Technical specification of external interfaces
V2.8

CLEARING AGENT INFORMATION SYSTEM
XMtrade®/ISZO V2.25

sféra
Grafické informačné systémy

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History of changes

Date	Version	Description	Author
11/30/2008	1.0	Document processing	Libor Láznička, Miroslav Galajda
12/15/2008	1.1	Specification of web service placement and their WSDL documents	Miroslav Galajda
1/23/2009	1.2	• Extension of SOAP headers with *WS-Addressing* support of August 2004 version. • Refinement of communication scenarios for RD-01 and RD-02 web services and structures and their responses (AsyncIdentificator added). • Extension of request structure of SR-01 service with additional parameter of asynchronous request identification (AsyncIdentificator) • Format of *MessageIdentification* identification of schedule message of trading platforms set as required, chapter RD-02-01.	Libor Láznička, Miroslav Galajda
1/29/2009	1.3	• Specification of web service addresses through secured https protocol, chapter Description of web services.	Miroslav Galajda
3/2/2009	1.4	• Correction of „typos“ of date format specification in elements of *DocumentDateTime* and *MessageDateTime* structures. Change From: YYYY-MMDDTHH: MM:SSZ To: YYYY-MM-DDTHH:MM:SSZ • Extension of SOAP headers with WS-Addressing support of August 2004 version.	Miroslav Galajda
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

Date	Version	Description	Author
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
7/16/2024	2.8	• New SANDBOX environment https://sandbox-iszo.okte.sk available for market participants.	Anton Weissensteiner

1 INTRODUCTION

1.1 Characteristics of the document

1.1.1 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.

1.1.2 Specification of the document

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

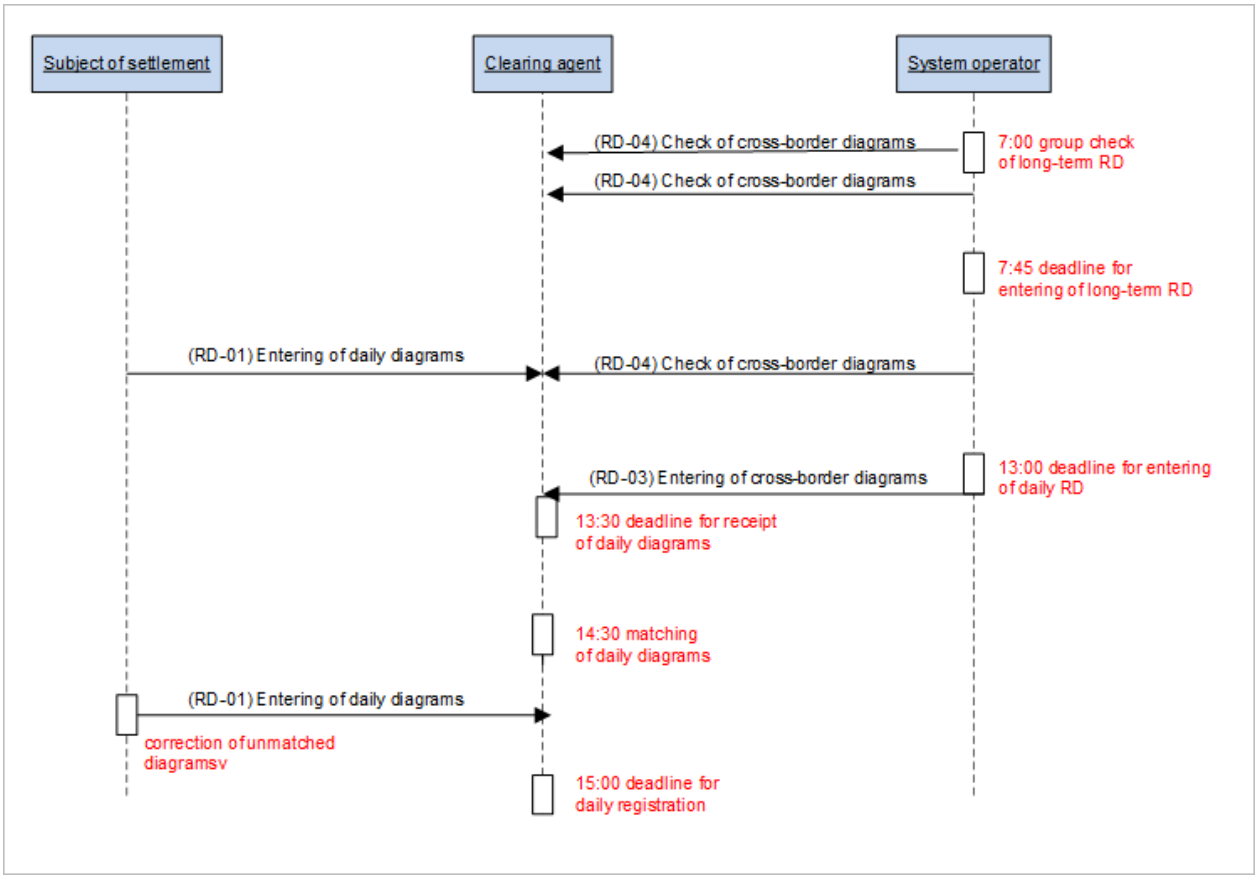
2 OVERVIEW OF EXTERNAL INTERFACES

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.

