CYPRUS Market Management System

Market Participant Interfaces Technical Description

November 2024

Version 2.0

TRANSMISSION SYSTEM OPERATOR

Market Participant Interfaces Technical Description~~Market Participant Interfaces Technical Description~~

Document and Revision Level	Publication Date
Market Participant Interfaces	March 2021

Revision History

Date	Revision	Revision Details	
30/03/2021	1.0	Initial Version	
31/01/2022	1.1	First Revision	
20/06/2022	1.2	Second Revision	
18/05/2023	1.3	Third Revision	
14/11/2024	2.0	Second Version	

Contents

1 Introduction

The Transmission System Operator Cyprus (TSOC) have been commissioned by the Cyprus Energy Regulatory Authority (CERA) to implement the trading arrangements for the new Electricity Market in Cyprus. This follows extensive consultation and development of the Market Rules (Trading and Settlement Rules 2017) which set-out the responsibilities and obligations for the Net Pool market arrangements in Cyprus.

The Net Pool market incorporates a Forwards Market, Day Ahead Market (DAM) and Balancing Market. An Integrated Scheduling Process (ISP) along with a real time Balancing Market (RTBM) will provide the TSO with the ability to procure and activate balancing services. The Market Operator (MO) function which has been assigned to TSOC will undertake settlement of these Markets with the exception of Bilateral Over the Counter (OTC) trading in the forward Market. OTC contracts will be settled between the trading parties however penalties as a result of deviations from contracted positions will be settled by the MO.

The handling of the whole Electricity Market in Cyprus, is performed through a computer system called the Market Management System (MMS).

1.1 Purpose

The purpose of this document is to detail the Market Participant Interfaces. This is a technical description including the protocols used and the security framework. It will contain a list of all the Market Participant interfaces used for the submission and retrieval of data and include the format and field level data structures and data types used where appropriate.

This document contains all Market Participant Interfaces for the Market Participants, TSO and MO using the MPI.

Note internal interfaces from the MMS to TSOC and DSO (ext. interface) systems are not included. These are set out in the Internal Interface Technical Description. Timing of scheduled events and the validations for data submissions are included in the relevant functional description however technical validations such as XML schemas and permitted values are included.

This issue is the second draft of the document and it is created following the System Acceptance Tests (SAT) of the MMS. Even though no significant changes are envisaged to the system's design the Market Participants should have in mind that minor (usually) changes might occur during the Trial Run of the system.

There are 3 ways for the Market Participant to submit data to the MMS system:

1. Using the MMS graphical user interface, a user connected over https with appropriate authorization can upload an XML file (over https)
2. Web service, System to system connection with appropriate authorization can upload an XML file (soap over https)
3. Using the MMS graphical user interface, a connected user with appropriate authorization can manually enter information in a web form.

In this document, we only describe the XML file interface. An example of the web server wsdl (Web Services Description Language) is provided at the end of the document.

1.2 Market Participant Data Exchange overview

The following picture shows the Market Participant Data Exchange overview:

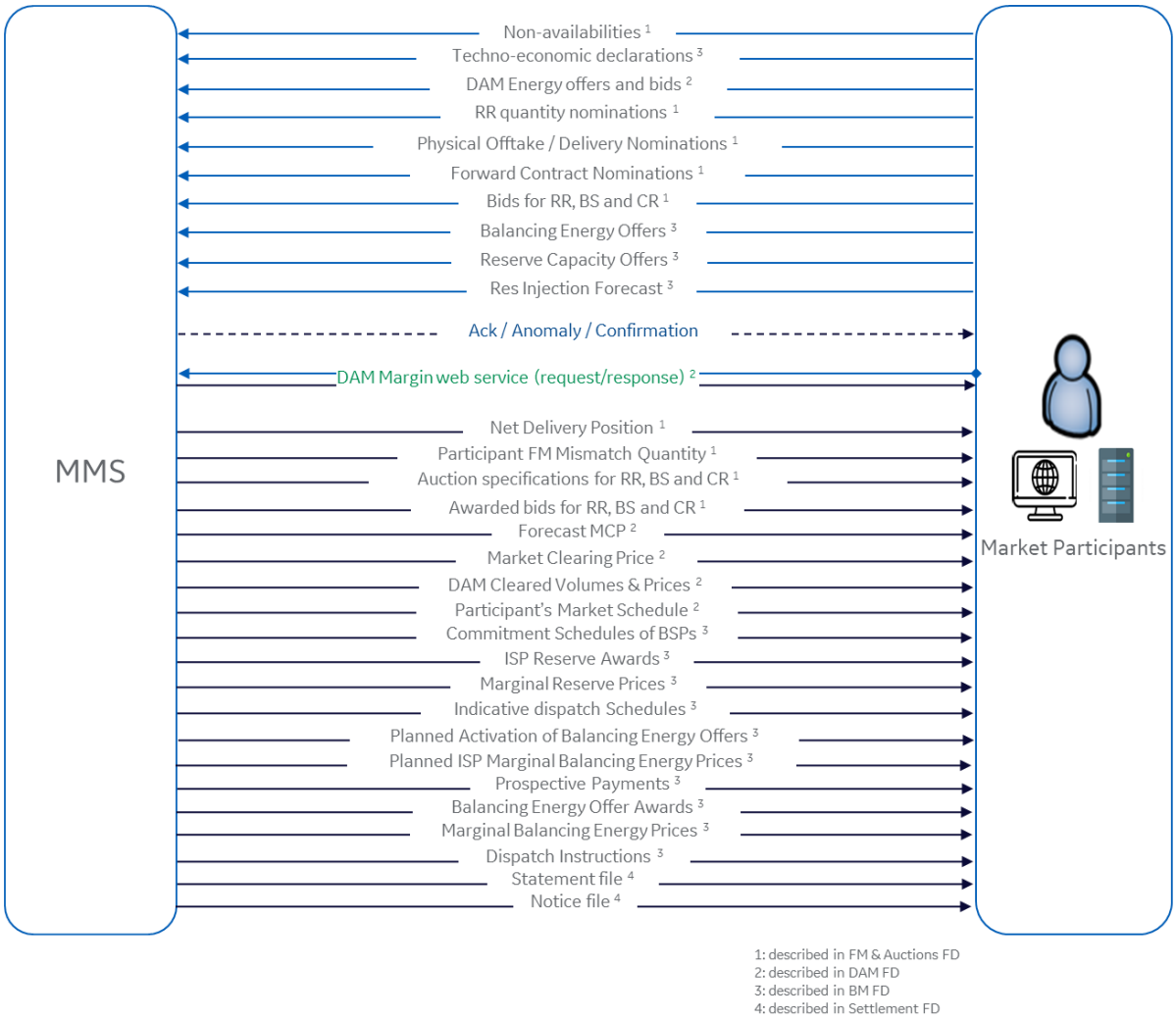

Figure 1: Market Participant Data Exchange overview

The system receives and sends data to the Market Participant using XML interfaces over https. Those interfaces will be connected to the business process through validation rules. These rules ensure that the received data is valid depending on both the data content and the business process state at the time the data is received.

For each message received the system will valid the XML against the XML Schema (xsd). If the XML is not valid it will be rejected. It will not be saved in database, and a message in the logs will describe the reason of the rejection (e.g. input file cannot be read).

For each message which has passed the XML schema validation an acknowledgement is generated including the result of the message validation. In case of a failed validation an explicit rejection reason will be logged and included in the acknowledgement message. It includes the Input type, the message identification, version and the data which caused the validation failure.

Common Information Model (CIM)

The common information model (CIM) is an abstract model that represents all the major objects in an electric utility enterprise typically involved in utility operations and electricity market management. By providing a standard way of representing power system resources as object classes and attributes, along with their relationships, the CIM facilitates the integration of market management system (MMS) applications developed independently by different vendors, between entire MMS systems developed independently, or between an MMS system and other systems concerned with different aspects of market management, such as capacity allocation, day-ahead management, balancing, settlement, etc.

CIM facilitates integration by defining a common language (i.e. semantics) based on the CIM to enable these applications or systems to access public data and exchange information independent of how such information is represented internally.

The CIM standards are continuously evolving to meet the changing requirements for data exchange, which are increasing in both frequency and type, with higher RES integration and the introduction of smart grids.

More details about the files used by CIM can be found on the ENTSO-E web site:

https://www.entsoe.eu/publications/electronic-data-interchange-edi-library/.

We use the CIM standards defined in EIC 62325-451. The ENTSO-E library provides detailed information on these standards and the structure of the XML documents.

For the Interfaces we use eight types of CIM document types listed below. The associated links are the ENTSO-E documentation for the two documents and provides the detailed structure and delimitation of these documents. We have shown, for context, the class structure on the following pages and provided links to the ENTSO-E documentation packages for the associated XSD's.

Schedule Market Document (IEC 62325-451-2)

https://eepublicdownloads.azureedge.net/clean-documents/EDI/Library/cim_based/schema/Schedule%20document%20uml%20model%20and%20schema%20v1.1.pdf

Energy Account Market Document (IECEIC 62325-451-4)

https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/EDI/Library/cim_based/schema/Energy%20account%20document%20and%20schema%20v1.pdf

Reserve Bid Market Document (IEC iec62325-451-7)

https://eepublicdownloads.blob.core.windows.net/public-cdn-container/clean-documents/EDI/Library/cim_based/schema/Reserve_bid_document_UML_model_and_schema_v1.1.pdf

Auction Specification Market Document (IEC ~~iec~~62325-451-3)

https://eepublicdownloads.azureedge.net/clean-documents/EDI/Library/cim_based/schema/Capacity%20Auction%20document%20uml%20model%20and%20schema%20v1.0.pdf"

Acknowledgment Specification Document (IEC ~~iec~~62325-451-1)

https://webstore.iec.ch/preview/info_iec62325-451-1%7Bed2.0%7Db.pdf

Anomaly Specification Document (IEC~~EIC~~ 62325-451-2)

https://eepublicdownloads.azureedge.net/clean-documents/EDI/Library/cim_based/schema/Schedule%20document%20uml%20model%20and%20schema%20v1.1.pdf

Confirmation Specification Document (IEC~~EIC~~ 62325-451-2)

https://eepublicdownloads.azureedge.net/clean-documents/EDI/Library/cim_based/schema/Schedule%20document%20uml%20model%20and%20schema%20v1.1.pdf

The required data in the MMS is mapped to the fields in the CIM documents. The XSD contains technical validations on the XML structure itself. In our interface descriptions we specify the additional business validations which are performed by the MMS on receipt of a file.

