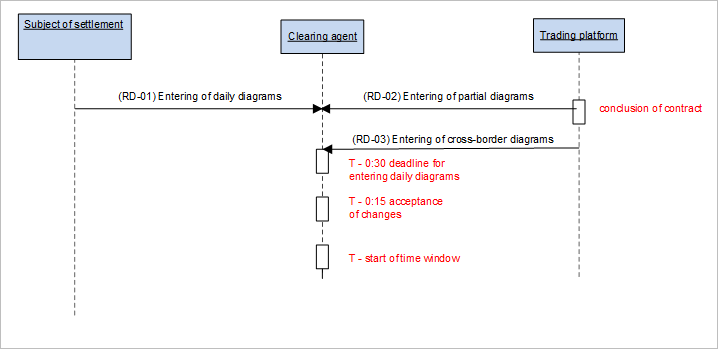
| **ID** | **Name** | **Description** |
| --- | --- | --- |
| RD-01 | Input of day-ahead diagrams | - allows subjects of settlement an automated interface for input of day-ahead diagrams. |
| RD-02 | Input of partial diagrams | - allows operators of trading platforms an automated interface for input of partial day-ahead diagrams. |
| SR-01 | Retrieval of status information | - allows market participants an automated interface for retrieval of status on processing of asynchronous operation /process. |

## Overview of data flows

### Overview of data flows within the process of day-ahead registration of diagrams



### Overview of data flows within the process of intraday registration of diagrams



# COMMUNICATION SPECIFICATION

## Web services

The imbalance clearing information system XMtrade®/ISZO covers external interfaces by the following set of web services/web methods.

| **ID** | **Name of web service** | **Name of web method** | **Description** |
| --- | --- | --- | --- |
| [RD-01](#_Zadávanie_denných_diagramov) | SubjectOfSettlementScheduling | Schedule | - allows subjects of settlement an automated interface for input of day-ahead diagrams. |
| [RD-02](#_Zadávanie_čiastkových_diagramov) | BusinessPlatformScheduling | Schedule | - allows operators of trading platforms an automated interface for input of partial day-ahead diagrams. |
| [SR-01](#_Vyžiadanie_stavovej_informácie) | StatusRequest | GetStatus | - allows market participants an automated interface for retrieval of status on processing of asynchronous operation/process. |

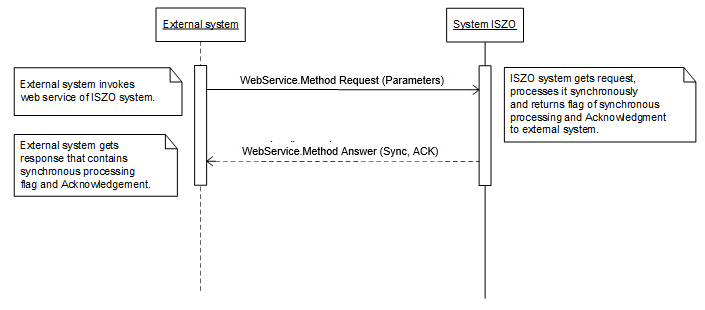
Specified web services communicate in synchronous mode. However, certain types of interfaces allow to process the request in the background. In such case general common *StatusRequest* web service serves for asynchronous retrieval of result according to *ENTSO-E Status Request* standard ([SR-01](#_Vyžiadanie_stavovej_informácie)).

Communication via web services is a form of precisely defined SOAP messages that are in principle divided into two parts: header and body, whereas message body contains trading data on specific request/result of the web method.

### Communication scenarios

#### Synchronous communication

Synchronous communication of the majority of the ISZO system web services can be in general depicted as follows:

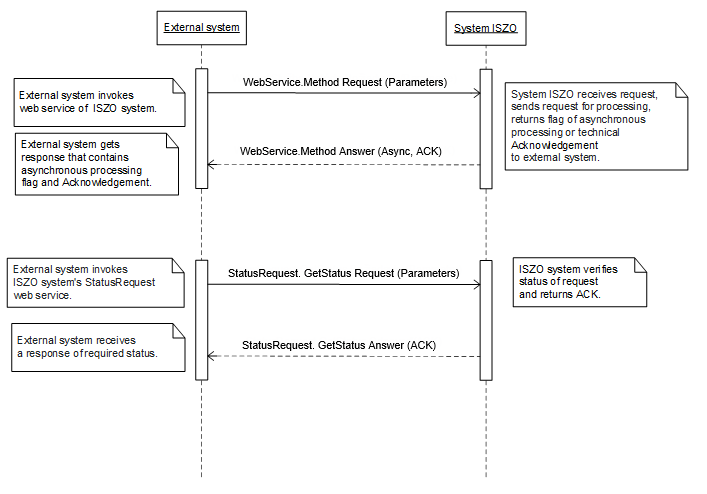


Synchronous call of web method processes the request and returns the corresponding response.

#### Asynchronous communication

At asynchronous activity of the web service, the request is registered in the system and an indicator on asynchronous request handling is synchronously returned, or eventually technical acknowledgement is returned. Subsequently, an external system retrieves information on the status of request processing via *StatusRequest* web service according to *ENTSO-E StatusRequest* standard by a synchronous call.

Simplified schema of asynchronous communication:



#### SOAP

The structure of SOAP messages is implemented in the SOAP 1.2 version according to recommendations of W3C consortium (<http://www.w3.org/TR/soap12>) and uses the following extensions:

* WS-Security ([http://www.oasis-open.org/specs/index.php#wssv1.0](http://www.oasis-open.org/specs/index.php%23wssv1.0)),
* WS-Addressing (<http://www.w3.org/Submission/2004/SUBM-ws-addressing-20040810>).

In order to shorten the notation of individual SOAP messages, the following namespace aliases are used:

| **Alias** | **Namespace** |
| --- | --- |
| s | <http://www.w3.org/2003/05/soap-envelope> |
| o | http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd |
| a | http://schemas.xmlsoap.org/ws/2004/08/addressing |

Web services are implemented in namespace of the following format:

* [http://sfera.sk/ws/xmtrade/iszo/**NameOfService**/services/**Version**](http://sfera.sk/ws/xmtrade/iszo/NameOfService/services/Version).
* For simplicity, the shortcut for prefix of this namespace will be used in the following chapters as follows: http://iszo = http://sfera.sk/ws/xmtrade/iszo/.
* SOAP messages of system web services contain two distinctive parts: header and body, whereas all messages of the ISZO system are encoded in UTF-8.

In addition to controlling data of the protocol, header contains details for authentication and authorization of the calling system (name, password, digital signature if applicable).

<s:Header>

<!-- WS-Addressing -->

<!-- WS-Security -->

</s:Header>

„WS-Security " contains security tokens necessary for authentication of source system and verification of message integrity. It relates to tokens of electronic signature and name and password of a user.

„WS-Addressing " contains details required for secured addressing of SOAP message.

Detailed header structure is to be found in [example](#_Príklad_SOAP_správy).

Message body contains class element of the message of specific request. Body structure of messages can be in general defined as follows:

Request:

<s:Body>

<**MethodName***Request* xmlns="http://sfera.sk/ws/xmtrade/iszo/**NameOfService**/services/**Version**">

<!-- message document -->

</**MethodName***Request*>

</s:Body>

Response:

<s:Body>

<**MethodName***Response* xmlns="http://sfera.sk/ws/xmtrade/iszo/**NameOfService**/services/**Version**">

<**MethodName***Result>*

<!-- message document -->

</**MethodName***Result>*

</**MethodName***Response*>

</s:Body>

#### SOAP Fault

*SOAP Fault* element serves for generic transfer of error information, which are transferred within SOAP message in *<s:Fault>* element, in accordance with *SOAP 1.2* specification (<http://www.w3.org/TR/soap12-part1/#soapfault>). It mainly relates to handling of system errors and exceptions during communication etc. However, defining custom types of Fault messages could be advantageously used to catch general application errors.

### SubjectOfSettlementScheduling

*SubjectOfSettlementScheduling* web service ([RD-01](#_Zadávanie_denných_diagramov)) allows subjects of settlement an automated interface for input of day-ahead diagrams.

The service implements the following methods:

*Schedule* – method for input of day-ahead diagram

#### SOAP Schedule

*Schedule* method of *SubjectOfSettlementScheduling* service operates in synchronous and asynchronous mode, whereas mode, in which the result is processed, is returned in response in *ProcessedAs* member (Synchronous/Asynchronous).

Corresponding Acknowledgement is returned in synchronous mode.

In case of asynchronous mode, only processing type or technical acknowledgement, if appropriate, is returned as a result. [*RequestStatus*](#_Služba_StatusRequest) web service implementing *ENTSO-E Status Request* standard can be used for status of asynchronously processed request.

##### Description of request structure

| **ScheduleRequest** | **Description** |
| --- | --- |
| SheduleDocument | Document [RD-01-01](#_Plánovacia_správa_(RD-01-01)). |

##### Description of response structure

| **ScheduleResponse** | **Description** |
| --- | --- |
| ScheduleResult | Common return structure of result for input of diagrams, see [AcknowledgementResult](#_AcknowledgementResult). |

##### Example of SOAP messages

Request:

POST /SOSSchedules.WCF.Host/ServiceReference.svc HTTP/1.1

Content-Type:application/soap+xml; charset=utf-8

Host: ...

Content-Length: ...

Expect: 100-continue

Connection: Keep-Alive

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<s:Header>

<!-- WS-Addressing -->

<!-- WS-Security -->

</s:Header>

<s:Body u:Id="\_1">

<**ScheduleRequest** xmlns="http://sfera.sk/ws/xmtrade/iszo/SubjectOfSettlementScheduling/services/2008/11/01">

<ScheduleDocument xmlns="http://sfera.sk/ws/xmtrade/iszo/common/types/essv3r1/2008/11/01">

**<!-- ESS Diagram Document -->**

</ScheduleDocument>

</**ScheduleRequest**>

</s:Body>

</s:Envelope>

Response:

HTTP/1.1 200 OK

Server: ASP.NET Development Server/9.0.0.0

Date: Sun, 30 Nov 2008 16:58:25 GMT

X-AspNet-Version: 2.0.50727

Cache-Control: private

Content-Type: application/soap+xml; charset=utf-8

Content-Length: ...