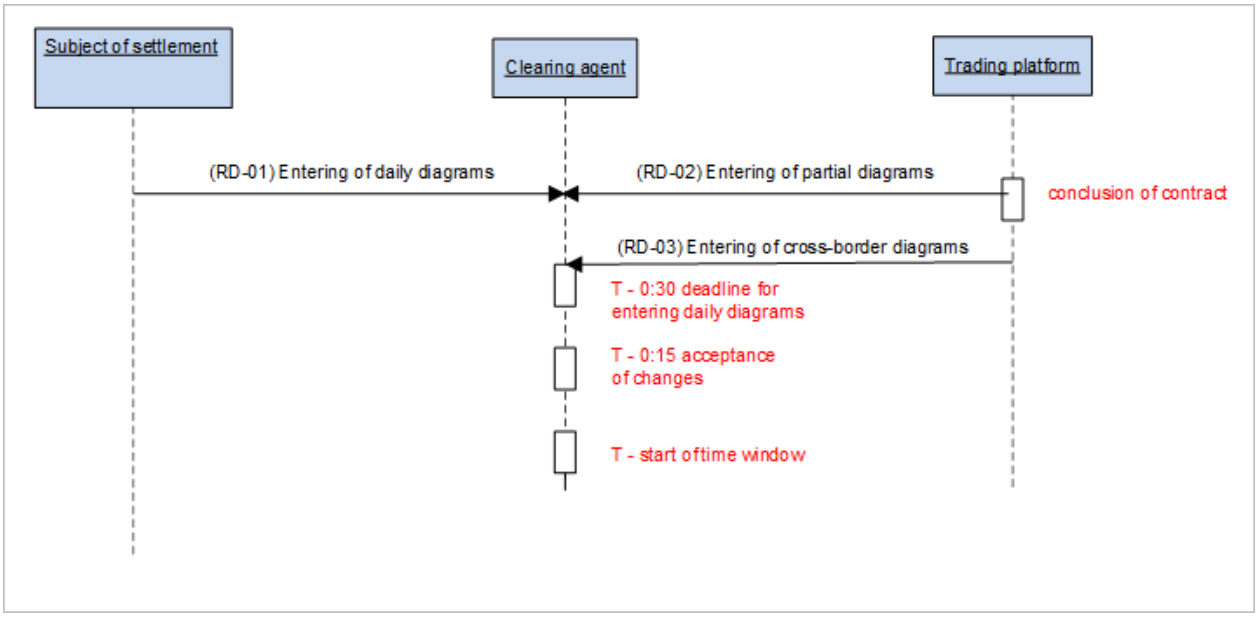
ID	Name	Description
RD-01	Input of day-ahead diagrams	- allows subjects of settlement an automated interface for input of day-ahead diagrams.
RD-02	Input of partial diagrams	- allows operators of trading platforms an automated interface for input of partial day-ahead diagrams.
SR-01	Retrieval of status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

2.1 Overview of data flows

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



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


Subject of settlement
Clearing agent
Trading platform
(RD-01) Entering of daily diagrams
(RD-02) Entering of partial diagrams
conclusion of contract
(RD-03) Entering of cross-border diagrams
T - 0:30 deadline for entering daily diagrams
T - 0:15 acceptance of changes
T - start oftime window

3 COMMUNICATION SPECIFICATION

3.1 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	SubjectOfSettlementScheduling	Schedule	- allows subjects of settlement an automated interface for input of day-ahead diagrams.
RD-02	BusinessPlatformScheduling	Schedule	- allows operators of trading platforms an automated interface for input of partial day-ahead diagrams.
SR-01	StatusRequest	GetStatus	- allows market participants an automated interface for retrieval of status on processing of asynchronous operation/process.

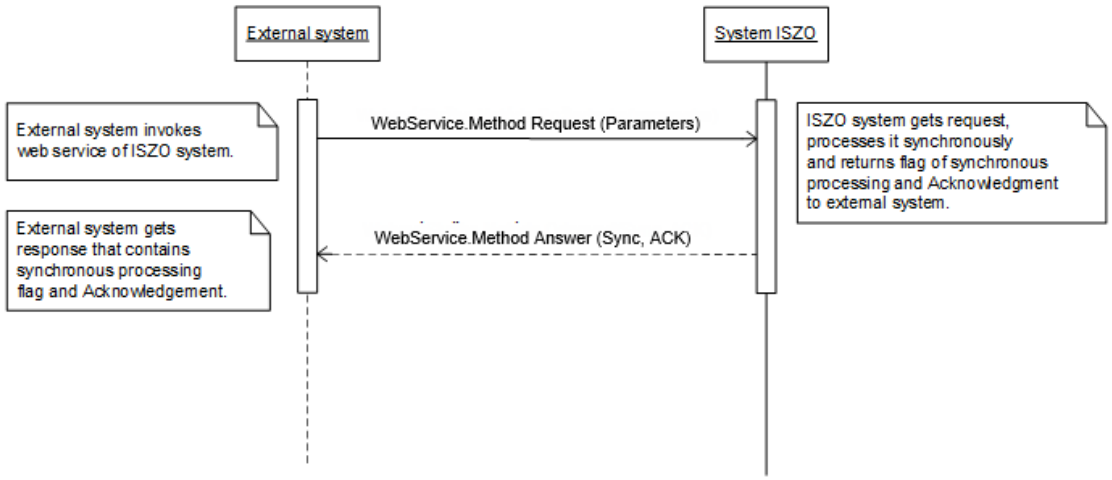
Specified web services communicate in synchronous mode. However, certain types of interfaces allow to process the request in the background. In such case general common *StatusRequest* web service serves for asynchronous retrieval of result according to *ENTSO-E Status Request* standard (SR-01).

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.