1.3 List with data files exchanged with Market Participants

This is the list with all data files exchanged between the Market Participants and the MMS system

File type	Document type	XSD file	Sender	Receiver	Message Type
Non-availability declarations	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	MP	TSO or MO	A28 (Generation availability schedule)
Techno-economic declarations	Participant Techno Economic Declaration	participant-techno-economic-declaration-v2r0.xsd	MP	TSO	Z01 (Techno-economic Declaration)
DAM Energy offers and bids	Reserve Bid Document	iec62325-451-7-reservebiddocument_v7_1.xsd	MP	MO	Z02 (DAM bid document)
RR quantity nominations	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	MP	MO	A81 (contracted reserve)
Physical Offtake/Delivery Nominations	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	MP	MO	A14 (Resource Schedule)
Forward Contract Nominations	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	MP	MO	Z03 (Forward Contract Nomination)
Bids for RR, BS and CR	Reserve Bid Document	iec62325-451-7-reservebiddocument_v7_1.xsd	MP	TSO	A24 (Bid document)
Balancing Energy Offers	Reserve Bid Document	iec62325-451-7-reservebiddocument_v7_1.xsd	MP	TSO	A37 (Reserve tender document)
Balancing Reserve Capacity Offers	Reserve Bid Document	iec62325-451-7-reservebiddocument_v7_1.xsd	MP	TSO	A32 (Proposed capacity)
Res Injection forecast	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	MP	TSO	A69 (Wind and solar forecast)
DAM Margin - web service					
Net Delivery Position	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	MO	MP	Z04 (Net Delivery Position)
Participant Forward Market Mismatch Quantity	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	MO	MP	Z05 (Participant Mismatch Quantity document)
Auction specifications for RR, BS and CR	Capacity Auction Specification Document	iec62325-451-3-auctionspecification_v7_1.xsd	MO	MP	A51 (Capacity Auction Specification Document)
Awarded bids for RR, BS and CR	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	MO	MP	A38 (Reserve Allocation Result Document)
Acknowledgement	Acknowledgement	iec62325-451-1-acknowledgement_v7_0.xsd	MO/TSO	MP	A17 (Acknowledgement Document)
Anomaly Report	Anomaly Report	iec62325-451-2-anomaly_v5_0.xsd	MO/TSO	MP	A16 (Anomaly Report)
Confirmation report	Confirmation Report	iec62325-451-2-confirmation_v5_0.xsd	MO/TSO	MP	A08 (Confirmation Report)
Forescasted MCP	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	MO	MP	Z06 (Forecasted MCP)
Market Clearing Prices	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	MO	MP	A44 (Price Document)
DAM Cleared Energy volumes and Prices	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	MO	MP	Z07 (Cleared Energy Volumes and Prices)
Market Schedule	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	MO	MP	A09 (Finalised Schedule)
Commitment Schedules of BSPs	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	TSO	MP	Z09 (Commitment Schedule)
ISP Reserve Awards	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	TSO	MP	A38 (Reserve Allocation Result Document)
Marginal Reserve Prices	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	TSO	MP	A44 (Price Document)
Indicative dispatch Schedules	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	TSO	MP	Z10 (Indicative Dispatch Schedule)
Planned Activation of Balancing Energy Offers	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	TSO	MP	A83 (Activated balancing quantities)
Plannedl SP Marginal Balancing Energy Prices	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	TSO	MP	A44 (Price Document)
Prospective Payments	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	TSO	MP	Z13 (Prospective payment Document)
Balancing Energy Offers Awards	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	TSO	MP	A83 (Activated balancing quantities)
Marginal Balancing Energy Prices	Energy Account Report	iec62325-451-4-settlement_v4_0.xsd	TSO	MP	A44 (Price Document)
Dispatch Instructions	Schedule Document	iec62325-451-2-schedule_v5_1.xsd	TSO	MP	Z14 (Dispatch Instruction)
Statement	EnergyAccountReport	iec62325-451-4-settlement_v4_0.xsd	SRP	MP	Z20 (DAM Statement) Z21 (IMB Statement) Z22 (ANS Statement) Z23 (TUS Statement) Z24 (DUS Statement) Z25 (UPL Statement) Z26 (NOC Statement) Z27 (REC Statement) Z28 (AGG Statement)
Notice	EnergyAccountReport	iec62325-451-4-settlement_v4_0.xsd	SRP	MP	Z30 (DAM Notice) Z31 (IMB Notice) Z32 (ANS Notice) Z33 (TUS Notice) Z34 (DUS Notice) Z35 (UPL Notice) Z36 (NOC Notice) Z37 (REC Notice) Z38 (AGG Notice)

Figure 2: File exchange overview

1.4 Common ENTSO-E xsd

In many file interface xsd, there is reference to additional xsd via the import tag as shown in example:

<xs:import schemaLocation="urn-entsoe-eu-wgedi-codelists.xsd" namespace="urn:entsoe.eu:wgedi:codelists" />

The common ENTSO_E xsd files used in the Market Participant Interface are:

- urn-entsoe-eu-wgedi-codelists.xsd
- urn-entsoe-eu-wgedi-components.xsd
- urn-entsoe-eu-local-extension-types

2 Market Participants Input XML Interfaces

2.1 Non-availability declaration Description

2.1.1 Interface Format

In the Forward Market, Participants must declare the non-availability of their resources.

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Generation availability schedule (A28)
process.processType	Process Type	Long term (A12)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the participant (the owner of the resource object)
sender_MarketParticipant.marketRole.type	Sender Role	Producer (A21)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	System Operator (A04) Market Operator (A11)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.

domain.mRID	Domain	Cyprus Control Area EIC Code
subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	Not used
subject_MarketParticipant.marketRole.type	Subject Party Role	Not used
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Partial unavailability declaration (Z01), Total unavailability declaration (Z02), Unavailability declaration cancellation (Z03)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Not used
out_Domain.mRID	Area / Coding scheme	Not used
marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Not used
out_MarketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.type	Agreement type	Not used
marketAgreement.mRID	Agreement identification	Not used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MAW
curveType	Curve Type	Variable sized Block (A03)
Period	Series_Period	See below

Reason	Reason code	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	Only one position of the block is provided for the whole Time Interval
Quantity	Quantity	Available capacity (in MW) for Partial unavailability declaration 0 for total unavailability 0 for unavailability cancellation
Reason	Reason	Not used

Reason	Attribute Name	Attribute Description
code	Reason Code	Failure (B18) Foreseen Maintenance (B19) Shutdown (B20) Complementary Information (A95) Major generation outage (Z01) Operation Inability Declaration (Z02) Intention to Suspend Normal Operation Declaration (Z03) Rejection due to an audit (Z04) Load change at DSO (Z05) Load change at Load representative (Z06)
text	Reason Text	The textual explanation corresponding to the reason code.

2.1.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations such as checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
FutureIntervalRule (30 Minutes)	A time series is not accepted if it creates, modifies or deletes data than are in the past or in the future for less than 30 minutes before the execution time. A time series is not accepted if the interval Start and End time do not end with 00 or 30 minutes
ResourceObjectRule	The Resource Object can only be: - A generating Unit, can be virtual but not contracted and not in test - A RES Unit more than 1MW, - A RES Unit portfolio - A RES Subunit - A Combined Cycle Power Plant - A Combined Cycle Configuration The Resource Object Owner is the sender of the message. (Market Evaluation Point matching the Resource Object EIC Code)
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version In the case the new unavailability declaration is not covering fully the previous one, the previous one is flagged as revoked on the missing intervals (Revoked by the Participant if the file was submitted by the Participant, revoked by the TSO if the file was submitted by an TSOC Operator).

SenderRoleRule	Sender Role is Producer (A21)
ReceiverIdentificationRule	The Receiver Identification is the Cyprus EIC Code
ReceiverRoleRule	Receiver Role is System Operator (A04) or Market Operator (A11)
MessageTypeRule	Message Type is Generation availability schedule (A28)
ProcessTypeRule	Process Type is long term (A12)
ScheduleClassificationTypeRule	Schedule Classification Type is Exchange (A01)
DomainCyprusRule	Domain is the Cyprus Control Area EIC Code
TimeSeriesVersionRule	If > the message version -> the message is rejected If < the message version -> the time series is ignored
TimeSeriesUnicityRule	Time Series Identification is unique in the message. Market Evaluation Point is unique in the message. If combination (Sender Identification, Time Series Identification) already exists in time series repository, it should be linked to the same resource object. No other Unavailability Declaration should exist in time series repository for the same resource object on an intersecting period.
BusinessTypeRule	Business Type is either Partial unavailability declaration (Z01) or Total unavailability declaration (Z02) or Unavailability declaration cancellation (Z03). If it is an Unavailability declaration cancellation, an unavailability declaration should exist with the same identification, same resource object and same trading periods and trading day. If the file is uploaded by the market participant, it will be flagged as Revoked by the Participant. If the file is uploaded by a Cyprus Operator, it will be flagged as Revoked by the TSO.
ProductRule	Product is active power (8716867000016)
ObjectAggregationRule	Object aggregation is A06 (Resource Object)
InDomainCyprusRule	In Domain is the Cyprus Control Area EIC Code
OutDomainNotUsedRule	Out Domain is Not Used
InPartySenderRule	In Party is the message Sender
OutPartyNotUsedRule	OutParty is not Used
MarketAgreementTypeNotUsedRule	MarketAgreementType **is** not Used
CurveTypeRule	Variable sized Block (A03) is only accepted

PositionRule	Only one position (position=1) is provided for the whole Time Interval
ReasonCodeRule	Reason Code cannot be empty except for BT=Z03 (Cancellation), and if it is filled, it must according to: Failure (B18) → allowed only for BT=Z01 (Partial) and BT=Z02 (Total) Foreseen Maintenance (B19) → allowed only for BT=Z01 (Partial) and BT=Z02 (Total) Shutdown (B20) → allowed only for BT=Z02 (Total) Complementary Information (A95) → allowed only for BT=Z01 (Partial) and BT=Z02 (Total) Major generation outage (Z01) → allowed only for BT=Z02 (Total) Operation Inability Declaration (Z02) → allowed only for BT=Z02 (Total) Intention to Suspend Normal Operation Declaration (Z03) → allowed only for BT=Z02 (Total) Rejection due to an audit (Z04) → allowed only for BT=Z03 (Cancellation) Load change at DSO (Z05) → allowed only for BT=Z01 (Partial) and BT=Z02 (Total) Load change at Load representative (Z06) → allowed only for BT=Z01 (Partial) and BT=Z02 (Total)
ReasonCodeZ03Rule	If the reason code is Z03 (Intention to Suspend Normal Operation Declaration) then the resource object must be flagged as obliged to submit Contingency reserve Offers
ReasonTextNotEmptyRule	Should not be empty
AvailableQuantityRule	Must not be equal or higher than the Standing data Registered Capacity AND must be higher than or equal to the Standing Data Technical Minimum for Partial Unavailability (Z01) Must be 0 for Total Unavailability (Z02) Must be 0 for Cancellation (Z03)

2.2 Techno-economic Declaration Description

2.2.1 Interface Format

The interface will use a custom (ENTSO-E like file) participant-techno-economic-declaration xsd:

- participant-techno-economic-declaration-v2r1.xsd

Message Header	
Message identification	Unique identification of the message for which the time series data is being supplied.
Message version	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Message type	Techno-economic Declaration (Z01)
Sender Identification / Coding Scheme	EIC of the party (the owner of the resource object)
Sender Role	Producer (A21)
Receiver Identification / Coding Scheme	TSOC EIC Code
Receiver Role	System operator (A04)
Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Message Time Interval	The beginning and ending date and time matching an EET full day
Unit parameters	See below

Unit parameters	
Unit identification (internal)	Resource Object Identification
Time Interval (internal)	Match the Message Time Interval
Fuel A cost	€/unit (Only for Thermal Unit)
Fuel B cost	€/unit (Only for Thermal Unit)
Fuel C cost	€/unit (Only for Thermal Unit)
Fuel A LHV	GJ/unit (Only for Thermal Unit)
Fuel B LHV	GJ/unit (Only for Thermal Unit)
Fuel C LHV	GJ/unit (Only for Thermal Unit)