Connection: Close

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<s:Header>

<!-- WS-Addressing -->

<!-- WS-Security -->

</s:Header>

<s:Body u:Id="\_1">

<**ScheduleResponse** xmlns="http://sfera.sk/ws/xmtrade/iszo/SubjectOfSettlementScheduling/services/2008/11/01">

<ScheduleResult xmlns="http://sfera.sk/ws/xmtrade/iszo/common/types/2008/11/01">

<ProcessedAs>Asynchronous</ProcessedAs>

<AsyncIdentificator>0680cc43-b545-413a-8bf7-4b0ed6700f48</AsyncIdentificator>

</ScheduleResult>

</**ScheduleResponse**>

</s:Body>

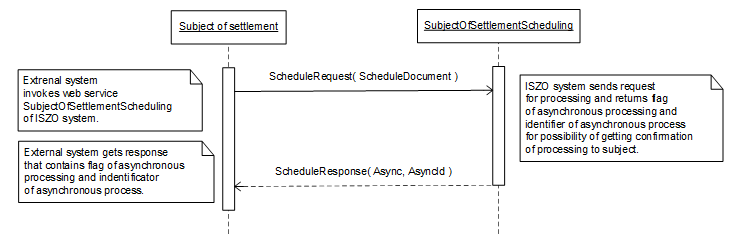
</s:Envelope>

#### Communication scenarios

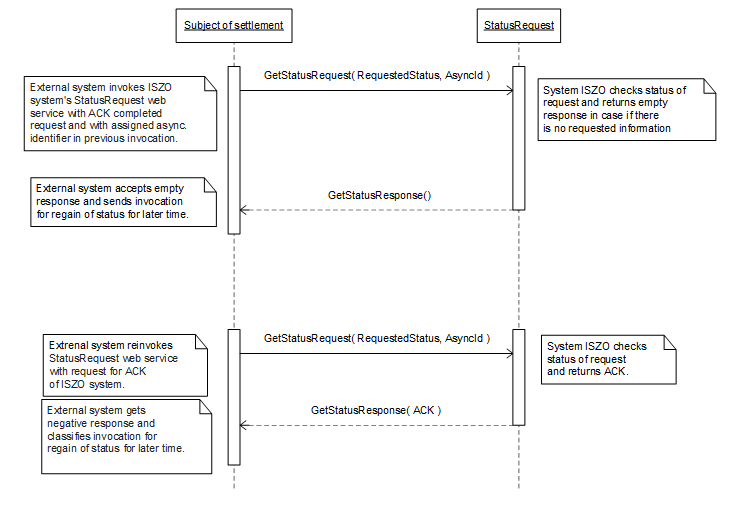
*Schedule*

Process of day-ahead diagram input operates in two phases.

In the first phase, input itself is carried out by sending of *ScheduleRequest* request with day-ahead diagram. The response is represented by indication of asynchronous processing and assigned identification to be used later for retrieval of request processing status.



In the second phase, the subject retrieves ACK (acknowledgement) on the principle of repeated calling in regular intervals (polling) of *StatusRequest* service. If *AsyncId* parameter is not entered, ACK is retrieved to the latest processed request.



### BusinessPlatformScheduling

*BusinessPlatformScheduling* web service ([RD-02](#_Zadávanie_čiastkových_diagramov)) allows operators of trading platforms an automated interface for input of partial day-ahead diagrams.

The service implements the following methods:

*Schedule* – method for input of partial day-ahead diagrams.

#### SOAP Schedule

*Schedule* method of *BusinessPlatformScheduling* service operates in synchronous and asynchronous mode, whereas mode, in which the result is processed, is returned in response in *ProcessedAs* member (Synchronous/Asynchronous).

Corresponding Acknowledgement is returned in synchronous mode.

In case of asynchronous mode, only processing type or technical acknowledgement, if appropriate, is returned as a result. [*RequestStatus*](#_Služba_StatusRequest) web service implementing *ENTSO-E Status Request* standard can be used for status of asynchronously processed request.

*Description request structure*

| **ScheduleRequest** | **Description** |
| --- | --- |
| SheduleDocument | Document [RD-02-01](#_Plánovacia_správa_(RD-02-01)). |

*Description of response structure*

| **ScheduleResponse** | **Description** |
| --- | --- |
| ScheduleResult | Common return structure of result for input of diagrams, see [AcknowledgementResult](#_AcknowledgementResult). |

*Example of SOAP messages*

Request:

POST /BusinessPlatformScheduling.WCF.Host/ServiceReference.svc HTTP/1.1

Content-Type:application/soap+xml; charset=utf-8

Host: ...

Content-Length: ...

Expect: 100-continue

Connection: Keep-Alive

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<s:Header>

<!-- WS-Addressing -->

<!-- WS-Security -->

</s:Header>

<s:Body u:Id="\_1">

<**ScheduleRequest** xmlns="http://sfera.sk/ws/xmtrade/iszo/BusinessPlatformScheduling/services/2008/11/01">

<ScheduleDocument xmlns="http://sfera.sk/ws/xmtrade/iszo/common/types/essv3r1/2008/11/01">

**<!-- ESS Diagram Document -->**

</ScheduleDocument>

</**ScheduleRequest**>

</s:Body>

</s:Envelope>

Response:

HTTP/1.1 200 OK

Server: ASP.NET Development Server/9.0.0.0

Date: Sun, 30 Nov 2008 16:58:25 GMT

X-AspNet-Version: 2.0.50727

Cache-Control: private

Content-Type: application/soap+xml; charset=utf-8

Content-Length: ...

Connection: Close

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<s:Header>

<!-- WS-Addressing -->

<!-- WS-Security -->

</s:Header>

<s:Body u:Id="\_1">

<**ScheduleResponse** xmlns="http://sfera.sk/ws/xmtrade/iszo/BusinessPlatformScheduling/services/2008/11/01">

<ScheduleResult xmlns="http://sfera.sk/ws/xmtrade/iszo/common/types/2008/11/01">

<ProcessedAs>Asynchronous</ProcessedAs>

<AsyncIdentificator>0680cc43-b545-413a-8bf7-4b0ed6700f48</AsyncIdentificator>

</ScheduleResult>

</**ScheduleResponse**>

</s:Body>

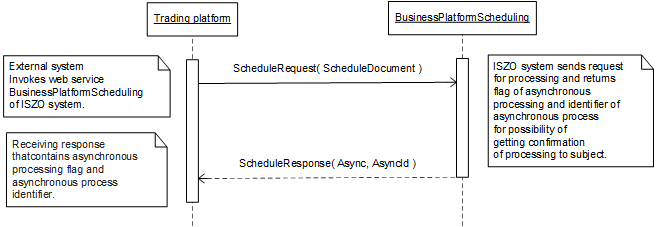
</s:Envelope>

#### Communication scenarios

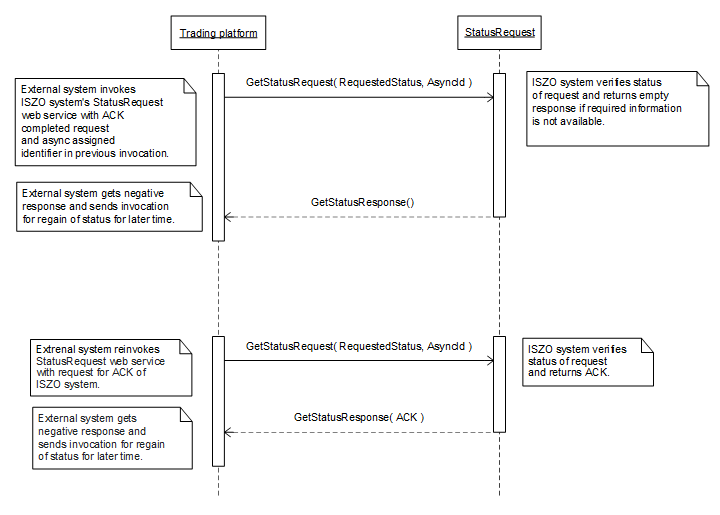
*Schedule*

Process of day-ahead diagram input operates in two phases.

In the first phase, input itself is carried out by sending of *ScheduleRequest* request with partial day-ahead diagram. The response is represented by indication of asynchronous processing and assigned identification to be used later for retrieval of request processing status.



In the second phase, the subject retrieves ACK (acknowledgement) on the principle of repeated calling in regular intervals (polling) of *StatusRequest* service. *AsyncId* parameter is a key to ACK of a specific request and is required in this case.



### StatusRequest service

*StatusRequest* service ([SR-01](#_Vyžiadanie_stavovej_informácie)) according to *ENTSO-E Status Request* standard serves for retrieval of processing status of asynchronous operation/process. Status of asynchronously processed request can be retrieved following this mechanism.

The service implements the following methods:

*GetStatus* – method for retrieval of asynchronous process status.

#### SOAP GetStatus

*GetStatus* method of *StatusRequest* service operates exclusively in synchronous mode, i.e. the request is processed immediately and its result is returned to the caller.

##### Description of request structure

| **GetStatusRequest** | **Description** |
| --- | --- |
| RequestedStatus | ESR document [SR-01-01](#_Požiadavka_na_zistenie). |

##### Description of response structure

| **GetStatusResponse** | **Description** |
| --- | --- |
| Acknowledgement | Acknowledgement report [SR-01-02](#_Odpoveď__Správa). |
| DeviationEnergyAccountReports  [0..2] | Report on imbalance clearing [SR-01-03](#_Správa_o_zúčtovaní). (Response contains two structures – details on imbalance of system and details on imbalance of subject of settlement) |
| RegulationEnergyAccountReports [0..2] | Report on clearing of regulating electricity [SR-01-04](#_Správa_o_zúčtovaní_1).  (Response contains two structures – details on acquired regulating electricity for the entire system and details on supplied regulating electricity of respective RE supplier) |
| AnomalyReport | Anomaly report [SR-01-05](#_Správa_o_anomálii). |
| ConfirmationReport | Confirmation report [SR-01-06](#_Správa_o_potvrdení). |
| DifferencesEnergyAccountReport | Report on clearing of differences [SR-01-07](#_Správa_o_zúčtovaní_2). |

*Example of SOAP messages*

Request:

POST /StatusRequest.WCF.Host/ServiceReference.svc HTTP/1.1

Content-Type:application/soap+xml; charset=utf-8

Host: ...

Content-Length: ...

Expect: 100-continue

Connection: Keep-Alive

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<s:Header>

<!-- WS-Addressing -->

<!-- WS-Security -->

</s:Header>

<s:Body u:Id="\_1">

<**GetStatusRequest** xmlns="http://sfera.sk/ws/xmtrade/iszo/common/services/2008/11/01">

<RequestedStatus xmlns="http://sfera.sk/ws/xmtrade/iszo/common/types/esrv1r1/2008/11/01">

<!-- ESR document -->

</RequestedStatus>

<AsyncIdentificator>0680cc43-b545-413a-8bf7-4b0ed6700f48</AsyncIdentificator>

</**GetStatusRequest**>

</s:Body>

</s:Envelope>

Response:

HTTP/1.1 200 OK

Server: ASP.NET Development Server/9.0.0.0

Date: Sun, 30 Nov 2008 16:58:25 GMT

X-AspNet-Version: 2.0.50727

Cache-Control: private

Content-Type: application/soap+xml; charset=utf-8

Content-Length: ...