3.1.1 Communication scenarios

Synchronous communication

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

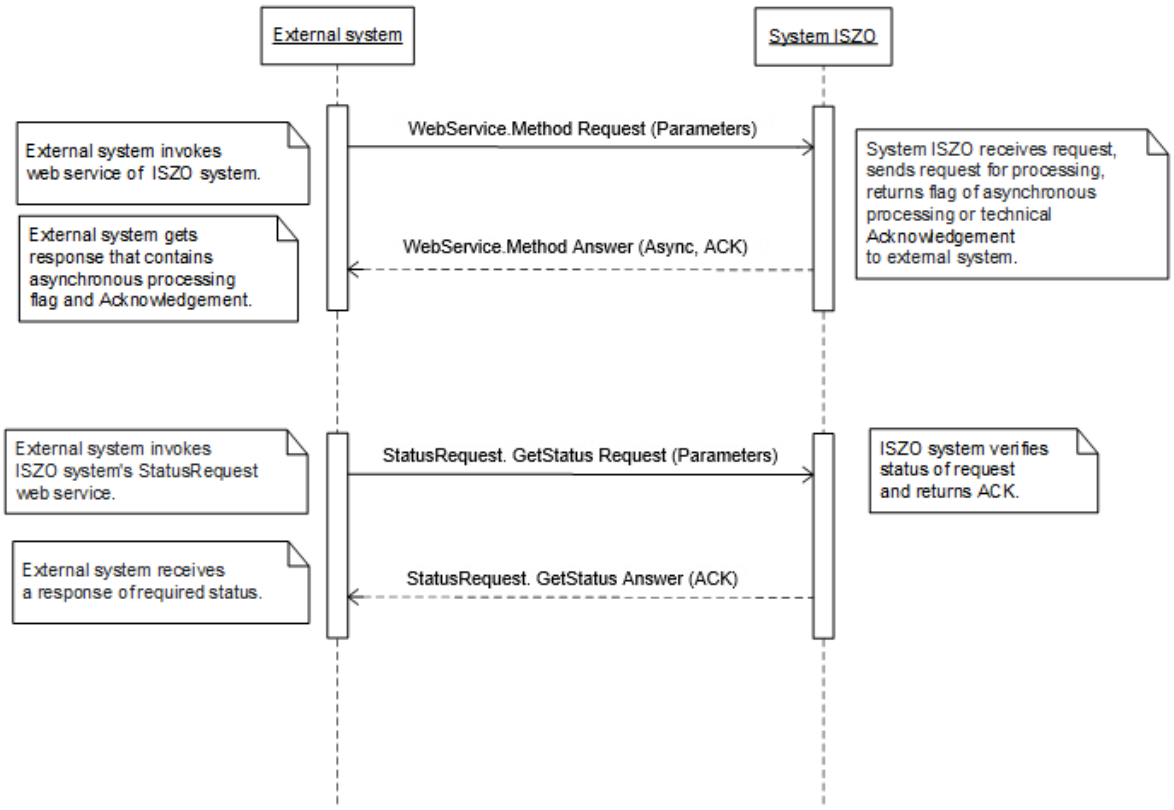


Synchronous call of web method processes the request and returns the corresponding response.

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),
- 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**.
- 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.

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>
  <MethodNameRequest xmlns="http://sfera.sk/ws/xmtrade/iszo/NameOfService/services/Version">
       <!-- message document  -->
  </MethodNameRequest>
</s:Body>
```

Response:

```
<s:Body>
  <MethodNameResponse xmlns="http://sfera.sk/ws/xmtrade/iszo/NameOfService/services/Version">
    <MethodNameResult>
       <!-- message document -->
    </MethodNameResult>
  </MethodNameResponse>
</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.

3.1.2 SubjectOfSettlementScheduling

SubjectOfSettlementScheduling web service (RD-01) 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* 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.

Description of response structure

ScheduleResponse	Description
ScheduleResult	Common return structure of result for input of diagrams, see 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:

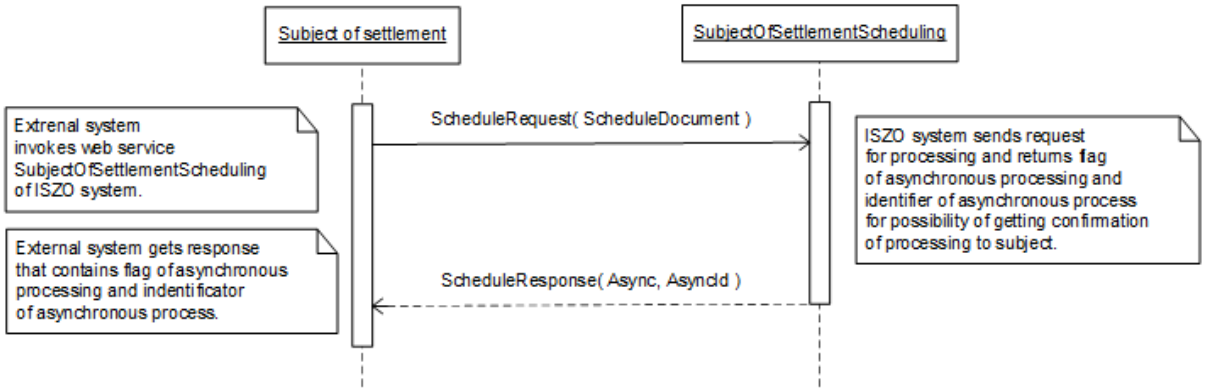
```
HTTP/1.1 200 OK
Server: ASP.NET Development Server/9.0.0.0
Date: Sun, 30 Nov 2008 16:58:25 GMT
X-AspNet-Version: 2.0.50727
Cache-Control: private
Content-Type: application/soap+xml; charset=utf-8
Content-Length: ...
Connection: Close

<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

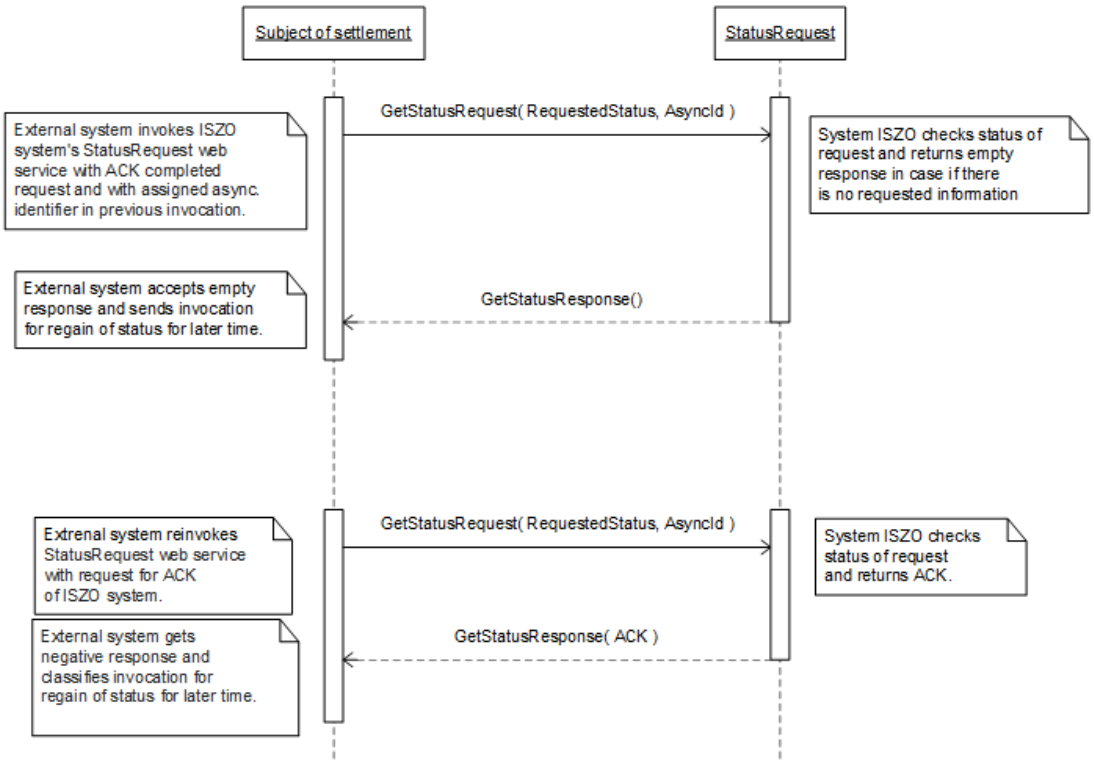
Schedule

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.



3.1.3 BusinessPlatformScheduling

BusinessPlatformScheduling web service (RD-02) 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* 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.

Description of response structure

ScheduleResponse	Description
ScheduleResult	Common return structure of result for input of diagrams, see 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:

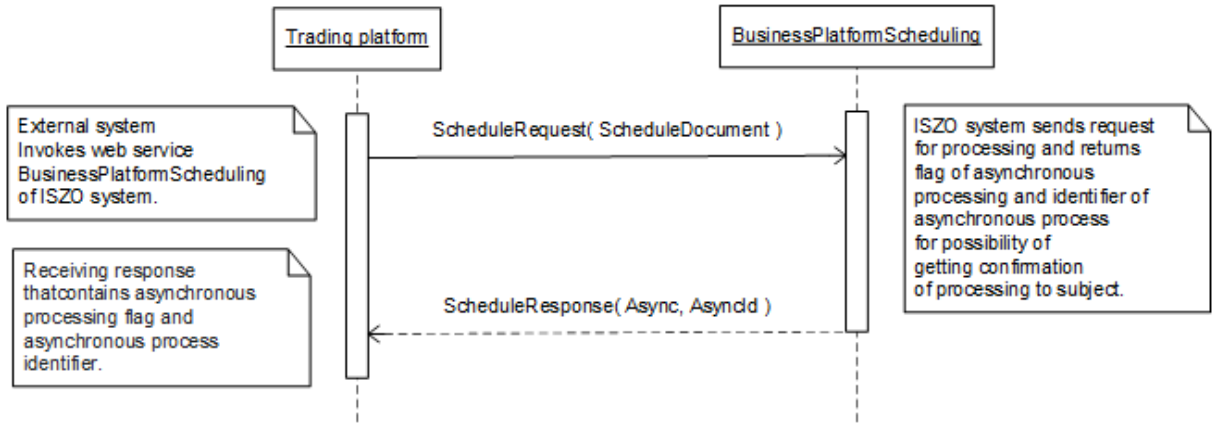
```
HTTP/1.1 200 OK
Server: ASP.NET Development Server/9.0.0.0
Date: Sun, 30 Nov 2008 16:58:25 GMT
X-AspNet-Version: 2.0.50727
Cache-Control: private
Content-Type: application/soap+xml; charset=utf-8
Content-Length: ...
Connection: Close