Carbon content A	%
Carbon content B	%
Carbon content C	%
Cold start-up up cost	€ (Only for Thermal Unit)
Warm start-up cost	€ (Only for Thermal Unit)
Hot start-up cost	€ (Only for Thermal Unit)
SpecialCostForCO2	€/Metric Ton of CO2
Variable Cost blocks	List, 10 elements maximum, see below

Variable Cost Block	
Net generation level	MW
Composition Fuel A	%
Composition Fuel B	%
Composition Fuel C	%
Raw Material Cost	€/MWh
Maintenance Material Cost	€/MWh
Labour Operation Cost	€/MWh

2.2.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
MessageTimeIntervalRule	The Message Time Interval is a full EET day
ParticipantDeclarationGateOpenRule	The Message Time Interval for trading day D must be received before D-1 16:00. After this deadline, TED is not allowed anymore, and thus all message received after the deadline will be rejected
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender

MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval, Resource Object Identification) has lower version
SenderRoleRule	Sender Role is a Producer (A21)
ReceiverIdentificationRule	The Receiver Identification is TSOC EIC Code
ReceiverRoleRule	Receiver Role is the System Operator (A04)
TimeIntervalRule	The Message Time Interval and the Unit Time Interval are the same
ResourceObjectRule	The Resource Object must be: - a Generating, or - a dispatchable RES Unit, but not NGP and more than 1MW capacity, or - a dispatchable RES Portfolio, but not NGP and more than 1MW capacity, or - a Combined Cycle Configuration. - a dispatchable Load Unit. The Resource Object Owner is the sender of the message or the TSOC.
NetGenerationLevelRule	The net generation level must match the Fuel Specific Consumption A/B or C as defined in the Standing data, except the LOADUNIT, the RES Unit and portfolio units
MVCCalculationRule	The MVC calculation must be run for all resource objects except the LOADUNIT, the RES Unit and portfolio units

2.3 DAM Energy Offers and Bids Description

2.3.1 Interface Format

The interface will use the CIM Reserve Bid Document xsd:

- iec62325-451-7-reservebiddocument_v7_1.xsd

Market Participants send the following files to the Day Ahead Market:

- SO - Simple (half-hourly Energy) Offer (for selling energy)
  - can be Non-priced if unit in commissioning or in testing
- BO - Block Offer (for selling energy)
  - can be linked (always priced)
- SB - Simple (half-hourly Energy) Bid (for buying energy)
  - can be Non-priced

ReserveBid_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
type	Message Type	DAM bid document (Z02)
process.processType	Process Type	Day Ahead (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the party (the owner of the resource object)
sender_MarketParticipant.marketRole.type	Sender Role	Resource Provider (A27)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	Market Operator (A11)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.

reserveBid_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the bid.
domain.mRID	Domain	Cyprus Control Area EIC Code
subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	EIC Code of the Resource Provider
subject_MarketParticipant.marketRole.type	Subject Party Role	Resource Provider (A27)
BidTimeSeries	Time Series	See below

BidTimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification within the schedule message assigned by the sender.
auction.mRID	Auction ID	Not used, but this is a mandatory field. For example, user can set a fixed text such as “DAM auction”
businessType	Business type	Simple Offer (Z04) Block Offer (Z05) Simple Bids (Z06)
acquiring_Domain.mRID	acquiring_Domain	EIC Code of the Cyprus Control Area
connecting_Domain.mRID	connecting_Domain	EIC Code of the Cyprus Control Area
provider_MarketParticipant.mRID	Market participant	Not Used
quantity_Measure_Unit.name	quantity_Measure_Unit	MWH
currency_Unit.name	currency_Unit	EUR
price_Measure_Unit.name	energyPrice_Measure_Unit	MWH
divisible	Divisible	All bids and offers are divisible (A01)
linkedBidsIdentification	linkedBidsIdentification	Only for Block Offer (Z05) – refers to the identification of the parent block
multipartBidIdentification	multipartBidIdentification	Not Used
exclusiveBidsIdentification	exclusiveBidsIdentification	Not Used
blockBid	blockBid	A01 (Yes - only for Block Offer (Z05), not present otherwise)

status	Status	Not Used
priority	Priority	Is established for Simple Offer (Z04) or Bid (Z06). The Offer Step is indexed from 1 to 10. For Block Offer (Z05), priority is not used
registeredResource.mRID	registeredResource	EIC Code of the Resource Object
flowDirection.direction	flowDirection	Up for Offer (A01, for Z04 and Z05) or Down for Bid (A02, for Z06)
stepIncrementQuantity	stepIncrementQuantity	Not Used
energyPrice_Measure_Unit.name	energyPrice_Measure_Unit	MWH
marketAgreement.type	marketAgreement.type	Not Used
marketAgreement.mRID	marketAgreement.mRID	Not Used
marketAgreement.createdDateTime	marketAgreement.createdDateTime	Not Used
activation_ConstraintDuration.duration	activation_ConstraintDuration	Not Used
resting_ConstraintDuration.duration	resting_ConstraintDuration	Not Used
minimum_ConstraintDuration.duration	minimum_ConstraintDuration	Not Used
maximum_ConstraintDuration.duration	maximum_ConstraintDuration	Not Used
standard_MarketProduct.marketProductType	standard_MarketProduct.marketProductType	Not Used
original_MarketProduct.marketProductType	original_MarketProduct.marketProductType	Not Used
validity_Period.timeInterval	validity_Period.timeInterval	Not Used
Period	Series_Period	See below
AvailableMBA_Domain	AvailableMBA_Domain	Not Used
Reason	Reason	Not Used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time interval	This information provides the start and end date and time of the period being reported.

resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
quantity.quantity	Quantity	Energy Offer and Bid Quantity
minimum_Quantity.quantity	Minimum Acceptance Ratio	Not Used for Simple Offer (Z04) and Bid (Z06) For Block Offer (Z05), minimum acceptance value (correspond to MAR: Minimum Acceptance Ratio)
price.amount	Price	Not Used
energy_Price.amount	Energy Price	Energy Offers and Bids Price, not present for non-price offer or non-price bid

2.3.2 Validation Rules

The message is rejected if one of the following rules is not respected, and a textual description justifying the rejection always accompany the generated message.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
ReserveBidPeriodIntervalRule	The Reserve Bid Period is a full EET day
OrderGateOpenRule	The Message Time Interval match an open Gate. If gate is closed, message is rejected.
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
SendingParticipantRule	If all the resource objects (identified by the registered Resource EIC Code) included in the message are not in commissioning or in test, then the sender is the owner of all the resource object included in the message.

	Otherwise, if all the resource objects included in the message are under commissioning or in test, then the sender must be a TSOC operator
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version
DivisibleRule	Divisible is A01 (Yes)
SenderRoleRule	Sender Role is Resource Provider (A27)
ReceiverIdentificationRule	The Receiver Identification is TSOC EIC Code
ReceiverRoleRule	Receiver Role is the Market Operator (A11)
DomainCyprusRule	Domain is the Cyprus Control Area EIC Code
AcquiringDomainCyprusRule	Acquiring Domain is the Cyprus Control Area EIC Code
ConnectingDomainCyprusRule	Connecting Domain is the Cyprus Control Area EIC Code
PeriodTimeIntervalRule	The Message Time Interval and the Period Time Interval are the same
SubjectPartyRoleRule	The sender MarketParticipant mRID must be equal to the subject MarketParticipant mRID and The sender MarketParticipant role must be equal to the subject MarketParticipant role
MessageTypeRule	Message Type is DAM bid document (Z02)
ResourceObjectRule	For Simple (Z04) or Block Offer (Z05), the Resource Object must be: - a Generating Unit but not contracted or - a RES Unit, but not NGP and more than 1MW capacity, or - a RES Portfolio, but not NGP, or - a Combined Cycle Power Plant. For Block Offer (Z05), the Resource Object must not be in test. For Simple Bid (Z06), the Resource Object must be: - a virtual and non-dispatchable Load Unit - a non-virtual dispatchable Load Unit. The Resource Object Owner is the sender of the message or the TSOC operator.
priorityRule	The priority is only used for Simple offer (Z04) and Bid (Z06). The priority is an integer between 1 to 10. The integer cannot be repeated and must be with an increment of 1. (e.g. 1,2,2,3 and 1,2,4 are forbidden)

	For Block Offer (Z05), the priority must not be present. If there is n offers sharing the same combination (Resource Object, Direction) in the message, for each priority between 1 and n, it exists one and only one combination (Resource Object, Direction, Priority) in the message
flowDirectionRule	UP for Offers (A01) or DOWN for Bids (A02), it identifies the order direction
linkedBidsIdentificationNotUsedRule	linkedBidsIdentification can only be used for Block Offer (Z05) linkedBidsIdentification must refer to an existing bid which belongs to the same resource object (Any link between different units/ROs is prohibited)
linkedBidsFamilyRule	The family of linked bloc offer is limited to 3 levels (Father – Son – GrandSon)
multipartBidIdentificationNotUsedRule	not Used
exclusiveBidsIdentificationNotUsedRule	not Used
blockBidNotUsedRule	blockBid is only used for Block Offer (Z05)
currency_UnitRule	EUR
priceMeasure_UnitRule	MWH
EnergyOfferPriceRule	For Simple Offer (BT=Z04), if the resource object is in commissioning or in test, price must be missing. For Simple Bid (BT=Z06), the price could be missing. If Energy offer price is not available for a point, it must be absent for every point of the time serie. In the same way, if it is available for a point, it must be available for every point of the time serie
NonNegativePricesRule	The prices must have only positive values
NonPricedOrderRule	For Simple Offer (BT=Z04), if the resource object is in commissioning or in test, priority must not be present. Only energy quantity values must be defined for the Resource Object for the trading day. For Simple Bid (BT=Z06), if the price is missing, the priority must not be present. Only energy quantity values must be defined for the Resource Object for the trading day.
PricedNonPricedUnicityRule	For the same resource object and the same trading period, non-priced and priced order cannot be present at the same time

EnergyOffersStepwiseCurvesRule	For Simple Offer (BT=Z04), two consecutive points must always have either the same price or the same quantity. That means price-energy steps (€/MWh, MWh) are non-decreasing in price for increased energy generation.
EnergyBidsStepwiseCurvesRule	For Simple Bid (BT=Z06), two consecutive points must always have either the same price or the same quantity. That means price-energy steps (€/MWh, MWh) are non-increasing in price for increased energy consumption.
EnergyPricesRuleAccuracy	The Energy prices shall be expressed in €/MWh with an accuracy of up to two (2) decimal points.
EnergyPricesRuleOfferIncreasing	For Simple Offer (Z04), the Energy prices must be strictly not decreasing between two consecutive points. For Simple Bids (Z06), the Energy prices must be strictly not increasing between two consecutive points.
EnergyQuantitiesRule	The Energy quantities must be expressed in MWh with an accuracy of up to three (3) decimal points. Energy quantity must be > 0.
EnergyMinimumQuantityRule	For Simple Offer (Z04) and Bid (Z06), the Minimum Acceptance ratio should not be present. For Block Offer (Z05), the the Minimum Acceptance ratio must be present and between 0 and 1.
BlockOfferNumberRule	The number of allowed BOs per Resource Object throughout a Trading Day must not exceed 10 BOs.
EnergyPricesValueRuleMVC	For Simple Offer (Z04) and Block Offer (Z05), if the owner of the resource is a dominant participant and if the resource is not in test, Energy prices must not be lower than the minimum variable cost.
EnergyPricesValueRuleCap	For Block Offer (Z05) and Simple Offer (Z04), if the resource is not in test, Energy prices must be less than or equal to the standing data Energy Offer Cap price.
EnergyPriceMaxQuantityBlockRule	For Block Offer (Z05), the price must be the same for the whole block, as the price is fixed for the whole period, but the max. quantity can be either fixed or differ per trading period
EnergyVolumesMultipleOfferDAMMargin	For Simple Offer (Z04) or Block Offer (Z05), and if multiple BidTimeSeries is found submitted in the same time, then the process to check the DAM Margin must follow the following order of activities: 1. Run rule EnergyVolumesStepValueRuleDAMMArgin 2. Run rule EnergyVolumesSimpleBlockValueRuleDAMMArgin