Connection: Close

<s:Envelope xmlns:s="http://www.w3.org/2003/05/soap-envelope" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<s:Header>

<!-- WS-Addressing -->

<!-- WS-Security -->

</s:Header>

<s:Body u:Id="\_1">

<**GetStatusResponse** xmlns="http://sfera.sk/ws/xmtrade/iszo/common/services/2008/11/01">

<Acknowledgement xmlns="http://sfera.sk/ws/xmtrade/iszo/common/types/ackv5r0/2008/11/01">

<!-- Acknowledgement document -->

</Acknowledgement>

</**GetStatusResponse**>

</s:Body>

</s:Envelope>

### Common data structures

#### AcknowledgementResult

| **Member name** | **Values** | **Description** |
| --- | --- | --- |
| ProcessedAs | Synchronous  Asynchronous | Mode, in which the request was processed. |
| Acknowledgement | See [RD-01-02](#_Správa_o_prijatí), [RD-02-02](#_Správa_o_prijatí_1). | Acknowledgement document |
| AsyncIdentificator | GUID, e.g..:  0680cc43-b545-413a-8bf7-4b0ed6700f48 | Unique identification of GUID type assigned by the ISZO system for asynchronous retrieval of processing status of the request.  Identification is generated exclusively in case that ProcessedAs = Asynchronous. |

## Communication security

Web services are available exclusively through secured https protocol that allows encryption of transmitted messages. Therefore, messages at SOAP protocol level are no longer encrypted.

Web service interfaces are secured in accordance with *WS-Security* standard (WSS) version 1.0, pursuant to which the following techniques of security are designed:

* Electronic signature of sent SOAP requests and responses,
* Transmission of authentication details within the SOAP request (username/password, certificate).

### Electronic signature

Electronic signature support of SOAP messages is secured within implementation of *WS-Security* standard, version 1.0.

(<http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wss>).

Signature is stored within the header of SOAP message, i.e. separately from the message body transmitting details. *WSS* standard implements the signature on the basis *xmldsig* standard (<http://www.w3.org/TR/xmldsig-core>).

Requested are the following signed elements:

* message body (s:Body),
* token username/password of a user (o:UsernameToken),
* timestamp (u:Timestamp),
* specification of the method name of web service (a:Action),
* sender specification (a:ReplyTo),
* message identification (a:MessageID),
* specification of service target address (a:To).

### Example of SOAP message

The following example demonstrates message structure consisting of elements of SOAP message itself (envelope), header (header), header elements of address and security specification and message body.

Beginning

<s:Envelope

xmlns:s="http://www.w3.org/2003/05/soap-envelope"

xmlns:a="http://schemas.xmlsoap.org/ws/2004/08/addressing"

xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<s:Header>

WS-Addressing

<a:Action s:mustUnderstand="1" u:Id="id-17567474" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">http://sfera.sk/ws/xmtrade/isot/interfaces/**NameOfService**/services/2009/04/01/**NameOfService**Contract/**MethodName**</a:Action>

<a:ReplyTo s:mustUnderstand="1" u:Id="id-235207" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<a:Address>http://schemas.xmlsoap.org/ws/2004/08/addressing/role/anonymous</a:Address>

</a:ReplyTo>

<a:MessageID s:mustUnderstand="1" u:Id="id-11090325" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">b83ac27b-9a4f-40e3-a782-96df2cbea73e</a:MessageID>

<a:To s:mustUnderstand="1" u:Id="id-27256294" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">**ServiceAddress**</a:To>

WS-Security

<o:Security xmlns:o="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">

<o:BinarySecurityToken EncodingType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-s-message-security-1.0#Base64Binary" ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3" u:Id="CertId-17206535" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd"><!-- REMOVED --></o:BinarySecurityToken>

<d:Signature Id="Signature-190585" xmlns:d="http://www.w3.org/2000/09/xmldig#">

<d:SignedInfo>

<d:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

<d:SignatureMethod Algorithm="http://www.w3.org/2000/09/xmldig#rsa-sha1"/>

<d:Reference URI="#UsernameToken-13236543">

<d:Transforms><d:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

</d:Transforms>

<d:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldig#sha1"/>

<d:DigestValue>lm0E+rpDJ8oSP8Fh+ZlqZRiMjc8=</d:DigestValue>

</d:Reference>

<d:Reference URI="#Timestamp-2175170">

<d:Transforms><d:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

</d:Transforms>

<d:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldig#sha1"/>

<d:DigestValue>02CsUF1As77a6I3+BkQZ22TogWI=</d:DigestValue>

</d:Reference>

<d:Reference URI="#id-4652787">

<d:Transforms><d:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

</d:Transforms>

<d:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldig#sha1"/>

<d:DigestValue>ktXRJoijcGSFrHaUKaLXUnH43XU=</d:DigestValue>

</d:Reference>

<d:Reference URI="#id-17567474">

<d:Transforms><d:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

</d:Transforms>

<d:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldig#sha1"/>

<d:DigestValue>lLOeuXRDI1Gs5IX+zvaWuFIhVzw=</d:DigestValue>

</d:Reference>

<d:Reference URI="#id-11090325">

<d:Transforms><d:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

</d:Transforms>

<d:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldig#sha1"/>

<d:DigestValue>ZsiiDzGRLHuyb8bKASKDo8ryoqc=</d:DigestValue>

</d:Reference>

<d:Reference URI="#id-235207">

<d:Transforms><d:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

</d:Transforms>

<d:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldig#sha1"/>

<d:DigestValue>9p44ZJinb/97IPlX0C7yFayRHpc=</d:DigestValue>

</d:Reference>

<d:Reference URI="#id-27256294">

<d:Transforms><d:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#"/>

</d:Transforms>

<d:DigestMethod Algorithm="http://www.w3.org/2000/09/xmldig#sha1"/>

<d:DigestValue>BCxp9HRQ6cJAykEdliom9mU86vA=</d:DigestValue>

</d:Reference>

</d:SignedInfo>

<d:SignatureValue><!-- REMOVED --></d:SignatureValue>

<d:KeyInfo Id="KeyId-33119438">

<o:SecurityTokenReference u:Id="STRId-28732159" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<o:Reference URI="#CertId-17206535" ValueType="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-x509-token-profile-1.0#X509v3"/>

</o:SecurityTokenReference>

</d:KeyInfo>

</d:Signature>

<o:UsernameToken u:Id="UsernameToken-13236543" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<o:Username><!-- REMOVED --></o:Username>

<o:Password Type="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-username-token-profile-1.0#PasswordText"><!-- REMOVED --></o:Password>

</o:UsernameToken>

<u:Timestamp u:Id="Timestamp-2175170" xmlns:u="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-utility-1.0.xsd">

<u:Created>2009-07-01T09:24:06.011Z</u:Created>

<u:Expires>2009-07-01T12:10:46.011Z</u:Expires>

</u:Timestamp>

</o:Security>

Header ending + body + message ending

</s:Header>

<s:Body u:Id="id-4652787">

<!-- body of the request -->

</s:Body>

</s:Envelope>

### Authentication and authorization of web service call

Web services are secured against unauthorized use. System user is required to have an assigned user account in the XMtrade®/ISZO system with the client certificate for signing and verification of identity. User is required to have assigned rights for calling of relevant web services.

## Description of web services

Description of web services of the imbalance clearing information system XMtrade®/ISZO is given in the form of *WSDL* (<http://www.w3.org/TR/wsdl>) documents on the following addresses.

### Production environment

| **ID** | **Názov webovej služby** | **Adresa služby/WSDL dokumentu** |
| --- | --- | --- |
| [RD-01](#_Zadávanie_denných_diagramov) | SubjectOfSettlementScheduling | <https://iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc>  <https://iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc?wsdl> |
| [RD-02](#_Zadávanie_čiastkových_diagramov) | BusinessPlatformScheduling | <https://iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc>  <https://iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc?wsdl> |
| [SR-01](#_Vyžiadanie_stavovej_informácie) | StatusRequest | <https://iszo.okte.sk/interfaces/StatusRequest/Service.svc>  <https://iszo.okte.sk/interfaces/StatusRequest/Service.svc?wsdl> |

### Testing environment

Service addresses of testing environment are almost identical to production addresses. They solely differ in the domain name of the address: <http://test-iszo.okte.sk> instead of <http://iszo.okte.sk>.

## Web service client

Web services of the XMtrade®/ISZO system are natively implemented on the platform of Microsoft .NET Framework 3.5 using *Windows Communication Foundation (WCF)* technology, however, with the respect of interoperability with other platforms, e.g. Java platform.

### Utilization of services from .NET environment

Requirements:

* Microsoft .NET Framework 3.5
* Microsoft Visual Studio 2019

#### Procedure

1. Proxy class

Generate proxy class on the basis of *WSDL* document of respective web service, e.g. by *wsdl.exe* tool or simply insert reference to web service in Visual Studio 2008 environment (item in the context menu *Add service reference*). Proxy class facilitating communication with web service is generated this way.

1. Client configuration

*App.config* configuration file of client contains the following specification:

<system.serviceModel>

<behaviors>

<endpointBehaviors>

<behavior name="Default">

<clientCredentials>

<clientCertificate findValue="**[NameOfClientCertificateForMessageSigning]**"

storeLocation="CurrentUser" storeName="My"

x509FindType="FindBySubjectName" />

<serviceCertificate>

<defaultCertificate findValue="**XMtrade ISZO - PSEUDONYM**"

storeLocation="LocalMachine" storeName="My"

x509FindType="FindBySubjectName" />

</serviceCertificate>

</clientCredentials>

</behavior>

</endpointBehaviors>

</behaviors>

<bindings>

<customBinding>

<binding name="InteropBinding">

<textMessageEncoding messageVersion="Soap12WSAddressingAugust2004"

writeEncoding="utf-8">

<readerQuotas maxDepth="32" maxStringContentLength="999999999"

maxArrayLength="999999999"

maxBytesPerRead="4096" maxNameTableCharCount="999999999" />

</textMessageEncoding>

<security allowSerializedSigningTokenOnReply="true"

authenticationMode="MutualCertificate"

requireDerivedKeys="false" securityHeaderLayout="Lax"

includeTimestamp="true"

keyEntropyMode="CombinedEntropy"

messageProtectionOrder="SignBeforeEncrypt"

messageSecurityVersion="WSSecurity10WSTrustFebruary2005WSSecureConversationFebruary2005WSSecurityPolicy11BasicSecurityProfile10"

requireSecurityContextCancellation="false">

<secureConversationBootstrap />

</security>

<httpsTransport />

</binding>

</customBinding>

</bindings>

<client>

<endpoint address="<http://iszo.okte.sk>/interfaces/**[NameOfService]**/Service.svc"

behaviorConfiguration="Default" binding="customBinding" bindingConfiguration="InteropBinding"

contract="ServiceProxy.**[NameOfService]**Contract" name="DefaultEndpoint">

</endpoint>

</client>

</system.serviceModel>

# SPECIFICATION OF DATA STRUCTURES

The imbalance clearing information system XMtrade®/ISZO provides interfaces for automated data exchange, which involves use of data structures defined on the basis of XML formats in accordance with *ENTSO-E* standards:

* ENTSO-E Scheduling System (ESS)  
  (Scheduling system),
* ENTSO-E Settlement Process (ESP)  
  (Settlement process),
* ENTSO-E Acknowledgement Process (EAD)  
  (Process for acknowledgement messages),
* ENTSO-E Status Request (ESR)  
  (Request for status information),
* Energy Identification Coding Scheme (EIC)  
  (System of identification in the energy area),
* ENTSO-E General Code List For Data Interchange (ECL)  
  (Code lists used in *ENTSO-E* standards),
* ENTSO-E Harmonised Electricity Market Role Model  
  (Electricity market role model).

| **Interface** | **Process** | **User** | **ID** | **Format** |
| --- | --- | --- | --- | --- |
| Input of day-ahead diagrams | Registration of diagrams | Subject of settlement | RD-01-01 | ESS 3.1 |
| RD-01-02 | EAD 5.0 |
| Input of partial diagrams | Registration of diagrams | Trading platform | RD-02-01 | ESS 3.1 |
| RD-02-02 | EAD 5.0 |
| Retrieval of status information | Registration of diagrams, settlement of imbalance and RE and clearing of differences | Market participant | SR-01-01 | ESR 1.1 |
| SR-01-02 | EAD 5.0 |
| SR-01-03 | ESP 1.1 |
| SR-01-04 | ESP 1.1 |
| SR-01-05 | ESS 3.1 |
| SR-01-06 | ESS 3.1 |
| SR-01-07 | ESP 1.1 |

## Input of day-ahead diagrams (RD-01)

The system of imbalance clearing XMtrade®/ISZO allows subjects of settlement an automated interface (system-system) for input of day-ahead diagrams within day-ahead and intraday registration of diagrams. Day-ahead diagrams are inputted in XML format in accordance with *ENTSO-E Scheduling System (ESS)* standard, version 3.1. Detailed specification of *ESS* standard is publicly available on ENTSO-E web pages <http://www.entsoe.eu/>.

### Processing level

Subjects of settlement input day-ahead diagrams within processes of day-ahead registration of diagrams and intraday registration of diagrams. Daily diagrams of subjects of settlement contain internal realizations of electricity supply and electricity consumption in defined area. Accepted offers/demands of subject of settlement that is a participant in short-term electricity market, realized through the day-ahead market and planned values of electricity supplies and electricity consumption of subjects of settlement on cross-border profiles provided by the transmission system operator to OKTE, a.s. are automatically included in the system of imbalance settlement and subject of settlement does not enter these values in its daily diagram as part of the diagram registration.

#### Day-ahead registration of diagrams

Day-ahead registration of diagrams occurs on the day preceding the trading day, for which day-ahead diagrams are registered. Day-ahead diagrams are inputted according to *ESS* standard in the form of schedule message in MW with the precision to 3 decimal places in valid Central European time or Central European Summer time for each clearing period by the deadline for reception of day-ahead diagrams, at the latest. Deadline for reception of day-ahead diagrams for trading day is **1:30 pm**. Subject of settlement is informed on successful acceptance or rejection of day-ahead diagram in accordance with *ESS/EAD* standard via Acknowledgement Report. Subject of settlement is allowed to input multiple versions of schedule message by the deadline for reception of day-ahead diagrams.

Subjects of settlement, whose values in day-ahead diagrams are evaluated by clearing agent as unmatched, are allowed to input modification via further version of the message by the deadline for day-ahead registration of diagrams. Modification solely relates to time series, in which clearing agent discovered a difference. Deadline for day-ahead registration of diagrams is set for the preceding day by **4:00 pm**.

#### Intraday registration of diagrams

Day-ahead diagrams are inputted according to *ESS* standard in the form of schedule message in MW with the precision to 3 decimal places in valid Central European time or Central European Summer time for each clearing period of respective time gate by the deadline for reception of day-ahead diagrams, at the latest. Deadline for reception of day-ahead diagrams from subjects of settlement for respective time gate ends **15 minutes prior to the start of time gate**, in which realisation of consumption and supply occurs. Subject of settlement is informed on successful acceptance or rejection of day-ahead diagram in accordance with *ESS/EAD* standard via Acknowledgement Report. Subject of settlement is allowed to input multiple versions of schedule message by the deadline for reception of day-ahead diagrams.

### Data flow

Details signed by qualified certificate are transmitted via secured web service directly to the system of imbalance clearing that informs the sender back on successful or failed reception of transmitted data via acknowledgement report ACK in accordance with *ENTSO-E* *EAD V5R0* standard. This method of communication can be used by all subjects of settlement.

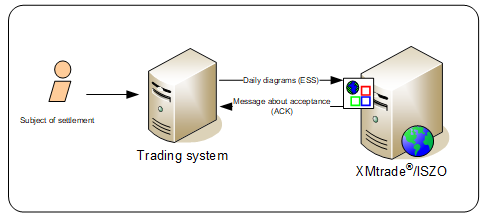


Figure 1 Interface for day-ahead diagrams

### Data structures

Schedule message is used in accordance with *ESS V3R1* standard for automated input of day-ahead diagrams into the imbalance clearing information system XMtrade®/ISZO. *EIC* standard is used for identification of entities and balance areas. Schedule message uses *ENTSO-E General Code List For Data Interchange* code list that is publicly available on <http://www.entsoe.eu/> web pages. Date and time items are inserted into the message in UTC (Universal Time Coordinated).

#### Schedule message (RD-01-01)

Schedule message (SM), through which subjects of settlement input day-ahead diagrams, consists of the following parts in accordance with *ESS V3R1* standard:

* *Schedule Message Header* – contains general details that relate to the entire message.
* *Schedule Time Series Header* – contains details that relate to the respective time series.
* *Period* – contains details that relate to the period of respective time series.
* *Interval* – contains values of respective time series.



Schedule Message Header

Schedule message header contains values of particular elements according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Message Identification | SUB\_YYYYMMDD\_PT | Message identification.  Recommended format:  SUB\_YYYYMMDD\_PT YYYY - year  MM - month  DD - day  PT - ProcessType (01 or 02) (e.g. SUB\_20080319\_02)  Maximum 35 characters. | Required |
| Message Version | „1“, „2“, „3“, … | Message version.  Version number is incremented on each additional sending of message modification.  Maximum 3 characters. | Required |
| Message Type | „A01“ | Message type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Process Type | „A01“ / „A02“ | Process type, which the message relates to.  A01 - day-ahead registration of diagrams  A02 - intraday registration of diagrams  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Schedule Classification Type | „A01“ | Communication classification.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Sender Identification | EIC of subject of settlement | Message sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A01“ / „A08“ | Message sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC OKTE | Message receiver identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Receiver Role | „A05“ | Message receiver role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Message Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of message sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Schedule Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Schedule time interval.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Domain | „10YSK-SEPS-----K“ | Identification of balance area, for which the schedule is specified.  Entity EIC is used.  Maximum 16 characters. | Required |
| Subject Party | EIC of subject of settlement | Identification of entity, for which the schedule is set up.  Entity EIC is used.  Maximum 16 characters. | Required |
| Subject Role | „A08“ | Role of entity, for which the schedule is set up.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Matching Period | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Matching period.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  In case of day-ahead registration, it contains the period of the entire trading day.  In case of intraday registration, it contains the period from the beginning of open gate or the gate of the first modification in diagram, if appropriate, by the end of trading day.  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |

##### Schedule Time Series Header

Header of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Senders Time Series Identification | Identification | Time series identification.  Unique identification within schedule message.  Maximum 35 characters. | Required |
| Senders Time Series Version | “1”, “2”, “3”, ... | Time series version.  Version number should be identical to the number of schedule message, in which time series were inputted or modified for the last time.  Maximum 3 characters. | Required |
| Product | “8716867000016” | It identifies product type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 13 numeric characters. | Required |
| Measurement Unit | “MAW” | Unit, in which the values in time series are inputted (MW).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Object Aggregation | “A03” | Object aggregation.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Metering Point Identification | - | Metering point identification.  Maximum 35 characters. | Optional |
| Capacity Contract Type | - | Capacity contract type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Optional |
| Capacity Agreement Identification | - | Identification of agreement on capacity assignment.  Maximum 35 characters. | Optional |
| Business Type | “A02” / „A06“ | Contract type.  A02 - internal contract  A06 - external contract  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| In Area | „10YSK-SEPS-----K“ | Balance area, to which the product is supplied.  EIC of balance area is used.  Maximum 16 characters. | Required |
| Out Area | „10YSK-SEPS-----K“ | Balance area, out of which the product is taken.  EIC of balance area is used.  Maximum 16 characters. | Required |
| In Party | EIC of subject of settlement | Consumer identification for internal diagrams.  Entity EIC is used.  Maximum 16 characters. | Required |
| Out Party | EIC of subject of settlement | Identification of supplier for internal diagrams.  Entity EIC is used.  Maximum 16 characters. | Required |

##### Period

*Period* header contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Time series interval.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Resolution | „PT15M” | Resolution of time series.  Values are inputted in 15-minute resolution. | Required |

##### Interval

Time series contain records for each clearing period of a trading day. Record of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Pos | „1“, „2“, „3“, … | Position of the value in time series.  Time series contain 96 values.  During time shift from Central European time to Central European Summer time and backwards, time series contain 92 or 100 values, respectively.  Maximum 6 characters. | Required |
| Qty | NNNNNN.NNN | Value of amount in MW with the precision to 3 decimal places. It always contains a positive number for increase of consumption or supply. Values without increase are represented by null.  Maximum 17 characters. | Required |

#### Acknowledgement document (RD-01-02)

Acknowledgement document (ACK), through which clearing agent informs on acceptance or rejection of day-ahead diagram, consists of the following parts in accordance with *EAD V5R0* standard:

* *Acknowledgement document* - contains details that relate to the entire document.
* *Time Series Rejection* – contains identification details of the respective time series.
* *Time Interval Error* – contains identification details of the respective value in time series.
* *Reason* – contains information on acceptance or rejection of schedule message.

Depending on a specific case, information on acceptance or rejection of schedule message (Reason) relates either to the document as a whole (*Acknowledgement document*), to time series (*Time Series Rejection*), or to respective value of time series (*Time Interval Error*). Use of particular document parts is dependent on a specific case.