<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

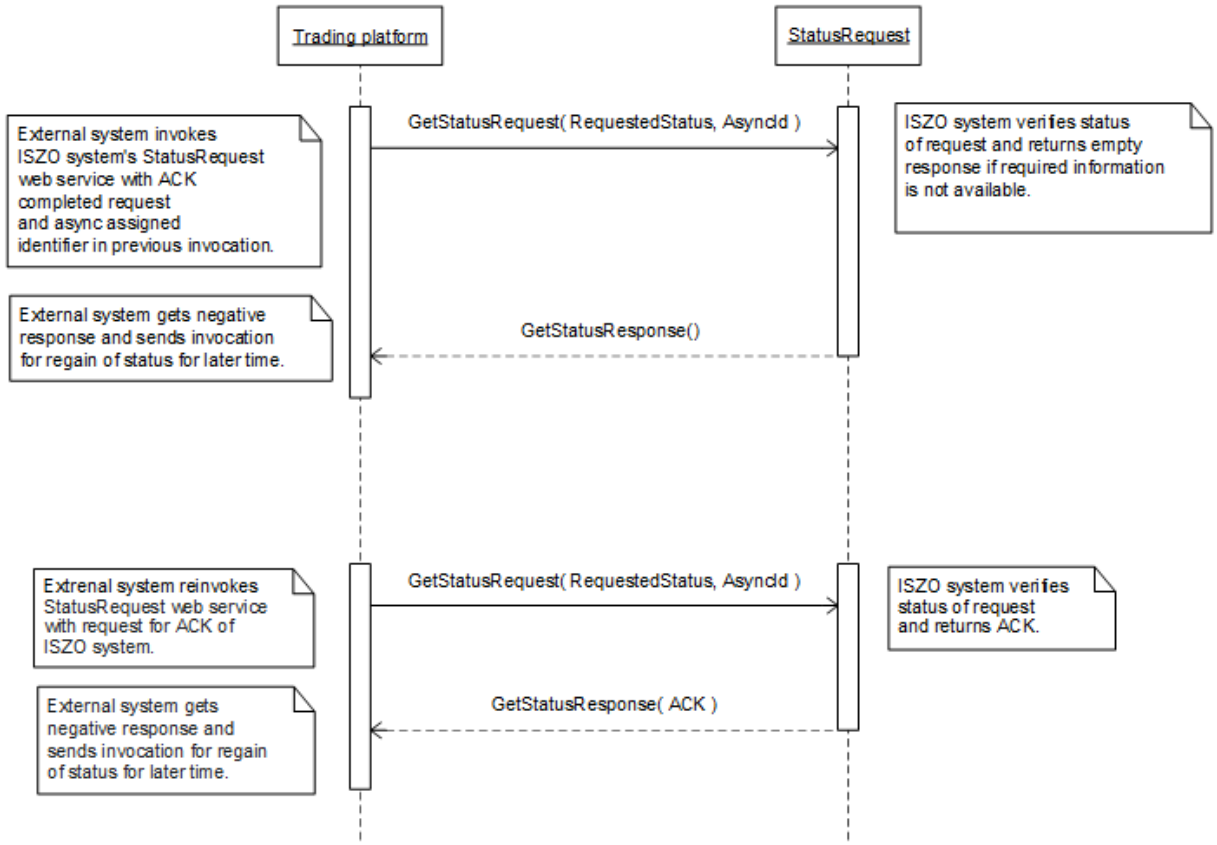
Schedule

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.