	3. Run rule EnergyVolumesLinkedBlockValueRuleDAMMArgin and EnergyVolumesParentLinkedBlockValueRuleDAMMArgin
EnergyVolumesStepValueRuleDAMMArgin	For Simple Offer (Z04), if the resource is not in test, the energy volume of the offer plus the total of the volume of all already submitted offers (last step value for type Simple Offer (Z04) and block value for Block Offer (Z05)) for the same resource and the trading period must not be higher than the corresponding DAM Margin of the resource and the trading period. If it is higher, then the Energy volume submitted must be reduced to the DAM Margin, starting by the last step of the simple offer until DAM Margin volume is reached.
EnergyVolumesSimpleBlockValueRuleDAMMArgin	For Block Offer (Z05) and if the offer is not a linked offer, the energy volume of the offer plus the total volume of all already submitted offers (last step value for type Simple Offer (Z04) and block value for Block Offer (Z05)) for the same resource and the trading period must not be higher than DAM Margin. If it is higher, then the Energy volume of the submitted block must be reduced to the DAM Margin if the DAM Margin is higher than the minimum offer quantity of the Energy offer. If DAM Margin is lower than the minimum offer quantity of the Energy offer, then the Energy offer is rejected. In case multiple independent blocks are submitted at the same time, the check starts with the block of the smallest volume. In case of equal volumes of blocks, the curtailment starts with the block of the highest price.
EnergyVolumesParentLinkedBlockValueRuleDAMMArgin	For Block Offer (Z05) and if linked offers are not for the same trading period, the energy volume of the highest level of the family offer plus the total volume of all already submitted offers (last step value for type Simple Offer (Z04) and block value for Block Offer (Z05)) for the same resource and the trading period must not be higher than DAM Margin. If it is higher, then the Energy volume of the submitted block must be reduced to the DAM Margin if the DAM Margin is higher than the minimum offer quantity of the Energy offer. If DAM Margin is lower than the minimum offer quantity of the Energy offer, then the whole submitted LBO family (the parent and its linked children) containing the parent will be rejected in its entirety.
EnergyVolumesChildLinkedBlockValueRuleDAMMArgin	For Block Offer (Z05) and if linked offers are not for the same trading period, the energy volume of the child level of the family offer plus the total volume of all already submitted offers (last step value for type Simple Offer (Z04) and block value for Block Offer (Z05)) for the same resource and the trading period must not be higher than DAM Margin. If it is higher, then the Energy volume of the submitted block must be reduced to the DAM

	Margin if the DAM Margin is higher than the minimum offer quantity of the Energy offer. If DAM Margin is lower than the minimum offer quantity of the Energy offer, then the child submitted offer is rejected. For Block Offer (Z05) and if linked offers are for the same trading period, the check will start with the lowest level of LBO. The energy volume of the child lowest level of the family offer plus the total volume of all already submitted offers (last step value for type Simple Offer (Z04) and block value for Block Offer (Z05)) for the same resource and the trading period must not be higher than DAM Margin. If it is higher, then the Energy volume of the submitted block must be reduced to the DAM Margin if the DAM Margin is higher than the minimum offer quantity of the Energy offer. If DAM Margin is lower than the minimum offer quantity of the Energy offer, then the child lowest level submitted offer is rejected. Then the check will continue with the second lowest until we reach the highest level of the family. In case multiple lowest level LBOs of the same family are submitted at the same time, the curtailment starts with the block of the smallest volume. In case of equal volumes of blocks, the curtailment starts with the block of the highest price.
VerificationAgainstSecurityCoverRule	For Simple Bid (Z06), the daily sum of each half-hourly bid energy value of the highest energy step multiplied by the forecast MCP must not be higher than the security cover on the DAM bank account of participant.

2.4 Replacement Reserve Quantity Nominations

2.4.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Contracted Reserve (A81)
process.processType	Process Type	Contracted (A34)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the party (the owner of the resource object)
sender_MarketParticipant.marketRole.type	Sender Role	Producer (A21)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	Market Operator (A11)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	Not used

subject_MarketParticipant. marketRole.type	Subject Party Role	Not used
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Replacement reserve (A98)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Not Used
out_Domain.mRID	Area / Coding scheme	Not Used
marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Sender Identification
out_MarketParticipant.mRID	Party / Coding scheme	Not Used
marketAgreement.type	Agreement type	Long Term (A06)
marketAgreement.mRID	Agreement identification	mRID of the auction
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MAW
curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not used

Series_Period	Attribute Name	Attribute Description

timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Energy quantity, in MW

2.4.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
MessageTimeIntervalRule	The Message Time Interval is a full EET day
ParticipantDeclarationGateOpenRule	The nomination must be received between 5 business days after the final publication of RR auction results for day D and before 09:00 EET (D-1)
SendingUserRule	The message is uploaded either by a TSO operator user or by a user linked to the xml message sender
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version
SenderRoleRule	Sender Role is Producer (A21)
ReceiverIdentificationRule	The Receiver Identification is TSOC EIC Code
ReceiverRoleRule	Receiver Role is Market Operator (A11)
TimeIntervalRule	The Message Time Interval and the Unit Time Interval are the same
ResourceObjectRule	The Resource Object must be RR capable (in standing data, flag Is ProvRR=True).

	The Resource Object Owner is the sender of the message or the TSOC.
MarketAgreementTypeRule	The Market Agreement type must be Long Term (A06)
MarketAgreementmRID	The Auction mRID must exist
VolumeMatchingWithAwardedRRQuantitiesRule	The capacity volume of the nomination schedule plus the total of the volume of all already submitted schedules for the participant must not be higher than the awarded Replacement Reserve Quantity for that Participant, trading period and for reserve direction.
Volume25PercentRule	The capacity volume of the nomination schedule must not be higher for each trading period and direction than the Replacement Reserve requirement multiplied by the Maximum share in RR provision as configured in the standing data (ANS.RR.MAX_SHARE).
UpwardReplacementReserveRule	The capacity volume of the nomination schedule for the upward replacement reserve must not be higher than the registered capacity of the unit from standing data minus the Physical Delivery Nomination of that resource.
DownwardReplacementReserveRule	The capacity volume of the nomination schedule for the downward replacement reserve must not be higher than the Physical Offtake Nomination minus the minimum generating level from standing data of that resource.
VolumeUpAgainstRRCapabilityQuantitiesRule	The capacity volume of the nomination schedule for the upward replacement reserve must not be higher than the maximum Replacement Reserve Capability of generating unit as declared in the standing data
VolumeDownAgainstRRCapabilityQuantitiesRule	The capacity volume of the nomination schedule for the downward replacement reserve must not be higher than the maximum Replacement Reserve Capability of generating unit as declared in the standing data

2.5 Physical Offtake/ Delivery Nominations

2.5.1 Interface Format

Market Participants send the following files to the Forward Market:

- Physical Delivery Nomination - to notify about the planned physical delivery of energy on the time horizon of the Trading Day (done in FM process)
- Physical Offtake Nomination - to notify the Operator about the planned physical offtake of energy on the time horizon of the Trading Day (done in FM process)
- Resource schedule for units in Commissioning or Testing operation (done in DAM process)
- Updates of Resource schedule for Units in Commissioning or Testing operation (done in Balancing Market process)

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Resource Schedule (A14)
process.processType	Process Type	Forward Market (Z01)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the party (the owner of the resource object)
sender_MarketParticipant.marketRole.type	Sender Role	Producer (A21) for resource object type generation Consumer (A13) for resource object type load unit
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	System Operator (A04)

		Market Operator (A11)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	Not used
subject_MarketParticipant.marketRole.type	Subject Party Role	Not used
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Production (A01) - for resource object type generation Consumption (A04) - for resource object type load unit
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Not Used
out_Domain.mRID	Area / Coding scheme	Not Used
marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Not Used
out_MarketParticipant.mRID	Party / Coding scheme	Not Used

marketAgreement.type	Agreement type	Not Used
marketAgreement.mRID	Agreement identification	Not Used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MWH
curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not Used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Energy quantity, in MWH

2.5.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
MessageTimeIntervalRule	The Message Time Interval is a full EET day
ParticipantDeclarationGateOpenRule	If the receiver role is Market Operator, then the nomination must be received before 09h00 EET (D-1) for the Trading Periods of day D and between 9:15-10:00 EET (D-1) for the final submission.

	Schedule data must not modify data that are in the past.
ParticipantDeclarationIntraDay	The message can be modified in intraday but should only apply for the remaining trading periods of D after the submission time (starting next 30 minutes period).
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version
SenderRoleRule	Sender Role is Producer (A21) for Production Business Type (A01) Sender Role is Consumer (A13) for Consumption Business Type (A04)
ReceiverIdentificationRule	The Receiver Identification is TSOC EIC Code
ReceiverRoleRule	Receiver Role is System Operator (A04) or Market Operator (A11)
TimeIntervalRule	The Message Time Interval and the Unit Time Interval are the same
ResourceObjectRule	If the resource is not flagged as in Test, then the Resource Object must be: • For PON: - a virtual non-dispatchable Load Unit - a non-virtual dispatchable Load Unit • For PDN: - a Generating Unit but not contracted or - a RES Unit more than 1MW capacity, or - a RES Portfolio, or - a Combined Cycle Power Plant. If the resource is flagged as in Test, then the resource object must not be a Load Unit, nor a Combined Cycle Power Plant, nor a Combined Cycle Configuration. ~~If the resource is flagged as in Test, then the resource object must not be a Load Unit.~~ The Resource Object Owner is the sender of the message or the TSOC.
AvailableCapacityVerificationRule	The submitted energy quantity of a PDN for a Generating Unit or a RES Unit or RES portfolio or a Combined Cycle Power Plant cannot be higher than the minimum between its Available Capacity minus nominated RR. Available capacity is

	equal to the unit's register capacity if a NAD does not exist, otherwise is equal to the available capacity declared through the NAD.

2.6 Forward Contract Nominations

2.6.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Market Participants submit FCNs to notify the Market Operator about the planned trading activity on the time horizon of the Trading Day.