Acknowledgement document

Header of acknowledgement document contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Document Identification | Identification | Document identification.  Maximum 35 characters. | Required |
| Document Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of document sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Sender Identification | EIC OKTE | Document sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A05” | Document sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC of subject of settlement | Document receiver identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Receiver Role | „A01“ / „A08“ | Document receiver role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiving Document Identification | Identification | Identification of the original schedule message, which the acknowledgement document refers to. | Required |
| Receiving Document Version | “1”, “2”, “3”, ... | Version of the original schedule message, which the acknowledgment document refers to. | Optional |
| Receiving Document Type | „A01“ | Type of the original schedule message, which the acknowledgment document refers to. | Optional |
| Receiving Payload Name | file\_name.xml | File name of the original schedule message, which the acknowledgment document refers to. | Optional |
| Date Time Receiving Document | YYYY-MM-DDTHH:MM:SSZ | Reception date of the original schedule message in UTC (Universal Time Coordinated), which the acknowledgement document refers to. | Optional |

##### Time Series Rejection

Time series identification in the acknowledgement document contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Senders Time Series Identification | Identification | Time series identification within the original schedule message, in which error was identified.  Maximum 35 characters. | Required |
| Senders Time Series Version | “1”, “2”, “3”, ... | Time series version within the original schedule message, in which error was identified.  Maximum 3 characters. | Required |

##### Time Interval Error

Identification of respective value in time series of the acknowledgement document contains values of particular attributes according the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Quantity Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Section of time series within the original schedule message, in which error was identified.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |

##### Reason

Information on acceptance or rejection of the schedule message contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Reason Code | AXY | Information on acceptance or rejection of the original schedule message and reasons for its rejection.  According to ENTSO-E General Code List For Data Interchange.  At the message level:  A01 - Message fully accepted  A02 - Message fully rejected  A03 - Message contains errors at the time series level  A04 - Time interval incorrect  A05 - Sender without valid contract  A10 - Credit limit exceeded  A51 - Message identification or version conflict  A52 - Time series missing from new version of message  A53 - Receiving party incorrect  A57 - Deadline limit exceeded/Gate not open  A59 - Not compliant to local market rules  A60 - Inter-area transit schedule exceeds nominated schedule  A78 - Sender identification and/or role invalid  A79 - Process type invalid  A80 - Domain invalid  A81 - Matching period invalid  A94 - Document cannot be processed by receiving system  At the level of time series:  A20 - Time series fully rejected  A21 - Time series accepted with specific time interval errors  A22 - In party/Out party invalid  A23 - Area invalid  A41 - Resolution inconsistency  A50 - Senders time series version conflict  A55 - Time series identification conflict  A56 - Corresponding time series not netted  A57 - Deadline limit exceeded/Gate not open  A59 - Not compliant to local market rules  A62 - Invalid business type  A82 - In/Out area inconsistant with domain  At the period level:  A04 - Time interval incorrect  At the interval level:  A42 - Quantity inconsistency  A46 - Quantities must not be signed values  A49 - Position inconsistency  A59 - Not compliant to local market rules  999 - Errors not specifically identified | Required |
| Reason Text | Open text | Additional text justification. | Optional |

## Input of partial diagrams (RD-02)

The system of imbalance clearing XMtrade®/ISZO allows trading platforms an automated interface (system-system) for input of partial diagrams within intraday registration of diagrams. Partial diagrams are inputted in XML format in accordance with *ENTSO-E Scheduling System (ESS)* standard, version 3.1. Detailed specification of *ESS* standard is publicly available on *ENTSO-E* web pages <http://www.entsoe.eu/>.

### Processing level

Trading platforms input partial diagrams within processes of intraday registration of diagrams.

#### Intraday registration of diagrams

Partial diagrams are inputted according to *ESS* standard in the form of schedule message in MW with the precision to 3 decimal places in valid Central European time or Central European Summer time for each clearing period of respective time gate by the deadline for reception of day-ahead diagrams, at the latest. Deadline for reception of day-ahead diagrams from subjects of settlement for respective time gate ends **15 minutes prior to the beginning of the time gate,** in which realisation of consumption and supply occurs.Trading platformand subject of settlement are informed on successful acceptance or rejection of partial diagram in accordance with *ESS/EAD* standard via Acknowledgement Report.

### Data flow

Details signed by qualified certificate are transmitted via secured web service directly to the system of imbalance clearing that informs the sender back on successful or failed reception of transmitted data via acknowledgement document ACK in accordance with *ENTSO-E* *EAD V5R0* standard. This method of communication can be used exclusively by trading platforms.

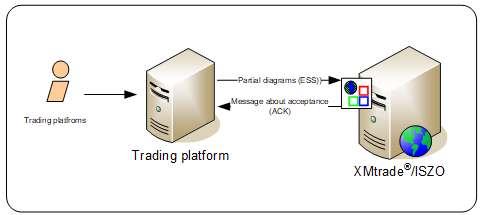


Figure 2 Interface for partial diagrams

### Data structures

Schedule message is used in accordance with *ESS V3R1* standard for automated input of partial diagrams into the imbalance clearing information system XMtrade®/ISZO. *EIC* standard is used for identification of entities and balance areas. Schedule message utilizes *ENTSO-E General Code List For Data Interchange* code list that is publicly available on <http://www.entsoe.eu/> web pages. Date and time items are inserted into the message in UTC (Universal Time Coordinated).

**Schedule message (RD-02-01)**

Schedule message (SM), through which trading platforms input partial diagrams, consists of the following parts in accordance with *ESS V3R1* standard:

* *Schedule Message Header* - contains general details that relate to the entire message.
* *Schedule Time Series Header* - contains details that relate to the respective time series.
* *Period* – contains details that relate to the period of respective time series.
* *Interval* – contains values of respective time series.



##### Schedule Message Header

*Schedule message* header contains values of particular elements according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Message Identification | OBP\_RRRRMMDD\_PT\_ KONTRAKTID | Message identification.  Matching partial diagrams of subjects of settlement, which were generated out of a single contract, contain the same identification.  Required format:  OBP\_RRRRMMDD\_PT\_ KONTRAKTID YYYY - year  MM - month  DD - day  PT - ProcessType (01 or 02)  KONTRAKTID – contract identification  (e.g. OBP\_20080319\_02\_K87654)  Maximum 35 characters. | Required |
| Message Version | „1“, „2“, „3“, … | Message version.  Version number is incremented on each additional sending of message modification.  Maximum 3 characters. | Required |
| Message Type | „A01“ | Message type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Process Type | „A02“ | Type of process, which the message relates to.  A02 - intraday registration of diagrams  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Schedule Classification Type | „A01“ | Communication classification.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Sender Identification | EIC of trading platform | Message sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A28“ | Message sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC OKTE | Message receiver identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Receiver Role | „A05“ | Message receiver role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Message Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of message sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Schedule Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Time interval of the schedule.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Domain | „10YSK-SEPS-----K“ | Identification of balance area, for which the schedule is specified.  Entity EIC is used.  Maximum 16 characters. | Required |
| Subject Party | EIC of subject of settlement | Identification of entity, for which the schedule is set up.  Entity EIC is used.  Maximum 16 characters. | Required |
| Subject Role | „A08“ | Role of entity, for which the schedule is set up.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Matching Period | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Matching period.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  In case of intraday registration, it contains the period from the beginning of open gate or the gate of the first modification in diagram, if appropriate, by the end of trading day.  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |

##### Schedule Time Series Header

Header of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Senders Time Series Identification | Identification | Time series identification.  Unique identification within the schedule message.  Maximum 35 characters. | Required |
| Senders Time Series Version | “1”, “2”, “3”, ... | Time series version.  Version number should be identical to the number of the schedule message, in which time series were inputted or modified for the last time.  Maximum 3 characters. | Required |
| Product | “8716867000016” | It identifies product type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 13 numeric characters. | Required |
| Measurement Unit | “MAW” | Unit, in which the values in time series are inputted (MW).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Object Aggregation | “A03” | Object aggregation.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Metering Point Identification | - | Metering point identification.  Maximum 35 characters. | Optional |
| Capacity Contract Type | - | Capacity contract type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Optional |
| Capacity Agreement Identification | - | Identification of agreement on capacity assignment.  Maximum 35 characters. | Optional |
| Business Type | “A02” / „A06“ | Contract type.  A02 - internal contract  A06 - external contract  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| In Area | EIC of balance area | Balance area, to which the product is supplied.  EIC of balance area is used.  Maximum 16 characters. | Required |
| Out Area | EIC of balance area | Balance area, out of which the product is taken.  EIC of balance area is used.  Maximum 16 characters. | Required |
| In Party | EIC of subject of settlement | Identification of consumer/importer.  Entity EIC is used.  Maximum 16 characters. | Required |
| Out Party | EIC of subject of settlement | Identification of supplier/exporter.  Entity EIC is used.  Maximum 16 characters. | Required |

##### Period

*Period* header contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Time series interval.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Resolution | „PT15M” | Resolution of time series.  Values are inputted in 15-minute resolution. | Required |

##### Interval

Time series contain records for each clearing period of a trading day. Record of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Pos | „1“, „2“, „3“, … | Position of the value in time series.  Time series contain 96 values.  During time shift from Central European time to Central European Summer time and backwards, time series contain 92 or 100 values, respectively.  Maximum 6 characters. | Required |
| Qty | NNNNNN.NNN | Value of amount in MW with the precision to 3 decimal places. It always contains positive number for increase of consumption or supply. Values without increase are represented by null.  Maximum 17 characters. | Required |

**Acknowledgement document (RD-02-02)**

Acknowledgement document (ACK), through which clearing agent informs on acceptance or rejection of day-ahead diagram, consists of the following parts in accordance with *EAD V5R0* standard:

* *Acknowledgement document* - contains details that relate to the entire document.
* *Time Series Rejection* - contains identification details of the respective time series.
* *Time Interval Error* - contains identification details of the respective value in time series.
* *Reason* – contains information on acceptance or rejection of schedule message.

Depending on a specific case, information on acceptance or rejection of schedule message (Reason) relates either to the document as a whole (*Acknowledgement document*), to time series (*Time Series Rejection*), or to respective value of time series (*Time Interval Error*). Use of particular document parts is dependent on a specific case.