3.1.4 StatusRequest service

StatusRequest service (SR-01) 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.

Description of response structure

GetStatusResponse	Description
Acknowledgement	Acknowledgement report SR-01-02.
DeviationEnergyAccountReports [0..2]	Report on imbalance clearing SR-01-03. (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. (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.
ConfirmationReport	Confirmation report SR-01-06.
DifferencesEnergyAccountReport	Report on clearing of differences SR-01-07.

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>
```

3.1.5 Common data structures

AcknowledgementResult

Member name	Values	Description
ProcessedAs	Synchronous Asynchronous	Mode, in which the request was processed.
Acknowledgement	See RD-01-02, RD-02-02.	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.

3.2 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).

3.2.1 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).

3.2.2 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/NameOfSer
viceContract/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>
```

3.2.3 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.

3.3 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.

3.3.1 Production environment

ID	Web service name	Service address /WSDL document
RD-01	SubjectOfSettlementScheduling	https://iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc https://iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc?wsdl
RD-02	BusinessPlatformScheduling	https://iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc https://iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc?wsdl
SR-01	StatusRequest	https://iszo.okte.sk/interfaces/StatusRequest/Service.svc https://iszo.okte.sk/interfaces/StatusRequest/Service.svc?wsdl

3.3.2 SANDBOX environment

ID	Web service name	Service address /WSDL document
RD-01	SubjectOfSettlementScheduling	https://sandbox-iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc https://sandbox-iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc?wsdl
RD-02	BusinessPlatformScheduling	https://sandbox-iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc https://sandbox-iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc?wsdl

ID	Web service name	Service address /WSDL document
SR-01	StatusRequest	https://sandbox-iszo.okte.sk/interfaces/StatusRequest/Service.svc https://sandbox-iszo.okte.sk/interfaces/StatusRequest/Service.svc?wsdl

Service addresses of SANDBOX environment are almost identical to production addresses. They solely differ in the domain name of the address: https://sandbox-iszo.okte.sk instead of https://iszo.okte.sk.

3.3.3 Testing environment

ID	Web service name	Service address /WSDL document
RD-01	SubjectOfSettlementScheduling	https://test-iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc https://test-iszo.okte.sk/interfaces/SubjectOfSettlementScheduling/Service.svc?wsdl
RD-02	BusinessPlatformScheduling	https://test-iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc https://test-iszo.okte.sk/interfaces/BusinessPlatformScheduling/Service.svc?wsdl
SR-01	StatusRequest	https://test-iszo.okte.sk/interfaces/StatusRequest/Service.svc https://test-iszo.okte.sk/interfaces/StatusRequest/Service.svc?wsdl

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

3.4 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.

3.4.1 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.