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Forward Contract Nomination (Z03)
process.processType	Process Type	Forward Market (Z01)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the TRP that sent the message.
sender_MarketParticipant.marketRole.type	Sender Role	Trade responsible party (A01)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	Market Operator (A11)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code

TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Internal inter area trade (A30)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Party (A03)
in_Domain.mRID	Area / Coding scheme	Not used
out_Domain.mRID	Area / Coding scheme	Not used
marketEvaluationPoint.mRID	Market Evaluation Point	Not used
in_MarketParticipant.mRID	Party / Coding scheme	EIC code of the Party putting the product into the in Domain
out_MarketParticipant.mRID	Party / Coding scheme	EIC code of the Party taking the product out of the out domain
marketAgreement.type	Agreement type	Not used
marketAgreement.mRID	Agreement identification	Bilateral Contract identification
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MWH
curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.

resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Energy quantity, in MWH

2.6.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
MessageTimeIntervalRule	The Message Time Interval is a full EET day
ParticipantDeclarationGateOpenRule	The nomination must be received before 09h00 EET (D-1) for the Trading Periods of day D.
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval, inParty, outParty) has lower version
SenderRoleRule	Sender Role is Trade responsible party(A01)
ReceiverIdentificationRule	The Receiver Identification is TSOC EIC Code
ReceiverRoleRule	Receiver Role is Market Operator (A11)
InOutPartyRule	The sender must be either the inParty, either the outParty. The inParty and the outParty must be different
TimeIntervalRule	The Message Time Interval and the Unit Time Interval are the same
FCNStatusVerificationRule	FCN Status is "TS CP Missing" if the counter party schedule is not available

	FCN Status is “TS Mismatch” if the counter party schedule is not matching FCN Status is “TS Match” if the counter party schedule is matching
FCNVerificationAgainstNDP	The NDP of the participant who has the role Wholesale Supplier must not be positive. If NDP become positive (more FCN production than consumption) for at least one trading period, then each trading period quantity are curtailed up to the Energy quantities for which the NDP remains non-positive
FCNQuantityRule	The FCN quantity must be positive only
FCNContractScheduleRule	Only two schedules can exist with the same Bilateral Ccontract identification
FCNMarketAggrementMRID	The marketAgreement.mRID which represent the Bilateral Contract identification cannot be empty. Any characters as text are accepted
CurveTypeRule	Sequential fixed size block (A01) is only accepted

2.7 Bids for RR, BS and CR

2.7.1 Interface Format

The interface will use the CIM Reserve Bid Document xsd:

- iec62325-451-7-reservebiddocument_v7_1.xsd

Market participants submit bids to offer reserve capability/ancillary services. Bids typically defined by a price, a direction (e.g., Up or Down) and a range of MW for each trading period, but this can vary according to the product specification.

Bid types are:

- Replacement Reserve (RR);
- Black Start (BS);
- Contingency Reserve (CR);

ReserveBid_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
type	Message Type	Bid document (A24)
process.processType	Process Type	Long Term (A12)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the Resource Provider that sent the message.
sender_MarketParticipant.marketRole.type	Sender Role	Resource Provider (A27)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	System operator (A04)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.

reserveBid_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	EIC Code of the Resource Provider
subject_MarketParticipant.marketRole.type	Subject Party Role	Resource Provider (A27)
BidTimeSeries	Time Series	See below

BidTimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification within the schedule message assigned by the sender.
auction.mRID	Auction	Auction identification (mRID) as provided in the auction specification
businessType	Business type	RR (Replacement Reserve) (A98) CR (Contingency Reserve) (B55) BS (Black Start) (Z07)
acquiring_Domain.mRID	acquiring_Domain	EIC Code of the Cyprus Control Area
connecting_Domain.mRID	connecting_Domain	EIC Code of the Cyprus Control Area
provider_MarketParticipant.mRID	Market participant	Not Used
quantity_Measure_Unit.name	quantity_Measure_Unit	MAW for RR and CR C62 (dimensionless quantity) for BS
currency_Unit.name	currency_Unit	EUR
price_Measure_Unit.name	energyPrice_Measure_Unit	MAW for RR and CR C62 (dimensionless quantity) for BS
divisible	divisible	Yes (A01) for RR and CR No (A02) for BS
linkedBidsIdentification	linkedBidsIdentification	Not Used
multipartBidIdentification	multipartBidIdentification	Not Used
exclusiveBidsIdentification	exclusiveBidsIdentification	Not Used
blockBid	blockBid	Not Used

status	status	Not Used
priority	priority	Offer Block Index from 1 to 10 for RR Priority = 1 only for CR and BS
registeredResource.mRID	registeredResource	For RR: Not used For CR and BS: EIC Code of the Resource Object
flowDirection.direction	flowDirection	For RR: UP (A01) or DOWN (A02) For CR and BS: UP (A01)
stepIncrementQuantity	stepIncrementQuantity	Not used
energyPrice_Measure_Unit.name	energyPrice_Measure_Unit	MAW for RR and CR C62 (dimensionless quantity) for BS
marketAgreement.type	marketAgreement.type	Not used
marketAgreement.mRID	marketAgreement.mRID	Not used
marketAgreement.createdDateTime	marketAgreement.createdDateTime	Not used
activation_ConstraintDuration.duration	activation_ConstraintDuration	Not used
resting_ConstraintDuration.duration	resting_ConstraintDuration	Not used
minimum_ConstraintDuration.duration	minimum_ConstraintDuration	Not used
maximum_ConstraintDuration.duration	maximum_ConstraintDuration	Not used
Period	Series_Period	See below
AvailableMBA_Domain	AvailableMBA_Domain	Not used
Reason	Reason	Not used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	PT30M (30 minutes) for Business type A98 (Replacement Reserve) P1Y (1 year) for Business type B55 (Contingency Reserve) and Z07 (Black Start)

Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
quantity.quantity	Quantity	Offer / Bid Quantity for RR Quantity = 0 for BS and CR
minimum_Quantity.quantity	Minimum Quantity	Not used
price.amount	Price	Price of the offer / bid
energy_Price.amount	Energy Price	Not used

2.7.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
VersioningRule	Time series for RR Bid (A98), with a given direction, priority combination in the message replace the time series sharing the same combination from a previous message version. If a time series with a combination is missing in a second message version, then that time series is deleted
MessageTimeIntervalRule	The Message Time Interval is a full EET day
ParticipantDeclarationGateOpenRule	The Message Time Interval match an open Participant submission Gate (RR Bid Submission for RR bid; CR Bid Submission for CR bid; BS Bid Submission for BS bid).
MessageTypeRule	Message Type is Bid document (A24)
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version

SenderRoleRule	Sender Role is Resource Provider (A27). The Market Party for RR bids should have at least on these roles: RES producer, RES aggregator, Producer, Load Representative
ReceiverIdentificationRule	The Receiver Identification is TSOC EIC Code
ReceiverRoleRule	Receiver Role is System operator (A04)
TimeIntervalRule	The Message Time Interval and the Unit Time Interval are the same. Every TimeSeries must have 48 interval values
SubjectPartyRoleRule	The sender MarketParticipant mRID must be equal to the subject MarketParticipant mRID and The sender MarketParticipant role must be equal to the subject MarketParticipant role
AuctionMRIDRule	The auction MRID must be valid in the MMS
BusinessTypeRule	Business Type can be: RR (Replacement Reserve) (A98) CR (Contingency Reserve (B55) BS (Black Start) *(Z07)*
priorityRule	For RR Bid (A98), the priority is an integer • starting by 1 • between 1 and 10 • should be defined as an increasing order by a step of 1 • If there is *n* offers sharing the same combination (Resource Object, Direction) in the message, for each priority between 1 and n, it exists one and only one combination (Resource Object, Direction, Priority) in the message (e.g. 1,3,4,5,6,7,8,9,10 is not allowed, 1,2,2,3 is not allowed, but 5,4,1,2,3 is allowed) Missing interval between priorities is not allowed (see TimeIntervalRule). In the case some intervals have less priority, 0 value will represent the gap. For CR Bid (B55) and BS Bid (Z07), only one priority equal to 1 is allowed.
flowDirectionRule	For RR Bid (A98), flowDirection is UP (A01) or DOWN (A02), it identifies the offer direction CR Bid (B55) and BS Bid (Z07), flowDirection is UP (A01) only
ResourceObjectRule	For RR Bid (A98), the Resource Object must be empty For BS Bid (Z07), the Resource Object must be:

	- a Generating Unit with Black Start capability with registered capacity greater than the Minimum required Pmax. For CR Bid (B55), the Resource Object must be: - a Generating Unit with Contingency Reserve capability. The Resource Object Owner is the sender of the message or the TSOC.
DefaultingPartyRule	The resource object owner must not be a defaulting party
linkedBidsIdentificationNotUsedRule	not Used
multipartBidIdentificationNotUsedRule	not Used
exclusiveBidsIdentificationNotUsedRule	not Used
DivisibleRule	Divisible is Yes (A01) for RR Bid (A98) and for CR Bid (B55). Divisible is No (A02) for BS Bid (Z07)
blockBidNotUsedRule	not Used
currency_UnitRule	EUR
VerificationAgainstRREnergyEfferCapRule	For Replacement Reserve (A98), Offer Prices must not be higher than the Administratively Defined Replacement Reserve Offer Cap.
RRBidsPricesRuleIncreasing	For RR Bid (A98), the Bids prices must be strictly not decreasing between two consecutive points.
CapacityVolumeRule	For Replacement Reserve bid (A98), the capacity volume of the RR bid must be limited (curtailed) to the following condition: Offered Capacity volume <= minimum value between: • RR auction requirement • SUM of all units with RR Capability not contracted, not virtual and not in Test and with subtype in {LOADUNIT, RESUNIT, RESPORTFOLIO, GENUNIT, COMCYCPOP} that belong to the participant of minimum value between: o Maximum Replacement Reserve Capability of unit u as found in the Standing data o Result of multiplication between (rounded down to the nearest whole number): ▪ RR auction requirement ▪ Maximum % Share in RR Provision as found in standing data - general configuration For Contingency (B55), and Black Start (Z07), quantity must be equal to 0.

VerificationAgainstBSEnergyEfferCap Rule	For Black Start (Z07), Offer Prices must not be higher than the Administratively Defined Black Start Offer Cap.
VerificationAgainstCREnergyEfferCap Rule	For Contingency (B55), Offer Prices must not be higher than the Administratively Defined Contingency Reserve Offer Cap.

2.8 Balancing Energy Offers

2.8.1 Interface Format

The interface will use the CIM Reserve Bid Document xsd:

- iec62325-451-7-reservebiddocument_v7_1.xsd

Balancing Energy Offers are submitted by Participants separately for each Balancing Service Provider (BSP) they operate, which has the technical capability to change its Market Schedule. A Balancing Energy Offer refers to an upward or downward deviation from the Market Schedule.