Acknowledgement document

Header of acknowledgement document contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Document Identification | Identification | Document Identification.  Maximum 35 characters. | Required |
| Document Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of document sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Sender Identification | EIC OKTE | Document sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A05” | Document sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC of trading platform or  EIC of subject of settlement | Document receiver identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Receiver Role | „A28“ | Document receiver role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiving Document Identification | Identification | Identification of the original schedule message, which the acknowledgment document relates to. | Required |
| Receiving Document Version | “1”, “2”, “3”, ... | Version of the original schedule message, which the acknowledgment document relates to. | Optional |
| Receiving Document Type | „A01“ | Type of the original schedule message, which the acknowledgment document relates to. | Optional |
| Receiving Payload Name | file\_name.xml | File name of the original schedule message, which the acknowledgment document relates to. | Optional |
| Date Time Receiving Document | YYYY-MM-DDTHH:MM:SSZ | Reception date of the original schedule message in UTC (Universal Time Coordinated), which the acknowledgment document relates to. | Optional |

##### Time Series Rejection

Time series identification in the acknowledgement document contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Senders Time Series Identification | Identification | Time series identification within the original schedule message, in which error was identified.  Maximum 35 characters. | Required |
| Senders Time Series Version | “1”, “2”, “3”, ... | Time series version within the original schedule message, in which error was identified.  Maximum 3 characters. | Required |

##### Time Interval Error

Identification of respective value in time series of the acknowledgement document contains values of particular attributes according to the following table.

|  |  |  |  |
| --- | --- | --- | --- |
| **Element** | **Value** | **Description** | **Use** |
| Quantity Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Section of time series in the original schedule message, in which error was identified.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |

##### Reason

Information on acceptance or rejection of the schedule message contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Reason Code | AXY | Information on acceptance or rejection of the original schedule message and reason for its rejection.  According to ENTSO-E General Code List For Data Interchange.  At the message level:  A01 - Message fully accepted  A02 - Message fully rejected  A03 - Message contains errors at the time series level  A04 - Time interval incorrect  A05 - Sender without valid contract  A10 - Credit limit exceeded  A51 - Message identification or version conflict  A52 - Time series missing from new version of message  A53 - Receiving party incorrect  A57 - Deadline limit exceeded/Gate not open  A59 - Not compliant to local market rules  A60 - Inter-area transit schedule exceeds nominated schedule  A78 - Sender identification and/or role invalid  A79 - Process type invalid  A80 - Domain invalid  A81 - Matching period invalid  A94 - Document cannot be processed by receiving system  At the level of time series:  A20 - Time series fully rejected  A21 - Time series accepted with specific time interval errors  A22 - In party/Out party invalid  A23 - Area invalid  A41 - Resolution inconsistency  A50 - Senders time series version conflict  A55 - Time series identification conflict  A56 - Corresponding time series not netted  A57 - Deadline limit exceeded/Gate not open  A59 - Not compliant to local market rules  A62 - Invalid business type  A82 - In/Out area inconsistant with domain  At the period level:  A04 - Time interval incorrect  At the interval level:  A42 - Quantity inconsistency  A46 - Quantities must not be signed values  A49 - Position inconsistency  A59 - Not compliant to local market rules  999 - Errors not specifically identified | Required |
| Reason Text | Open text | Additional text justification. | Optional |

## Retrieval of status information (SR-01)

The system of imbalance clearing XMtrade®/ISZO allows electricity market participants an automated interface (system-system) for retrieval of status information in processes requiring longer processing time. Request for status retrieval are inputted in XML format in accordance with *ENTSO-E Status Request (ESR) V1R1* standard. Detailed specification of *ESR* standard is publicly available on ENTSO-E web pages <http://www.entsoe.eu/>.

### Data flow

Details signed by qualified certificate are transmitted via secured web service directly to the system of imbalance clearing that informs the sender back on status of requested process or failed reception of transmitted data. This method of communication can be used by all subjects of settlement, suppliers of regulated electricity or trading platforms, respectively.

### Data structures

Request for retrieval of status in accordance with *ESR V1R1* standard is used for submission of request for retrieval of process status to the imbalance clearing information system XMtrade®/ISZO. *EIC* standard is used for identification of entities. Request for retrieval of status utilizes ENTSO-E *General Code List For Data Interchange* code list that is publicly available on <http://www.entsoe.eu/> [http://www.etso-net.org/](http://www.etso-net.org) web pages. Date and time items are inserted into the document in UTC (Universal Time Coordinated). The system of imbalance clearing XMtrade®/ISZO responds to the request for retrieval of status via message that corresponds to respective process. System responds in accordance with *ENTSO-E EAD V5R0* standard via acknowledgement document ACK for processes of diagram registration (A01,A02). During the process of day-ahead diagram registration (A01,A02), the system makes available also information on discrepancy of diagrams via Anomaly Report AR and on total acceptance of day-ahead diagrams via Confirmation Report CR, both reports follow *ENTSO-E ESS V3R1* standard. For the process of imbalance and regulating electricity clearing (A06), the system responds by report on imbalance clearing (Energy account report EAR), or report on clearing of regulating electricity (Energy account report EAR), both follow *ENTSO-E ESP V1R1* standard.

#### Request for retrieval of status (SR-01-01)

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Message Identification | Identification | Unique message identification.  Maximum 35 characters. | Required |
| Message Type | „A07“ / „A08“/ „A10“ /  „A12“ / „A16“ / „A17“ / „A18“ / „Z01“ | Type of message, which status is being requested.  A07 – continuous confirmation report  A08 – final confirmation report  A10 – report on clearing of regulating electricity  A12 – report on imbalance clearing  A16 – anomaly report  A17 – acknowledgement report  A18 – confirmation report  Z01 – report on clearing of differences  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Process Type | „A01“ / „A02“ / „A06“ / „Z01“ | Type of process, to which the message is relating.  A01 - day-ahead registration of diagrams  A02 - intraday registration of diagrams  A06 - imbalance and regulating electricity clearing  Z01 – clearing of differences  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Sender Identification | EIC of sender | Message sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A01“ / „A08“ / „A28“ | Message sender role.  A01 – market participant  A08 – subject of settlement  A28 – trading platform  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC OKTE | Message receiver identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Receiver Role | „A05“ | Message receiver role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Message Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of message sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Requested Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Time interval.  Maximum allowed interval for a single message of the following types:  A10 - 1 calendar month  A12 - 1 calendar month  A17 - 1 trading day  Z01 - 1 calendar month  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |

#### Acknowledgement report (SR-01-02)

Response to the request for retrieval of status is represented by acknowledgement report (ACK, type = A17) in accordance with *ENTSO-E EAD V5R0* standard created within specific requested process. The system of imbalance clearing XMtrade®/ISZO shall return corresponding [RD-01-02](#_Správa_o_prijatí), [RD-02-02](#_Správa_o_prijatí_1) responses in case that the schedule message was inputted via a web service.

#### Report on imbalance clearing (Energy Account Report) (SR-01-03)

Response to the request for retrieval of current status of imbalance clearing is represented by report on imbalance clearing (EAR, Energy Account Report, type = A12) in accordance with *ENTSO-E ESP V1R1* standard. The system of imbalance clearing XMtrade®/ISZO always returns current values from last performed imbalance clearing.

Within a single data flow, the system returns total details on imbalance in the system and details on imbalance of respective subject of settlement in two separate structures.

Report on imbalance clearing (EAR, Energy Account Report), through which subjects of settlement retrieve details from imbalance clearing, consists of the following parts in accordance with *ESP V1R1* standard:

* *Energy Account Report Header* - contains general details that relate to the entire report.
* *Account Time Series Header* – contains details that relate to the respective time series.
* *Period* – contains details that relate to the period of the respective time series.
* *Account Interval* – contains values of the respective time series.



Energy Account Report Header

Report header contains values of particular elements according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Document Identification | Identification | Document Identification.  Maximum 35 characters. | Required |
| Document Version | „1“ | Version of response to the request.  Maximum 3 characters. | Required |
| Document Type | „A12“ | Document type.  A12 – report on imbalance clearing (energy account report)  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Document Status | „A01“ / „A02“ | Status of details in the document.  A01 – continuous report for daily, decadal and monthly imbalance clearing  A02 – final report for imbalance clearing  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Process Type | „A06“ | Type of process, to which the document is relating.  A06 – clearing of imbalances and regulating electricity  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Classification Type | „A01“ / „A02“ | Communication classification.  A01 – detailed data at the level of subject of settlement  A02 – summary data at the level of balance area  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Sender Identification | EIC OKTE | Document sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A05“ | Document sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC of subject of settlement | Document receiver identification.  Entity EIC is used, specified in *Sender Identification* attribute of the request for retrieval of status.  Maximum 16 characters. | Required |
| Receiver Role | „A01“ / „A08“ / „A28“ | Document receiver role, specified in *Sender Role* attribute of the request for retrieval of status.  A01 – market participant  A08 – subject of settlement  A028 – trading platform  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Document Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of document sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Accounting Period | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Document time interval, specified in *Requested Time Interval* attribute of the request for retrieval of status.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Domain | „10YSK-SEPS-----K“ | Identification of balance area, to which data are relating.  Entity EIC is used.  Maximum 16 characters. | Optional |

##### Account Time Series Header

Header of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Senders Time Series Identification | Identification | Time series identification.  Unique identification within the schedule message.  Maximum 35 characters. | Required |
| Business Type | from „Z01“ up to „Z30“ | Identification of energy data type.  Z01 – imbalance  Z02 – positive / negative imbalance  Z03 – costs for acquisition of regulating electricity  Z04 – total additional costs (till 31.12.2011)  Z05 – contractual amount  Z06 – balance of consumption and supply  Z08 – measured amount  Z11 – payment for positive additional costs (till 31.12.2011)  Z12 – clearing price for imbalance  Z13 – share on positive additional costs (till 31.12.2011)  Z17 – total regulating electricity  Z18 –payment of subject of settlement for imbalance  Z19 –payment of OKTE for imbalance  Z20 – continuous meterings (as of 1.4.2013)  Z21 – non-continuous meterings (as of 1.4.2013)  Z22 – balance of revenues from imbalance clearing and costs for securing of RE (as of 1.4.2013)  Z23 – total losses for systems balanced from below (as of 1.1.2014)  Z24 – continuous aggregates for systems balanced from above (as of 1.1.2014)  Z25 – combined aggregates for systems balanced from above (as of 1.1.2014)  Z26 – non-continuous aggregates for system balanced from above (as of 1.1.2014)  Z27 – clearing price of PNRE (as of 1.1.2014)  Z28 – ratio of non-continuous meterings (as of 1.1.2014)  Z29 – price for share on RE costs (as of 1.5.2014)  Z30 – price of system imbalance of SR (as of 1.7.2024) | Required |
| Product | “8716867000016” | It identifies product type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 13 numeric characters. | Required |
| Object Aggregation | “A01” / “A03” | Object aggregation.  A01 – details at the level of balance area  A03 – details at the level of subject of settlement  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Area | „10YSK-SEPS-----K“ | Balance area.  EIC of balance group is used.  Maximum 16 characters. | Required |
| Party | EIC of subject of settlement | Identification of subject of settlement for details that relate to the subject.  Attribute is not specified for details that relate to the system.  Entity EIC is used.  Maximum 16 characters. | Optional |
| Agreement Identification | - | Identification of agreement on capacity assignment.  Maximum 35 characters. | Optional |
| Measurement Unit | “MWH” | Unit, in which values in time series are inputted (MWh).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Currency | “EUR” | Currency, in which values in time series are inputted (EUR).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Optional |
| Accounting Point | - | Accounting Point.  Accounting point EIC is used.  Maximum 16 characters. | Optional |

##### Period

*Period* header contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Time series interval.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Resolution | „PT15M” | Resolution of time series.  Values are inputted in 15-minute resolution. | Required |