2. 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="WSSecurity10WSTrustFebruary2005WSSecureConversationFebruary2005WSSecuri
tyPolicy11BasicSecurityProfile10"
            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>
```

4 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

4.1 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/.

4.1.1 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.

4.1.2 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.

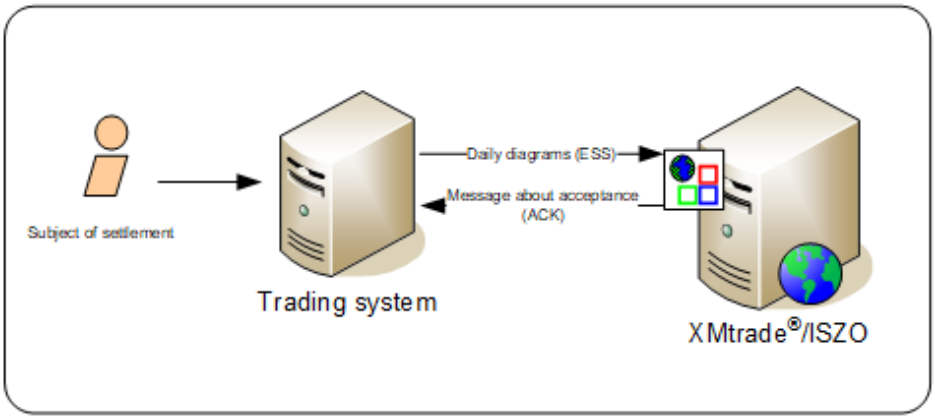


Figure 1 Interface for day-ahead diagrams

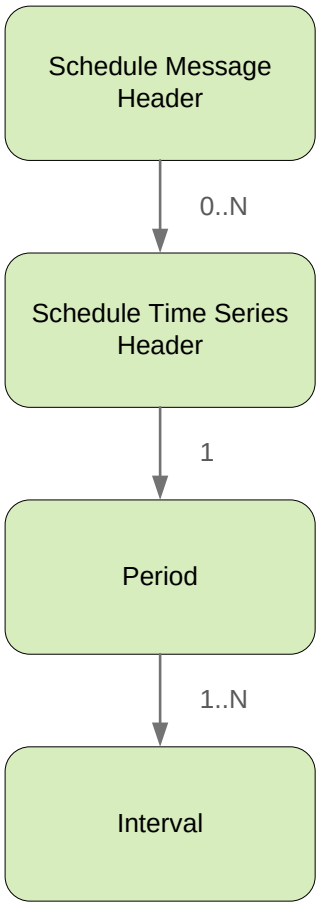
4.1.3 Data structures

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

Element	Value	Description	Use
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	Required

Element	Value	Description	Use
		Date and time items are inserted into the message in UTC (Universal Time Coordinated).	
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

Element	Value	Description	Use
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

Element	Value	Description	Use
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

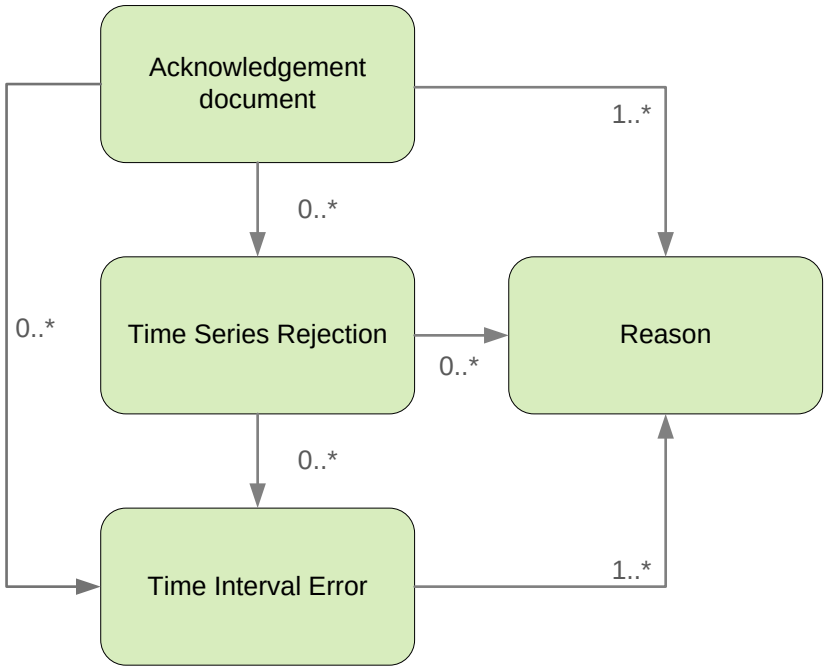
Element	Value	Description	Use
Qty	NNNNNN.NNN	Value of amount in MW with the precision to 3 decimal places. It always contains a positive number for increase of consumption or supply. Values without increase are represented by null. Maximum 17 characters.	Required

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.	Required

Element	Value	Description	Use
		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).	
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	Required

Element	Value	Description	Use
		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 <u>At the level of time series:</u> 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 <u>At the period level:</u> A04 - Time interval incorrect <u>At the interval level:</u> 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	
Reason Text	Open text	Additional text justification.	Optional

4.2 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/.

4.2.1 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 platform and subject of settlement are informed on successful acceptance or rejection of partial diagram in accordance with *ESS/EAD* standard via Acknowledgement Report.

4.2.2 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.

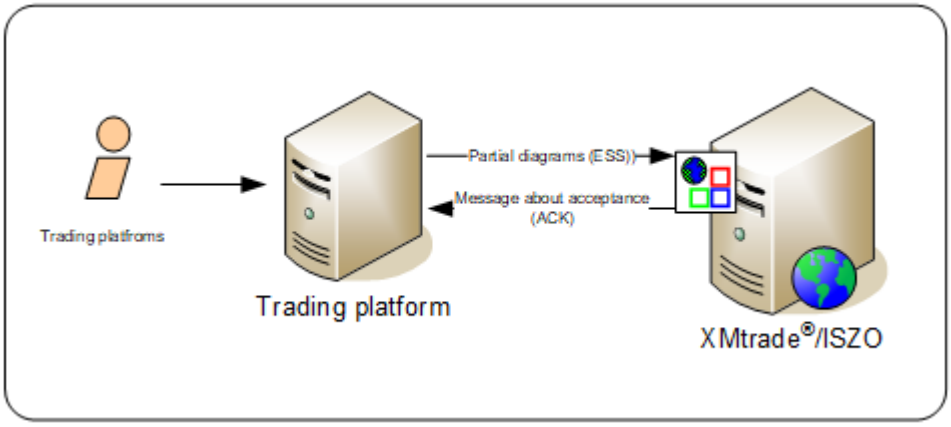


Figure 2 Interface for partial diagrams

4.2.3 Data structures

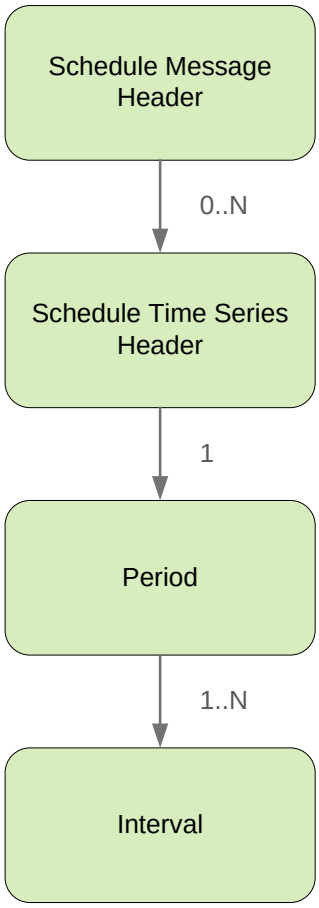