ReserveBid_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
type	Message Type	Reserve tender document (A37)
process.processType	Process Type	Energy Offer, Redispatch Process (A41)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the Resource Provider that sent the message or TSOC.
sender_MarketParticipant.marketRole.type	Sender Role	Resource Provider (A27)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	System operator (A04)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
reserveBid_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code

subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	EIC Code of the Resource Provider
subject_MarketParticipant.marketRole.type	Subject Party Role	Resource Provider (A27)
BidTimeSeries	Time Series	See below

BidTimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification within the schedule message assigned by the sender.
auction.mRID	Auction	Not used, but this is a mandatory field. For example, user can set a fixed text such as “ISP BEO auction”
businessType	Business type	Control area balance energy (A86)
acquiring_Domain.mRID	acquiring_Domain	EIC Code of the Cyprus Control Area
connecting_Domain.mRID	connecting_Domain	EIC Code of the Cyprus Control Area
provider_MarketParticipant.mRID	Market participant	Not Used
quantity_Measure_Unit.name	quantity_Measure_Unit	MWH
currency_Unit.name	currency_Unit	EUR
price_Measure_Unit.name	energyPrice_Measure_Unit	MWH
divisible	divisible	Yes (A01)
linkedBidsIdentification	linkedBidsIdentification	Not Used
multipartBidIdentification	multipartBidIdentification	Not Used
exclusiveBidsIdentification	exclusiveBidsIdentification	Not Used
blockBid	blockBid	Not Used
status	status	Not Used
priority	priority	Offer Block Index from 1 to 10
registeredResource.mRID	registeredResource	EIC Code of the Resource Object
flowDirection.direction	flowDirection	UP (A01) or DOWN (A02)
stepIncrementQuantity	stepIncrementQuantity	Not used
energyPrice_Measure_Unit.name	energyPrice_Measure_Unit	MWH

marketAgreement.type	marketAgreement.type	Not Used
marketAgreement.mRID	marketAgreement.mRID	Not Used
marketAgreement.createdDateTime	marketAgreement.createdDateTime	Not Used
activation_ConstraintDuration.duration	activation_ConstraintDuration	Not Used
resting_ConstraintDuration.duration	resting_ConstraintDuration	Not Used
minimum_ConstraintDuration.duration	minimum_ConstraintDuration	Not Used
maximum_ConstraintDuration.duration	maximum_ConstraintDuration	Not Used
Period	Series_Period	See below
AvailableMBA_Domain	AvailableMBA_Domain	Not Used
Reason	Reason	Not Used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
quantity.quantity	Quantity	Offer Quantity
minimum_Quantity.quantity	Minimum Quantity	Not used
price.amount	Price	Not used
energy_Price.amount	Energy Price	Energy Price of the offer

2.8.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
VersioningRule	Time series with a given Resource Object, direction, priority combination in the message replace the time series sharing the same combination from a previous message version. If a time series with a combination is missing in a second message version, then that time series is deleted
EnergyBidPeriodIntervalRule	The Energy Bid Period is a full EET day
EnergyOfferGateOpenRule	The Message Time Interval match an open Participant Declaration Gate (Submission of Balancing Offers)
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version
ResourceObjectRule	The Resource Object can only be: - A generating Unit, can be virtual but not contracted and not in test - A dispatchable load Unit - A dispatchable RES Unit more than 1MW, but not NGP, not Meter profiled, and not in test - A dispatchable RES Unit portfolio - A Combined Cycle Configuration For offers with DOWN direction only, the Resource Object can also be: - A RES Unit with downward capability more than 1MW - A RES portfolio with downward capability The Resource Object Owner is the sender of the message. (Market Evaluation Point matching the Resource Object EIC Code) or TSOC
DefaultingPartyRule	The resource object owner must not be a defaulting party
SenderRoleRule	Sender Role is Resource Provider (A27)
ReceiverIdentificationRule	The Receiver Identification is the TSOC EIC Code
ReceiverRoleRule	Receiver Role is System Operator (A04)
PeriodTimeIntervalRule	The Message Time Interval and the Period Time Interval are the same. Every TimeSeries must have 48 Points

SubjectPartyRoleRule	The sender MarketParticipant mRID must be equal to the subject MarketParticipant mRID and The sender MarketParticipant role must be equal to the subject MarketParticipant role
MessageTypeRule	Message Type is Reserve tender document (A37)
ProcessTypeRule	Process Type is Redispatch Process (A41), and it defines the offer type Energy Offer
DomainCyprusRule	Domain is the Cyprus Control Area EIC Code
BusinessTypeRule	Business Type "Control area balance energy" (A86) should match the offer type defined by the process type Control area balance energy (Energy Offer).
DivisibleRule	Divisible is Yes (A01)
linkedBidsIdentificationNotUsedRule	not Used
multipartBidIdentificationNotUsedRule	not Used
exclusiveBidsIdentificationNotUsedRule	not Used
blockBidNotUsedRule	blockBid is not Used
statusNotUsedRule	status is not Used
priorityRule	The priority is an integer between 1 and 10 If there are n offers sharing the same combination (Resource Object, Direction) in the message, for each priority between 1 and n, it exists one and only one combination (Resource Object, Direction, Priority) in the message
stepIncrementQuantityNotUsedRule	not Used
energyPrice_Measure_UnitRule	is MWH
connecting_DomainRule	Connected Domain is EIC Code of the Cyprus Control Area
price_Measure_UnitRule	MWH
minimum_ConstraintDurationNotUsedRule	not Used
currency_UnitRule	EUR
marketAgreementNotUsedRule	Not Used
acquiring_DomainRule	acquiring_Domain is the EIC Code of the Cyprus Control Area
flowDirectionRule	flowDirection is UP (A01) or DOWN (A02) and it identifies the offer direction

AscendingPriceOfferUpRule	For Balancing Energy offer in Up direction, for each Position, in offers sharing the same combination (Resource Object, Direction) the price is ascending with the priority
DescendingPriceOfferDownRule	For Balancing energy offer in Down direction, for each Position, in offers sharing the same combination (Resource Object, Direction) the price is descending when the priority is ascending.
BalancingEnergyPricesRuleAccuracy	The Energy prices shall be expressed in €/MWh with an accuracy of up to two (2) decimal points.
BalancingEnergyQuantitiesRule	The Energy quantities must be expressed in MWh with an accuracy of up to three (3) decimal points.
BalancingEnergyUPPricesLimitRule	For BEO in UP direction and for resource type Generating Unit and Combined Cycle Configuration, the Energy prices must be less than or equal to the Balancing Energy offer price cap (found in Standing Data) and greater than or equal to the maximum value between Minimum Variable Cost (found in TED if any) and Balancing Energy offer price lower limit (found in Standing Data). For BEO in UP direction and for resource type RES Unit and RES Portfolio, the Energy prices for each step of the stepwise Balancing Energy Offer must be greater than or equal to the Balancing Energy Offer Lower Limit (found in Standing Data) and less than or equal to the Balancing Energy Offer price cap (found in Standing Data). For BEO in UP direction and for resource type Load, the Energy prices must be greater than or equal to the Balancing Energy offer price lower limit (found in Standing Data) and less than or equal to the Balancing Energy offer price cap (found in Standing Data).
BalancingEnergyDOWNPricesLimitRule	For BEO in DOWN direction and for resource type Generating Unit and Combined Cycle Configuration, if the MVC (Minimum Variable Cost) for the resource object exist, then the Energy prices for each step of the stepwise Balancing Energy Offer in down direction must be greater than or equal to the BEOLL (Balancing Energy offer price lower limit - found in Standing Data, factor BM.BEO_MIN_UP in general configuration) and less than or equal to the MVC (found in TED schedule). If MVC is not available, then the BEO in DOWN direction and for resource type Generating Unit and Combined Cycle Configuration must be greater than or equal to BEOLL (Balancing Energy offer price lower limit - found in Standing Data, factor BM.BEO_MIN_UP in general configuration) and less than or equal to the to the Administratively Defined

	Balancing Energy Offer Cap (found in Standing Data, factor BM.BEO_CAP_UP in the general configuration). For BEO in DOWN direction and for resource type RES Unit and RES Portfolio, the Energy prices for each step of the stepwise Balancing Energy Offer must be greater than or equal to the BEOLL (Balancing Energy offer price lower limit - found in Standing Data, factor BM.BEO_MIN_UP in general configuration) and less than or equal to the to the Administratively Defined Balancing Energy Offer Cap (found in Standing Data, factor BM.BEO_CAP_UP in the general configuration). For BEO in DOWN direction and for resource type Load, the Energy prices for each step of the stepwise Balancing Energy Offer must be greater than or equal to the BEOLL (Balancing Energy offer price lower limit - found in Standing Data, factor BM.BEO_MIN_UP in general configuration) and less than or equal to the to the Administratively Defined Balancing Energy Offer Cap (found in Standing Data, factor BM.BEO_CAP_UP in the general configuration).
quantityProducerUPVerificationRule	If resource object is a generating unit and if the Available capacity is higher than or equal to the Market Schedule, then the sum of all offer quantities in UP direction must be equal to the positive difference between the resource available capacity and the Market Schedule, otherwise if the difference is negative, it must be 0. If resource object is a generating unit and if the Available capacity is smaller than the Market Schedule, then the sum of all offer quantities in UP direction must be equal to 0. The resource available capacity is the value stored in the time series Generation Availability for the resource object.
quantityProducerDNVerificationRule	If resource object is a generating unit and if the Available capacity (of the plant in case of CCGT) is higher than the Market Schedule, then the sum of all offer quantities in DOWN direction must be equal to the Market Schedule. If resource object is a generating unit and if the Available capacity (of the plant in case of CCGT) is smaller than the Market Schedule, then the sum of all offer quantities in DOWN direction must be equal to the value of the Available capacity - for units of non-CCGT plants - at plant level of CCGT plants (and not at configuration level).

	The resource available capacity is the value stored in the time series Generation Availability for the resource object. Available Capacity of the CCGT plant is defined as the maximum of the Available Capacities of the configurations. The Market Schedule (MS) of the CCGT plant is defined at plant level.
quantityRESProducerUPVerificationRule	If resource object is a RES Unit or RES Portfolio, and if no mFRR offer UP nor RR nomination UP was received, then the sum of all offer quantities in UP direction must be less or equal to the minimum of the difference between the resource available capacity and the Market Schedule, and the Technical Capability as found in the Standing Data. If resource object is a RES Unit or RES Portfolio, and if mFRR offer UP was received but no RR nomination UP was received, then the sum of all offer quantities in UP direction must not be lower than the mFRR offer UP. If resource object is a RES Unit or RES Portfolio, and if RR nomination UP was received but no mFRR offer UP was received, then the sum of all offer quantities in UP direction must not be lower than the RR nomination UP. If resource object is a RES Unit or RES Portfolio, and if both mFRR offer and RR nomination were received, then the sum of all offer quantities in UP direction must not be lower than the sum of the mFRR offer UP plus the RR nomination UP.
quantityRESProducerDNVerificationRule	If resource object is a RES Unit or RES Portfolio, then the sum of all offer quantities in DOWN direction be equal to the Market Schedule.
quantityLoadRepresUPVerificationRule	If resource object is a Load Unit, and if no mFRR UP nor RR nomination Up was received, and if the Technical Capability of the resource as declared in the SD is higher or equal than the Market Schedule, then the sum of all offer quantities in UP direction must be equal to the Market Schedule. If resource object is a Load Unit, and if no mFRR UP nor RR nomination UP was received, and if the Technical Capability of the resource as declared in the SD is lower than the Market Schedule, then the sum of all offer quantities in UP direction must be equal to the Technical Capability. If resource object is a Load Unit, and if a mFRR offer UP was received but no RR nomination UP, then the sum of all offer quantities in UP direction must be between the mFRR offer UP quantity and the Technical Capability.