##### Account Interval

Time series contain records for each clearing period of a trading day. Record of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Pos | „1“, „2“, „3“, … | Position of the value in time series.  Time series contain 96 values.  During time shift from Central European time to Central European Summer time and backwards, time series contain 92 or 100 values, respectively.  Maximum 6 characters. | Required |
| In Qty | NNNNNN.NNN | Value of amount in MWh with the precision to 3 decimal places representing consumption / shortage of electricity.  For time interal of the report till December 31, 2018 volume of positive imbalance is indicated in time period with attribute BusinessType Z01 and Z02. For time interval of the report till January 1, 2019 volume of negative imbalance is indicated according to the Regulation EBGL.    It always contains a positive value.    Maximum 17 characters. | Required |
| Out Qty | NNNNNN.NNN | Value of amount in MWh with the precision to 3 decimal places representing supply / surplus of electricity.  For time interal of the report till December 31, 2018 volume of negative imbalance is indicated in time period with attribute BusinessType Z01 and Z02. For time interval of the report till January 1, 2019 volume of positive imbalance is indicated according to the Regulation EBGL.  It always contains a positive value.  Maximum 17 characters. | Required |
| Settlement Amount | NNNNNN.NNNN | Unit price in EUR/MWh or costs/payment in EUR with the precision to 4 decimal places.  For the time interval of the report until December 31, 2018, a positive value in time interval with value of the BusinessType attribute Z01, Z18, Z19 and Z21 represents the liability of subject of imbalance, while the negative value represents the liability of imbalance settler. For the time interval of the report from January 1, 2019 in accordance with Regulation EBGL, the positive value represents the liability of imbalance settler, while the negative value represents the liability of subject of imbalance.  For time interval of the report from January 1, 2019 price sign is rotated in time interval with value of attribute BusinessType Z27 and Z29 in accordance with Regulation EBGL.  In time interval with attribute value BusinessType Z03, Z12, Z22 and Z28 sign of value in element SettlementAmount doesn’t change.  Maximum 17 characters. | Optional |

#### Report on clearing of regulating electricity (Energy Account Report) (SR-01-04)

Response to the request for retrieval of current status of regulating electricity clearing is represented by report on clearing of regulating electricity (EAR, Energy Account Report, type = A10) in accordance with *ENTSO-E ESP V1R1* standard. The system of imbalance clearing XMtrade®/ISZO always returns current values from last performed clearing of regulating electricity.

Within a single data flow, the system returns total details on acquired regulating electricity for the entire system and details on supplied regulating electricity of respective RE supplier in two separate structures.

Report on clearing of regulating electricity (EAR, Energy Account Report), through which entities retrieve details on clearing of regulating electricity, consists of the following parts in accordance with *ESP V1R1* standard:

* *Energy Account Report Header* - contains general details that relate to the entire report.
* *Account Time Series Header* - contains details that relate to the respective time series.
* *Period* – contains details that relate to the period of the respective time series.
* *Account Interval* – contains values of the respective time series.



Energy Account Report Header

Report header contains values of particular elements according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Document Identification | Identification | Document identification.  Maximum 35 characters. | Required |
| Document Version | „1“ | Version of response to the request.  Maximum 3 characters. | Required |
| Document Type | „A10“ | Document type.  A10 – report on clearing of regulating electricity  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Document Status | „A01“ / „A02“ | Status of details in the document.  A01 - continuous report for daily, decadal and monthly clearing of regulating electricity  A02 - final report for final clearing of regulating electricity  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Process Type | „A06“ | Type of process, to which the document is relating.  A06 – clearing of imbalances and regulating electricity  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Classification Type | „A01“ / „A02“ | Communication classification.  A01 – detailed data at the level of subject of settlement  A02 – summary data at the level of balance area  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Sender Identification | EIC OKTE | Document sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A05“ | Document sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC of subject of settlement | Document receiver identification.  Entity EIC is used, specified in *Sender Identification* attribute of the request for retrieval of status.  Maximum 16 characters. | Required |
| Receiver Role | „A01“ / „A08“ / „A28“ | Document receiver role, specified in *Sender Role* attribute of the request for retrieval of status.  A01 – market participant  A08 – subject of settlement  A28 – trading platform  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Document Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of document sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Accounting Period | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Document time interval, specified in *Requested Time Interval* attribute of the request for retrieval of status.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Domain | „10YSK-SEPS-----K“ | Identification of balance area, to which data are relating.  Entity EIC is used.  Maximum 16 characters. | Optional |

##### Account Time Series Header

Header of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Senders Time Series Identification | Identification | Time series identification.  Unique identification within the schedule message.  Maximum 35 characters. | Required |
| Business Type | from „Z03“ up to „Z17“ | Identification of energy data type.  Z03 – positive / negative regulating electricity  Z07 – payment for negative additional costs (till 31.12.2011)  Z09 – payment for supply of negative RE  Z10 – share on negative additional costs (till 31.12.2011)  Z14 – payment for supply of positive RE  Z15 – marginal price of positive RE (till 30.6.2024)  Z16 – marginal price for negative RE (till 30.6.2024)  Z17 – total regulating electricity | Required |
| Product | “8716867000016” | It identifies product type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 13 numeric characters. | Required |
| Object Aggregation | “A01” / “A03” | Object aggregation.  A01 – details at the level of balance area  A03 – details at the level of subject of settlement  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Area | „10YSK-SEPS-----K“ | Balance area.  EIC of balance group is used.  Maximum 16 characters. | Required |
| Party | EIC of subject of settlement | Identification of subject of settlement for details that relate to the subject.  Attribute is not specified for details that relate to the system.  Entity EIC is used.  Maximum 16 characters. | Optional |
| Agreement Identification | - | Identification of agreement on capacity assignment.  Maximum 35 characters. | Optional |
| Measurement Unit | “MWH” | Unit, in which values in time series are inputted (MWh).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Currency | “EUR” | Currency, in which values in time series are inputted (EUR).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Optional |
| Accounting Point | - | Accounting Point.  Accounting point EIC is used.  Maximum 16 characters. | Optional |

##### Period

*Period* header contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Time series interval.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Resolution | „PT15M” | Resolution of time series.  Values are inputted in 15-minute resolution. | Required |

##### Account Interval

Time series contain records for each clearing period of a trading day. Record of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Pos | „1“, „2“, „3“, … | Position of the value in time series.  Time series contain 96 values.  During time shift from Central European time to Central European Summer time and backwards, time series contain 92 or 100 values, respectively.  Maximum 6 characters. | Required |
| In Qty | NNNNNN.NNN | Value of amount in MWh with the precision to 3 decimal places. It always contains a positive value.    Maximum 17 characters. | Required |
| Out Qty | NNNNNN.NNN | Value of amount in MWh with the precision to 3 decimal places. It always contains a positive value.  Maximum 17 characters. | Required |
| Settlement Amount | NNNNNN.NNNN | Payment in EUR with the precision to 4 decimal places. Positive value represents clearing agent obligation, on the contrary negative value represents subject of settlement obligation.  Maximum 17 characters. | Optional |

#### Anomaly Report (SR-01-05)

Anomaly Report (AR, type = A16), through which clearing agent informs on failed matching of day-ahead diagrams, consists of the following parts in accordance with *ESS V3R1* standard:

* *Anomaly Report* - contains details that relate to the entire report.
* *Time Series Anomaly* - contains details that relate to the respective time series.
* *Period* – contains details that relate to the period of the respective time series.
* *Interval* – contains values of the respective time series.
* *Reason* – contains information on anomalies in the time series.

Anomaly report is available via web service only in case that the original schedule message was also submitted via web service.

Information on anomaly of time series (Reason) relates to time series (*Time Series Anomaly*).



##### Anomaly report

Header of anomaly report contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Message Identification | Identification | Message Identification.  Maximum 35 characters. | Required |
| Message Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of message sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Sender Identification | EIC OKTE | Message sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A05” | Message sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC of subject of settlement | Message receiver identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Receiver Role | „A01“ / „A08“ | Message receiver role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Schedule Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Message time interval.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |

##### Time Series Anomaly

Time series identification in anomaly report contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Message Sender Identification | EIC of subject of settlement | Message sender identification, which diagrams are in anomaly.  Entity EIC is used.  Maximum 16 characters. | Required |
| Senders Message Identification | Identification of the original message | Identification of the message, in which diagrams are in anomaly.  Maximum 35 characters. | Required |
| Senders Message Version | Version of the original message | Version of the message, in which diagrams are in anomaly.  Version number is incremented on each additional sending of message modification.  Maximum 3 characters. | Required |

Additional attributes as *Senders Time Series Identification*, *Senders Time Series Version*, *BusinessType*, *Product*, *Object Aggregation*, *In Area*, *Out Area*, *Meteringpoint Identification*, *In Party*, *Out Party*, *Capacity Contract Type*, *Capacity Agreement Identification* and *Measurement Unit* as well as respective information in *Period* and *Interval* sections contain identical values as the respective time series of the original document.

##### Reason

Information on anomaly in the schedule message contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Reason Code | AXY | Information on anomaly of the time series and reasons for the failure to match.  According to ENTSO-E General Code List For Data Interchange.  A09 - Time series not matching  A27 - Cross border capacity exceeded  A28 - Counterpart time series missing  A29 - Counterpart time series quantity  differences | Required |
| Reason Text | Open text | Additional text justification. | Optional |

#### Confirmation report (SR-01-06)

Confirmation report (CR, type = A07/A08/A18), through which clearing agent informs on acceptance of day-ahead diagrams, consists of the following parts in accordance with *ESS V3R1* standard:

* *Confirmation Report* - contains details that relate to the entire report.
* *Time Series Confirmation* - contains details that relate to the time series.
* *Imposed Time Series* – contains details that relate to the imposed time series.
* *Period* – contains details that relate to the period of the respective time series.
* *Interval* – contains values of the respective time series.
* *Reason* – contains information on acceptance of time series.

Confirmation report is available via web service only in case that the original schedule message was also submitted via web service.

Depending on a specific case, information on document acceptance (Reason) relates either to the document as a whole (*Confirmation Report*), to time series (*Time Series Confirmation / Imposed Time Series*), or to the respective value of time series (*Interval*). Use of particular document parts is therefore dependent on a specific case.



##### Confirmation Report

*Confirmation report* header contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Message Identification | Identification | Message Identification.  Maximum 35 characters. | Required |
| Message Type | "A07" / "A08" / „A18“ | Message type.  A07 – continuous confirmation report  A08 – final confirmation report  A18 – final confirmation report  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Message Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of message sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Sender Identification | EIC OKTE | Message sender identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A05” | Message sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC of subject of settlement | Message receiver identification.  Entity EIC is used.  Maximum 16 characters. | Required |
| Receiver Role | „A01“ / „A08“ | Message receiver role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Schedule Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Message time interval.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the message in UTC (Universal Time Coordinated). | Required |
| Confirmed Message Identification | Identification | Identification of the original schedule message, which the confirmation report relates to. | Required |
| Confirmed Message Version | “1”, “2”, “3”, ... | Version of the original schedule message, which the confirmation message relates to. | Optional |
| Domain | „10YSK-SEPS-----K“ | Identification of balance area, for which the schedule is specified.  Entity EIC is used.  Maximum 16 characters. | Required |
| Subject Party | EIC of subject of settlement | Identification of entity, for which the schedule is set up.  Entity EIC is used.  Maximum 16 characters. | Required |
| Subject Role | „A01“ / „A08“ | Role of entity, for which the schedule is set up.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Process Type | „A01“ / „A02“ | Type of the process, to which the message is relating.  A01 - day-ahead registration of diagrams  A02 - intraday registration of diagrams  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |

##### Time Series Confirmation

All time series, which were sent for respective subject of settlement, are specified within this section. Eventual discrepancies in rejected time series are identified via *Reason Code*. Attributes as *Senders Time Series Identification*, *Senders Time Series Version*, *BusinessType*, *Product*, *Object Aggregation*, *In Area*, *Out Area*, *Meteringpoint Identification*, *In Party*, *Out Party*, *Capacity Contract Type*, *Capacity Agreement Identification* and *Measurement Unit* contain identical values as values in time series of the original document.