Schedule message is used in accordance with *ESS V3R1* standard for automated input of partial diagrams into the imbalance clearing information system XMtrade®/ISZO. *EIC* standard is used for identification of entities and balance areas. Schedule message utilizes *ENTSO-E General Code List For Data 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.	Required

Element	Value	Description	Use
		Maximum 3 characters.	
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	Required

Element	Value	Description	Use
		Date and time items are inserted into the message in UTC (Universal Time Coordinated).	
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	Required

Element	Value	Description	Use
		According to ENTSO-E General Code List For Data Interchange. Maximum 3 characters.	
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.

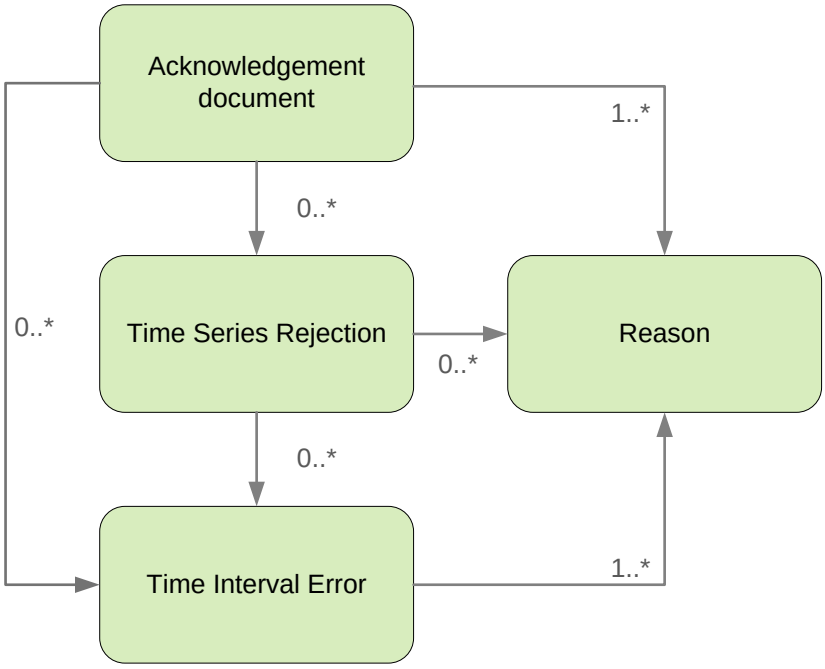
Element	Value	Description	Use
Pos	„1“, „2“, „3“, …	Position of the value in time series. Time series contain 96 values. During time shift from Central European time to Central European Summer time and backwards, time series contain 92 or 100 values, respectively. Maximum 6 characters.	Required
Qty	NNNNNN.NNN	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

Element	Value	Description	Use
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	Required

Element	Value	Description	Use
		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	
Reason Text	Open text	Additional text justification.	Optional

4.3 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/.

4.3.1 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.

4.3.2 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/ 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

Element	Value	Description	Use
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	Required

Element	Value	Description	Use
		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).	

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, RD-02-02 responses in case that the schedule message was inputted via a web service.

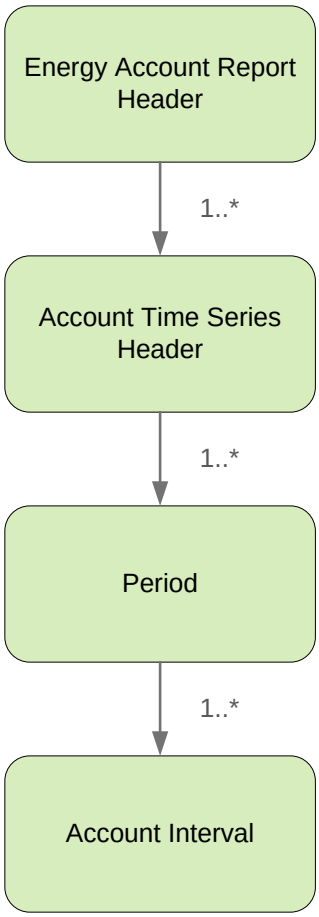
Report on imbalance clearing (Energy Account Report) (SR-01-03)

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	Required

Element	Value	Description	Use
		According to ENTSO-E General Code List For Data Interchange. Maximum 3 characters.	
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

Element	Value	Description	Use
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	Required

Element	Value	Description	Use
		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)	
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

Element	Value	Description	Use
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.	Required

Element	Value	Description	Use
		Maximum 6 characters.	
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