	If resource object is a Load Unit, and if a RR nomination UP was received but no mFRR offer UP, then the sum of all offer quantities in UP direction must be between the RR nomination UP and the Technical Capability. If resource object is a Load Unit, and if both RR nomination UP and mFRR offer UP was received, then the sum of all offer quantities in UP direction must be between the sum of (RR nomination UP and mFRR offer Up) and the Technical Capability.
quantityLoadRepresDNVerificationRule	If resource object is a Load Unit, and if no mFRR offer DN nor RR nomination DN was received, and if the Technical Capability of the resource as declared in the SD is higher than the Market Schedule, then the sum of all offer quantities in DN direction must be equal to the difference between the Market Schedule and Technical Capability. If resource object is a Load Unit, and if no mFRR offer DN nor RR nomination DN was received, and if the Technical Capability of the resource as declared in the SD is lower than the Market Schedule, then the sum of all offer quantities in DN direction be equal to 0. If resource object is a Load Unit, and if a mFRR offer DN was received but no RR nomination DN, then the sum of all offer quantities in DN direction must be between the mFRR offer quantity and the Technical Capability. If resource object is a Load Unit, and if a RR nomination DN was received but no mFRR offer DN, then the sum of all offer quantities in DN direction must be between the RR nomination DN and the Technical Capability. If resource object is a Load Unit, and if both RR nomination DN and mFRR offer DN was received, then the sum of all offer quantities in DN direction must be between the sum of (RR nomination DN and mFRR offer DN) and the Technical Capability.
TechMinRule	If resource object is a Generating Unit, and the Available Capacity of the resource object is not 0, for direction Up, if the Technical Minimum is higher than the Market Schedule, then the sum of the Quantity of the priority 1 offers step and the Market Schedule must be equal to the Technical Minimum. If resource object is Generating Unit, for direction Down, if Available Capacity is lower than the Technical Minimum, then the Quantity of the highest priority offer step in down direction must be equal to the Available Capacity.

	If resource object is a Generating Unit, and the Available Capacity of the resource object is not 0, for direction Down, if Market Schedule is higher than or equal to the Technical Minimum (and the Available Capacity is higher than or equal to the Technical Minimum), then the Quantity of the highest priority offer step in down direction must be equal to the Technical Minimum. If resource object is a Generating Unit, and the Available Capacity of the resource object is not 0, for direction Down, if Technical Minimum is higher than the Market Schedule (and the Available Capacity is higher than or equal to the Technical Minimum), then the offer quantity of highest priority step must be equal to the Market Schedule.

2.9 Balancing Reserve Capacity Offers

2.9.1 Interface Format

The interface will use the CIM Reserve Bid Document xsd:

- iec62325-451-7-reservebiddocument_v7_1.xsd

Participants operating Balance Responsible Parties can submit Reserve Capacity Offers of the following type:

- Upward and downward Frequency Containment Reserve (FCR);
- Upward and downward automatic Frequency Restoration Reserve (aFRR);
- Upward and downward manual Frequency Restoration Reserve (mFRR); and

ReserveBid_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
type	Message Type	Proposed capacity (A32)
process.processType	Process Type	Manual frequency restoration reserve (A47) = mFRR Capacity Offer Automatic frequency restoration reserve (A51) = aFRR Capacity Offer Frequency containment reserve (A52) = FCR Capacity Offer
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the Resource Provider that sent the message or TSOC.
sender_MarketParticipant.marketRole.type	Sender Role	Resource Provider (A27)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	System operator (A04)

createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
reserveBid_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	EIC Code of the Resource Provider
subject_MarketParticipant.marketRole.type	Subject Party Role	Resource Provider (A27)
BidTimeSeries	Time Series	See below

BidTimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification within the schedule message assigned by the sender.
auction.mRID	Auction	Not used, but this is a mandatory field. For example, user can set a fixed text such as “ISP RCO auction”
businessType	Business type	Frequency containment reserve (A95) Automatic frequency restoration reserve (A96) Manual frequency restoration reserve (A97)
acquiring_Domain.mRID	acquiring_Domain	EIC Code of the Cyprus Control Area
connecting_Domain.mRID	connecting_Domain	EIC Code of the Cyprus Control Area
provider_MarketParticipant.mRID	Market participant	Not Used
quantity_Measure_Unit.name	quantity_Measure_Unit	MAW
currency_Unit.name	currency_Unit	EUR
price_Measure_Unit.name	energyPrice_Measure_Unit	MAW
divisible	divisible	Yes (A01)
linkedBidsIdentification	linkedBidsIdentification	Not Used
multipartBidIdentification	multipartBidIdentification	Not Used

exclusiveBidsIdentification	exclusiveBidsIdentification	Not Used
blockBid	blockBid	Not Used
status	status	Not Used
priority	priority	Offer Block Index, only can be 1
registeredResource.mRID	registeredResource	EIC Code of the Resource Object
flowDirection.direction	flowDirection	is UP (A01) or DOWN (A02)
energyPrice_Measure_Unit.name	energyPrice_Measure_Unit	MAW
marketAgreement.type	marketAgreement.type	Not Used
marketAgreement.mRID	marketAgreement.mRID	Not Used
marketAgreement.createdDateTime	marketAgreement.createdDateTime	Not Used
activation_ConstraintDuration.duration	activation_ConstraintDuration	Not Used
resting_ConstraintDuration.duration	resting_ConstraintDuration	Not Used
minimum_ConstraintDuration.duration	minimum_ConstraintDuration	Not Used
maximum_ConstraintDuration.duration	maximum_ConstraintDuration	Not Used
Period	Series_Period	See below
AvailableMBA_Domain	AvailableMBA_Domain	Not Used
Reason	Reason	Not Used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.

quantity.quantity	Quantity	Offer Quantity = must be 0 if resource object is not a LOADUNIT (as quantity is calculated by MMS), otherwise it is the offer quantity
minimum_Quantity.quantity	Minimum Quantity	Not used
price.amount	Price	Price of the reserve offer
energy_Price.amount	Energy Price	Not used

2.9.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
ReserveBidPeriodIntervalRule	The Reserve Bid Period is a full EET day
ReserveBidGateOpenRule	The Message Time Interval match an open Participant Declaration Gate
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
ResourceObjectRule	The Resource Object can only be: - A generating Unit, cannot be virtual neither contracted and not in test - A dispatchable load Unit - A dispatchable RES Unit more than 1MW, but not NGP, not Meter profiled, and not in test - A dispatchable RES Unit portfolio - A Combined Cycle Configuration The Resource Object Owner is the sender of the message. (Market Evaluation Point matching the Resource Object EIC Code)
ResourceObjectcapability	If BT= A96 (aFRR) then the resource object must be flagged with isProv aFRR =TRUE and for UP direction, MAXIMUM_aFRR_UP >= 0, or for DOWN direction MAXIMUM_aFRR_DOWN >= 0 If BT= A97 (mFRR) then the resource object must have for UP direction MAXIMUM_mFRR_UP >= 0, or for DOWN direction MAXIMUM_mFRR_DOWN >= 0 If BT= A95 (FCR) then the resource object must have for UP direction MAXIMUM_FCR_UP >= 0, or for DOWN direction MAXIMUM_FCR_DOWN >= 0

DefaultingPartyRule	The resource object owner must not be a defaulting party
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version
SenderRoleRule	Sender Role is Resource Provider (A27)
ReceiverIdentificationRule	The Receiver Identification is the Cyprus EIC Code
ReceiverRoleRule	Receiver Role is System operator (A04)
PeriodTimeIntervalRule	The Message Time Interval and the Period Time Interval are the same
SubjectPartyRoleRule	The sender MarketParticipant mRID must be equal to the subject MarketParticipant mRID and The sender MarketParticipant role must be equal to the subject MarketParticipant role
MessageTypeRule	Message Type is Proposed capacity (A32)
ProcessTypeRule	Process Type can have one of the following values: Manual / Automatic frequency restoration reserve or Frequency containment reserve. The process type defines the offer type, as follows: • Manual frequency restoration reserve (A47) = mFRR Capacity Offer • Automatic frequency restoration reserve (A51) = aFRR Capacity Offer • Frequency containment reserve (A52) = FCR Capacity Offer
DomainCyprusRule	Domain is the Cyprus Control Area EIC Code
BusinessTypeRule	Business Type should match the offer type defined by the process type: • Automatic frequency restoration reserve (A96) = aFRR Capacity Offer • Manual frequency restoration reserve (A97) = mFRR Capacity Offer • Frequency containment reserve (A95) = FCR Capacity Offer
DivisibleRule	Divisible is A01 (Yes)
linkedBidsIdentificationNotUsedRule	linkedBidsIdentification is not Used
multipartBidIdentificationNotUsedRule	multipartBidIdentification is not Used

exclusiveBidsIdentificationNotUsedRule	exclusiveBidsIdentification is not Used
blockBidNotUsedRule	blockBid is not Used
statusNotUsedRule	status is not Used
priorityRule	The priority is an integer with a value of 1. For the same combination (Resource Object, Direction, Reserve Commodity) in the message, only one priority 1 offer can exist.
connecting_DomainRule	Connected Domain is EIC Code of the Cyprus Control Area
price_Measure_UnitRule	price_Measure_Unit is MAW
currency_UnitRule	currency_Unit is EUR
provider_MarketParticipantRule	provider_MarketParticipant is the EIC Code of the Resource Provider
acquiring_DomainRule	acquiring_Domain is the EIC Code of the Cyprus Control Area
quantity_Measure_UnitRule	quantity_Measure_Unit is MAW
flowDirectionRule	flowDirection is UP (A01) or DOWN (A02) and it identifies the offer direction
capacityOfferPriceRule	Price must exist in each point and Energy Price is not used. The capacity price for each Reserve Offer for each Reserve type must be greater than (and not equal to) zero, and less than the Administratively Defined Reserve Offer Cap for such Reserve type
capacityVolumeProducerRule	If resource owner is a producer or RES producer or RES aggregator, and if the resource object is a generating unit or a RES Unit or portfolio or combined cycle configuration, then the capacity volume must be 0 and is replaced by the max reserve capacity volume of the commodity and direction being submitted as found in the standing data (MAXFCRUP or MAXFCRDO, MAXAFRRUP or MAXAFRRDO, MAXMFRRUP or MAXMFRRDO)
capacityVolumeConsumerRule	If resource owner is a Load representative and if resource object is a Load Unit, then the capacity volume must be higher than 0 but must not be higher than to the declared Capability to provide each type of reserve from standing data (MAXFCRUP or MAXFCRDO, MAXAFRRUP or MAXAFRRDO, MAXMFRRUP or MAXMFRRDO)

2.10 RES Injection Forecast

2.10.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Following Participants can submit RES Injection Forecast:

- RES Injection Forecasts by RES Producers and EAC Supply (for RES Units operating under National Grant Plans), being the operators of the RES Units having a Registered Capacity above 1 MW. RES Units can be Generic DER entities (e.g. Biomass, Small Conventional)
- RES Injection Forecasts by RES Aggregators and EAC Supply (for RES Units operating under National Grant Plans with Non-Profiled Meters), being the operators of the RES Units having a Registered Capacity below 1 MW

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Wind/solar/DER forecast (A69)
process.processType	Process Type	Day Ahead (A01)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	EIC of the participant that sent the message or TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender Role	Producer (A21)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	TSOC EIC Code
receiver_MarketParticipant.marketRole.type	Receiver Role	System Operator (A04)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.

schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
subject_MarketParticipant.mRID	Subject Party Identification / Coding Scheme	Not used
subject_MarketParticipant.marketRole.type	Subject Party Role	Not used
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Wind/Solar/DER generation (A93)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
out_Domain.mRID	Area / Coding scheme	Not Used
marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Sender Identification
out_MarketParticipant.mRID	Party / Coding scheme	Not Used
marketAgreement.type	Agreement type	Not Used
marketAgreement.mRID	Agreement identification	Not Used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MAW
curveType	Curve Type	Sequential fixed size block (A01)

Period	Series_Period	See below
Reason	Reason code	Not Used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Power quantity, in MW

2.10.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative acknowledgement shall be sent to the Participant.
MessageTimeIntervalRule	The Message Time Interval is a full EET day
ForecastSubmissionDeadlineRule	The Message Time Interval for D must be submitted before the MP's RES Injection forecast deadline (D-1 11:00 am)
SendingUserRule	The message is uploaded either by an operator user or by a user linked to the xml message sender
MessageIdentificationVersionRule	The previous message received with the same combination (message identification, message type, Sender Identification, Message Time Interval) has lower version
SenderRoleRule	Sender Role is Producer (A21)
ReceiverIdentificationRule	The Receiver Identification is TSOC EIC Code
ReceiverRoleRule	Receiver Role is System Operator (A04)

TimeIntervalRule	The Message Time Interval and the Unit Time Interval are the same
ResourceObjectRule	The Resource Object must be: - a RES Unit - a RES subunit - a RES portfolio. The Resource Object Owner is the sender of the message or the TSOC.