##### Imposed Time Series

Time series, which were imposed within registration rules of day-ahead diagrams (e.g. cross-border diagrams, successfully traded amount on the organized market and so on), are specified within this section. Time series identification in confirmation report contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Imposed Time Series Identification | Identification | Time series identification.  Unique identification within the schedule message.  Maximum 35 characters. | Required |
| Imposed Time Series Version | “1”, “2”, “3”, ... | Time series version.  Version number should be identical to the number of the schedule message, in which the time series was inputted or modified for the last time.  Maximum 3 characters. | Required |
| Business Type | “A02” / „A06“ | Contract type.  A02 - internal contract  A06 - external contract  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Product | “8716867000016” | It identifies product type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 13 numeric characters. | Required |
| Object Aggregation | “A03” | Object aggregation.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| In Area | „10YSK-SEPS-----K“ | Balance area, to which the product is supplied.  EIC of balance area is used.  Maximum 16 characters. | Required |
| Out Area | „10YSK-SEPS-----K“ | Balance area, out of which the product is taken.  EIC of balance area is used.  Maximum 16 characters. | Required |
| Metering Point Identification | - | Metering point identification.  Maximum 35 characters. | Optional |
| In Party | EIC of subject of settlement or EIC SEPS zahraničie | Consumer identification for internal diagrams.  EIC of subject of settlement is specified for time series that represent import to SEPS.  EIC SEPS zahraničie is specified for time series that represent export to SEPS.  Entity EIC is used.  Maximum 16 characters. | Required |
| Out Party | EIC of subject of settlement  or EIC SEPS zahraničie | Identification of supplier for internal diagrams.  EIC of subject of settlement is specified for time series that represent export to SEPS.  EIC SEPS zahraničie is specified for time series that represent import to SEPS.  Entity EIC is used  Maximum 16 characters. | Required |
| Capacity Contract Type | - | Capacity contract type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Optional |
| Capacity Agreement Identification | - | Identification of agreement on capacity assignment.  Maximum 35 characters. | Optional |
| Measurement Unit | “MAW” | Unit, in which the values in time series are inputted (MW).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |

##### Period

*Period* header contains values of particular attributesas *Time Interval* and *Resolution* that are identical to values in the original document. In case of imposed time series, these values are identical to values within other time series of subject of settlement.

##### Interval

Time series contain records for each clearing period of a trading day. Record of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Pos | „1“, „2“, „3“, … | Position of the value in time series.  Time series contain 96 values.  During time shift from Central European time to Central European Summer time and backwards, time series contain 92 or 100 values, respectively.  Maximum 6 characters. | Required |
| Qty | NNNNNN.NNN | Value of amount in MW with the precision to 3 decimal places. It always contains a positive number for increase of consumption or supply. Values without increase are represented by null.  Maximum 17 characters. | Required |

##### Reason

Information on acceptance, rejection or imposition of time series in the schedule message contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Reason Code | AXY | Information on acceptance, rejection or imposition of time series and reasons for rejection and imposition.  According to ENTSO-E General Code List For Data Interchange.  At the message level:  A06: Schedule global position accepted  A07: Schedule global position partially accepted  A08: Schedule global position rejected  At the level of time series:  A20: Time series fully rejected  A26: Default time series applied  A30: Imposed Time series from nominated party's time  series (party identified in reason text)  A63: Time series modified  At the interval level:  A43: Quantity increased  A44: Quantity decreased  A45: Default quantity applied | Required |
| Reason Text | Open text | Additional text justification. | Optional |

#### Report on clearing of differences (Energy Account Report) (SR-01-07)

Response to the request for retrieval of current status of clearing of differences is represented by report on clearing of differences (EAR, Energy Account Report, type = Z01) in accordance with *ENTSO-E ESP V1R1* standard. The system of imbalance clearing XMtrade®/ISZO always returns current values from last performed clearing of differences.

Within a single data flow, the system returns total details on differences of respective subject of settlement.

Report on clearing of differences (EAR, Energy Account Report), through which subjects of settlement retrieve details from clearing of differences, consists of the following parts in accordance with *ESP V1R1* standard:

* *Energy Account Report Header* - contains general details that relate to the entire report.
* *Account Time Series Header* - contains details that relate to the respective time series.
* *Period* – contains details that relate to the period of the respective time series.
* *Account Interval* – contains values of the respective time series.



Energy Account Report Header

Report header contains values of particular elements according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Document Identification | Identification | Document Identification.  Maximum 35 characters. | Required |
| Document Version | „1“ | Version of response to the request.  Maximum 3 characters. | Required |
| Document Type | „Z01“ | Document type.  Z01 – report on clearing of differences  Maximum 3 characters. | Required |
| Document Status | „A01“ / „A02“ | Status of details in the document.  A01 – report for monthly clearing of differences  A02 – report for final clearing of differences  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Process Type | „Z01“ | Type of process, to which the document is relating.  Z01 – clearing of differences  Maximum 3 characters. | Required |
| Classification Type | „A01“ | Communication classification.  A01 – detailed data at the level of subject of settlement  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Sender Identification | EIC OKTE | Identification of subject of settlement.  Entity EIC is used.  Maximum 16 characters. | Required |
| Sender Role | „A05“ | Document sender role.  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Receiver Identification | EIC of subject of settlement | Document receiver identification.  Entity EIC is used, specified in *Sender Identification* attribute of the request for retrieval od status.  Maximum 16 characters. | Required |
| Receiver Role | „A08“ | Document receiver role, specified in *Sender Role* attribute of the request for retrieval of status.  A08 – subject of settlement  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Document Date Time | YYYY-MM-DDTHH:MM:SSZ | Date of document sending.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Accounting Period | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Document time interval, specified in *Requested Time Interval* attribute of the request for retrieval of status.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Domain | „10YSK-SEPS-----K“ | Identification of balance area, to which data are relating.  Entity EIC is used.  Maximum 16 characters. | Optional |

##### Account Time Series Header

Header of time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Senders Time Series Identification | Identification | Time series identification.  Unique identification within the schedule message.  Maximum 35 characters. | Required |
| Business Type | from „Z01“ up to „Z07“ | Identification of energy data type.  Z01 – differences of non-continuous consumptions  Z02 – differences of non-continuous supplies  Z03 – differences of losses in systems balanced from below  Z04 – differences of aggregates for systems balanced from above  Z06 – data for payment of subject of settlement  Z07 – data for payment of OKTE  Z08 – compensatory price for clearing of differences | Required |
| Product | “8716867000016” | It identifies product type.  According to ENTSO-E General Code List For Data Interchange.  Maximum 13 numeric characters. | Required |
| Object Aggregation | “A03” | Object aggregation.  A03 – details at the level of subject of settlement  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Area | „10YSK-SEPS-----K“ | Balance area.  EIC of balance group is used.  Maximum 16 characters. | Required |
| Party | EIC of subject of settlement | Identification of subject of settlement for details that relate to the subject.  Entity EIC is used.  Maximum 16 characters. | Optional |
| Agreement Identification | - | Identification of agreement on capacity assignment.  Maximum 35 characters. | Optional |
| Measurement Unit | “MWH” | Unit, in which the values in time series are inputted (MW).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Required |
| Currency | “EUR” | Currency, in which the values in time series are inputted (EUR).  According to ENTSO-E General Code List For Data Interchange.  Maximum 3 characters. | Optional |
| Accounting Point | - | Accounting Point.  Accounting point EIC is used.  Maximum 16 characters. | Optional |

##### Period

Period header contains values of particular attributes according to the following table.

|  |  |  |  |
| --- | --- | --- | --- |
| **Element** | **Value** | **Description** | **Use** |
| Time Interval | YYYY-MM-DDTHH:MMZ/  YYYY-MM-DDTHH:MMZ | Time series interval, for which unified compensatory price for clearing of differences is applied.  Date and time format:  YYYY - year  MM - month  DD - day  HH - hour  MM - minute  Date and time items are inserted into the document in UTC (Universal Time Coordinated). | Required |
| Resolution | „PnD” | Resolution of time series that is represented by the number of days (n) of the interval specified in *Time Interval* attribute. | Required |

##### Account Interval

Time series contains a single record for the total interval specified in the header of period. Record of the time series contains values of particular attributes according to the following table.

| **Element** | **Value** | **Description** | **Use** |
| --- | --- | --- | --- |
| Pos | „1“ | Identification of time interval value. | Required |
| In Qty | NNNNNN.NNN | Value of difference amount in MWh with the precision to 3 decimal places representing shortage of electricity in the time interval with the value of Z01, Z02, Z03, Z04, Z05 and Z06 of *BusinessType* attribute.  For the time interval of the report till December 31, 2018, volume of positive imbalance is indicated. For the time interval of the report from January 1, 2019, volume of the negative imbalance is indicated in accordance with Regulation EBGL.  It always contains a positive value.    Maximum 17 characters. | Required |
| Out Qty | NNNNNN.NNN | Value of difference amount in MWh with the precision to 3 decimal places representing surplus of electricity in the time series with the value of Z01, Z02, Z03, Z04, Z05 and Z07 of *BusinessType* attribute.  For the time interval of the report till December 31, 2018, volume of negative imbalance is indicated. For the time interval of the report from January 1, 2019, volume of positive imbalance is indicated in accordance with Regulation EBGL.  It always contains a positive value.  Maximum 17 characters. | Required |
| Settlement Amount | NNNNNN.NNNN | Unit price in EUR/MWh or payment in EUR to 4 decimal places.  For the time interval of the report till December 31, 2018, a positive value in the time interval with the value of the BusinessType attribute Z06 and Z07 represents the liability of subject of imbalance, while the negative value represents the liability of imbalance settler. For the time interval of the report from anuary 1, 2019 in accordance with Regulation EBGL, positive value represents the liability of imbalance settler, while the negative value represents the liability of subject of imbalance.  In the time interval with the value of the BusinessType attribute Z08, the sign of the balancing price for the settlement of differences doesn’t change.  Maximum 17 characters. | Optional |

# LIST OF FIGURES

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