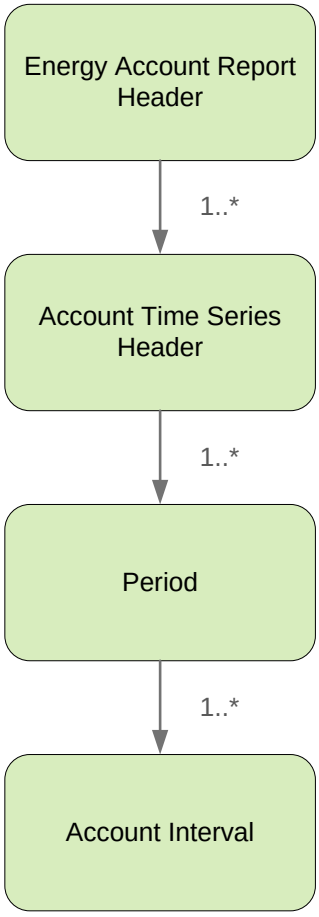
Report on clearing of regulating electricity (Energy Account Report) (SR-01-04)

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

Element	Value	Description	Use
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.	Required

Element	Value	Description	Use
		Maximum 16 characters.	
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

Element	Value	Description	Use
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).	Optional

Element	Value	Description	Use
		According to ENTSO-E General Code List For Data Interchange. Maximum 3 characters.	
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

Element	Value	Description	Use
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

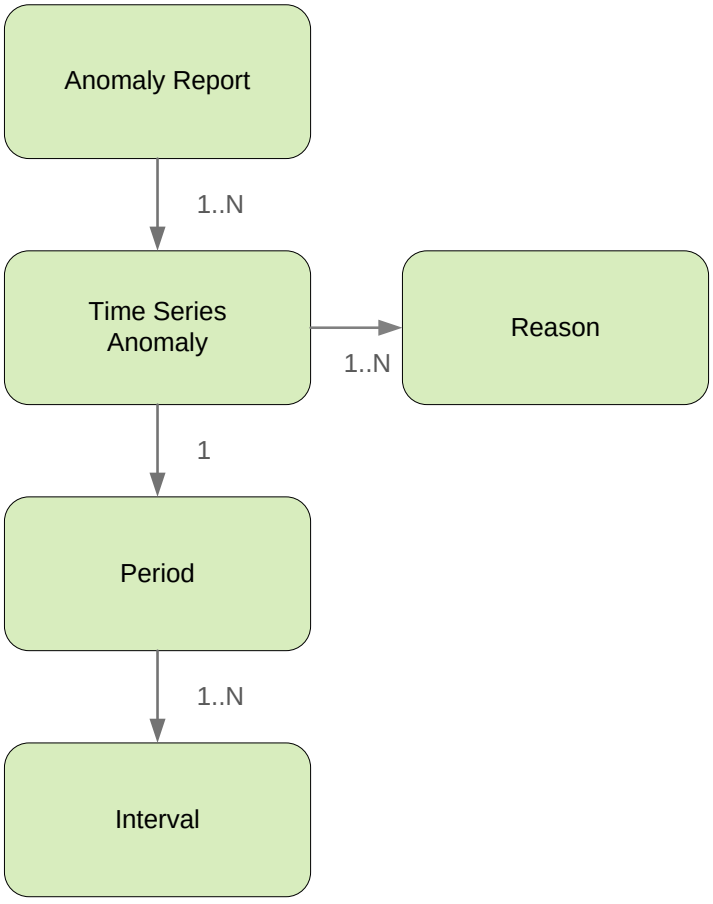
Anomaly Report (SR-01-05)

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)

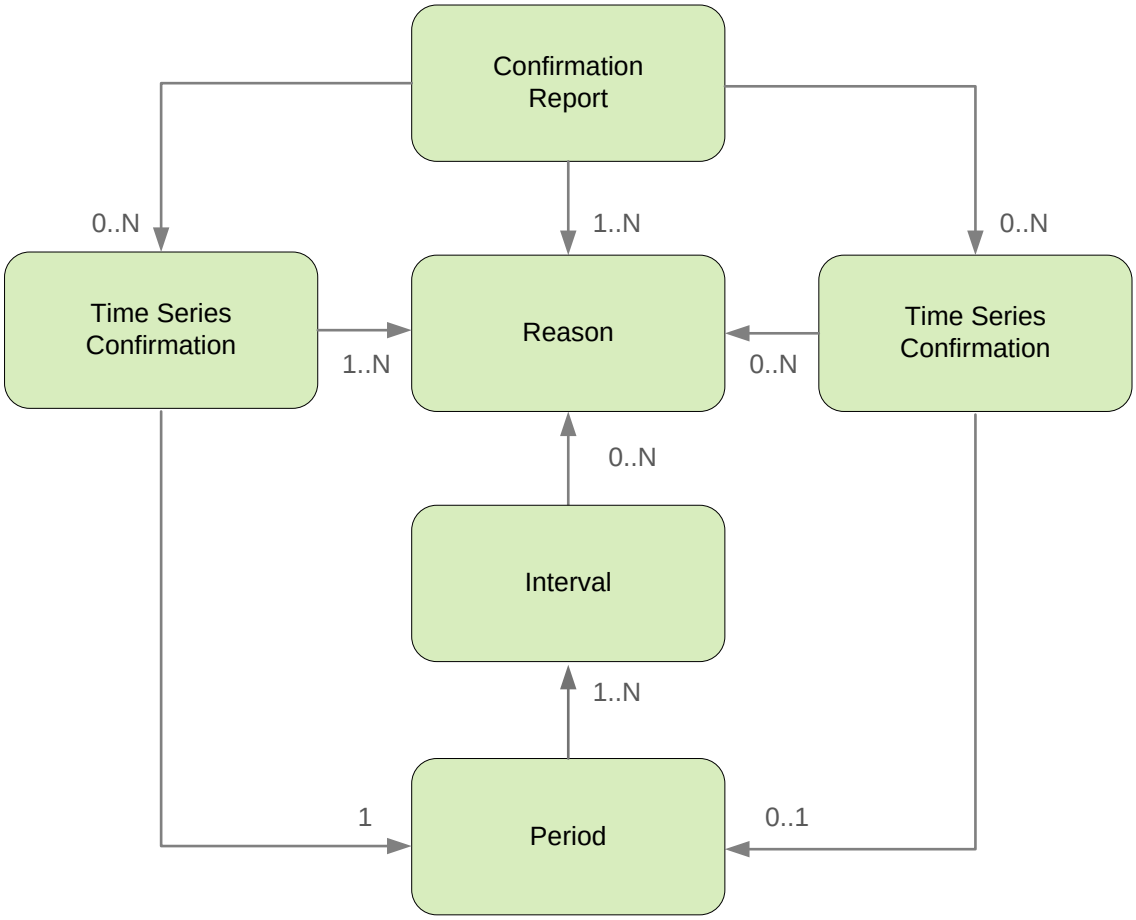
Confirmation report (CR, type = A07/A08/A18), through which clearing agent informs on acceptance of day-ahead diagrams, consists of the following parts in accordance with *ESS V3R1* standard:

- *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

Element	Value	Description	Use
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.	Required

Element	Value	Description	Use
		Maximum 16 characters.	
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.	Required

Element	Value	Description	Use
		Maximum 3 characters.	
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	Required

Element	Value	Description	Use
		Maximum 16 characters.	
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 attributes as *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.	Required

Element	Value	Description	Use
		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	
Reason Text	Open text	Additional text justification.	Optional

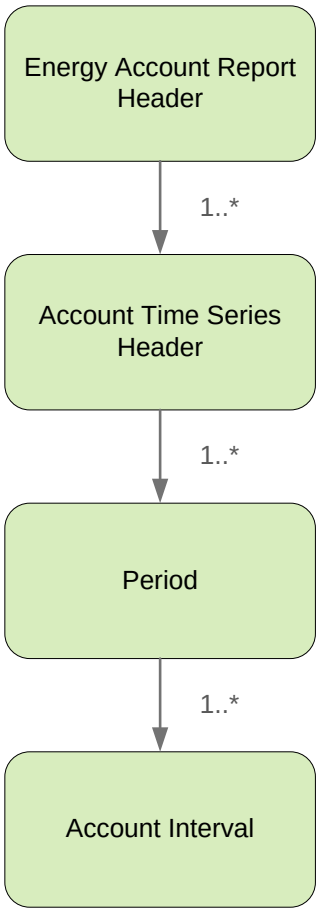
Report on clearing of differences (Energy Account Report) (SR-01-07)

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

Element	Value	Description	Use
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

Element	Value	Description	Use
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	Required

Element	Value	Description	Use
		According to ENTSO-E General Code List For Data Interchange. Maximum 3 characters.	
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	Required

		Date and time items are inserted into the document in UTC (Universal Time Coordinated).	
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	Optional

Element	Value	Description	Use
		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.	

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Figure 2 Interface for partial diagrams 34