2.11 DAM Margin

2.11.1 Interface Format

The interface will use a SOAP web service. The MMS application is exposing a web service that the market participant can use to send a request. MMS application answers via a web service response with the DAM Margin of the Market participant. The same web service is used to query Initial DAM Margin and DAM Margin data, thanks to the boolean parameter "Initial".

An example of the soap body request in xml format is provided below:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:dam="http://tsoc.etse.com/DAMMarginDerivationDataService"
xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-
1.0.xsd">
 <soapenv:Header>
                <wsse:Security>
                        <wsse:UsernameToken>
                                <wsse:Username>superuser</wsse:Username>
                                <wsse:Password                          Type="http://docs.oasis-
open.org/wss/2004/01/oasis-200401-wss-username-token-profile-
1.0#PasswordText">superuser</wsse:Password>
                        </wsse:UsernameToken>
                </wsse:Security>
        </soapenv:Header>
  <soapenv:Body>
    <dam:processDAMMarginData >
     <arg0>
                <period>
                        <start>2020-11-16T22:00:00.000Z</start>
                        <end>2020-11-17T22:00:00.000Z</end>
                </period>
                <marketParty>EAC_G</marketParty>
                <resourceObject></resourceObject>
                <initial>false</initial>
          </arg0>
    </dam:processDAMMarginData >
  </soapenv:Body>
</soapenv:Envelope>
```

In the web service, the user representing the Market participant will have to provide 4 arguments:

- the start and stop of the period
- the name of the Market party he is representing
- the name of the resource he needs to retrieve the DAM Margin. In the case the resource name is empty, DAM Margin for all the resources available under the market party will be sent.

- the flag to specify if Initial DAM Margin data is requested or not. If the flag is set to “true”, the Initial DAM Margin data will be returned, if the flag is set to “false”, the latest DAM Margin data will be returned. If the flag is missing, then default value “false” will be considered.

An example of the response in xml format is provided bellow (only the 2 first intervals are shown, supposing EAC_G has only 2 resources):

```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <ns2: processDAMMarginDataResponse
xmlns:ns2="http://tsoc.etse.com/DAMMarginDerivationDataService">
      <return><![CDATA[<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<results>
  <result>
    <endDate>2020-11-16T22:30Z</endDate>
    <marketParty>EAC_G</marketParty>
    <resourceObject>DPS_1</resourceObject>
    <startDate>2020-11-16T22:00Z</startDate>
    <value>60.00000</value>
  </result>
  <result>
    <endDate>2020-11-16T22:30Z </endDate>
    <marketParty>EAC_G</marketParty>
    <resourceObject>DPS_2</resourceObject>
    <startDate>2020-11-16T22:00Z </startDate>
    <value>60.00000</value>
  </result>
  <result>
    <endDate>2020-11-16T23:00Z</endDate>
    <marketParty>EAC_G</marketParty>
    <resourceObject>DPS_1</resourceObject>
    <startDate>2020-11-16T22:30Z</startDate>
    <value>60.00000</value>
  </result>
  <result>
    <endDate>2020-11-16T23:00Z </endDate>
    <marketParty>EAC_G</marketParty>
    <resourceObject>DPS_2</resourceObject>
    <startDate>2020-11-16T22:30Z </startDate>
    <value>60.00000</value>
  </result>

.....

</results>]]></return>
    </ns2: processDAMMarginDataResponse>
```

```
  </soap:Body>
</soap:Envelope>
```

2.11.2 Validation Rules

The message is rejected if one of the following rules is not respected.

Rule Name	Rule Description
SchemaFormatValidationRule	Obligatory fields of the XML must meet the related XSD specification. Moreover, the XML related business validations like checking against gate opening/closure times, existence of participant, etc. If this verification fails, then the file should be rejected, and a negative response shall be sent to the Participant.
SendingUserRule	The request is coming from a registered user that belongs to a registered market participant authorized to participate in the Day Ahead Market

3 Forward Market Output XML Interfaces

3.1 Net Delivery Position

3.1.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Net Delivery Position (Z04)
process.processType	Process Type	Forward Market (Z01)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender Role	Market operator (A11)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	EIC of the participant
receiver_MarketParticipant.marketRole.type	Receiver Role	Resource Provider (A27)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Net Delivery Position (Z08)
product	Product	active power (8716867000016)
objectAggregation	Object aggregation	Party (A03)
in_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
out_Domain.mRID	Area / Coding scheme	Not used
marketEvaluationPoint.mRID	Market Evaluation Point	Not used
in_MarketParticipant.mRID	Party / Coding scheme	Not used
out_MarketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.type	Agreement type	Not used
marketAgreement.mRID	Agreement identification	Not used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MWH
curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Energy quantity, in MWH
Reason	Reason	Not used

3.2 Participant Forward Market Mismatch Quantity

The Participant Forward Market Mismatch Quantity is calculated during the global verification of nominations as well as after the final submission of PDNs/PONs. The Forward Market Mismatch Quantity is considered in the Integrated Scheduling Process.

3.2.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Participant Mismatch Quantity document (Z05)
docStatus	Document Status	Intermediate (A01) for the initial publication Final (A02) for the final publication
process.processType	Process type	Z01 (Forward Market)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	Market operator (A11)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code

period.timeInterval	Accounting period	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	FM Mismatch Quantity (Z09)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	A06 (Resource Object)
area_Domain.mRID	Area / Coding scheme	EIC code / coding scheme of Scheduling Area
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH Megawatt hour
currency_Unit.name	Currency	Not used
marketEvaluationPoint.mRID	Market Evaluation point	Not used
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	ESMP_DateTimeInterval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M) or daily (P1D) depending on the determinant resolution
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Not used
in_Quantity.quantity	In Quantity	Positive value of the mismatch
in_Quantity_quality	In Quality	Not used

out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	Negative value of the mismatch
Reason	Reason	Not used

3.3 Auction specifications for RR, BS and CR

In the Specification of Auctions phase invitations to auctions are automatically created by the system by using default parameters that have been predefined in the market configuration according to the commodity and time horizon. Once created by the system, the different parameters of an invitation to auctions can be manually updated by the system operator.

There are three types of auctions:

- Auctions for Replacement Reserve
- Auctions for Black Start
- Auctions for Contingency Reserve

3.3.1 Interface Format

The interface will use the CIM Auction Specification Market Document xsd:

- iec62325-451-3-auctionspecification_v7_1.xsd

CapacityAuctionSpecification_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Capacity Auction Specification Document (A51)
Process.processType	Process Type	Long term (A12)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender role	System operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	TSOC EIC Code (public)
receiver_MarketParticipant.marketRole.type	Receiver role	System operator (A04)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.

period.timeInterval	ESMP_DateTimeInterval	See below Must be same as delivery period (a month for RR, a year for BS and CR)
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
Auction_TimeSeries	Time Series	See below

Auction_Timeseries	Attribute Name	Attribute Description
mRID	mRID	Auction mRID
businessType	Business type	RR (Replacement Reserve) (A98) CR (Contingency Reserve) (B55) BS (Black Start) (Z07)
auction.category	Auction Category	Base – the auction is for a base period (A01)
auction.type	Auction Type	Explicit - The auction is an explicit auction (A02)
auction.allocationMode	Auction Allocation mode	Order by price with pro rata (A01)
auction.paymentTerms	Auction payment terms	Pay as cleared - The amount to be paid shall correspond to the amount calculated for clearing (A02)
auction.cancelled	Auction cancelled	Yes (A01)) No (A02)
bidding_Period.timeInterval	Bidding Period	See below ESMP_DateTimeInterval The beginning and ending date and time of the bidding period within which traders can submit bid.
in_Domain.mRID	In Domain	Cyprus Control Area EIC Code
out_Domain.mRID	Out Domain	Cyprus Control Area EIC Code
marketAgreement.type	Market Agreement type	Monthly (A03) for BT = A98 Yearly (A04) for BT = B55 or Z07)
delivery_Period.timeInterval	Delivery Period	See below ESMP_DateTimeInterval The beginning and ending date and time of the period when the capacity is to be used.
quantity_Measure_Unit.name	Quantity Measure Unit	MAW for RR and CR C62 (dimensionless quantity) for BS

price_Measure_Unit.name	Price Measure Unit	MAW
currency_Unit.name	Currency Unit	EUR
notification_MarketAgreement.createdDateTime	Notification time creation	The date and time that the participants will be notified of the results prior to the contestation period.
contestation_MarketAgreement.createdDateTime	Contestation time creation	The period in which contestations may be provided starts with the notification date time and ends with the contestation date and time. If there is no possibility of contestation both dates and times must be the same.
publication_MarketAgreement.createdDateTime	Publication time creation	The date and time that the final auction results will be published to the market after the contestation period.
resale_MarketAgreement.createdDateTime	Resale time creation	Not used.
curveType	Curve Type	Sequential fixed size block (A01)
Period	Series Period	See below Series_Period
AuctionDescription_AttributeInstanceComponent	Attribute Instance Component	See below AttributeInstanceComponent
RightsCharacteristics_Auction	Rights Characteristics	Not used
Reason	Reason	See below - Only used for cancellation of Auction

ESMP_DateTimeInterval	Attribute Name	Attribute Description
Start	DateTimeInterval.start	Time of gate opening
End	DateTimeInterval.start	Time of gate closing

Series_Period	Attribute Name	Attribute Description
timeInterval	ESMP_DateTimeInterval	See below
Resolution	Duration	The definition of the number of units of time that compose an individual step within a period
Point	Point	See below

AttributeInstanceComponent	Attribute Name	Attribute Description

position	Position	For RR and CR, one position only: • Position 1 for comment (Text to be input by TSOC in the GUI) For BS, three positions only: • First position (=1) for comment (Text to be input by TSOC in the GUI) • Second position (=2) for the Minimum Required Pmax • Third position (=3) for the text <<Handling partial non-availability>>
attribute	Attribute	For position 1: Comment For position 2: Minimum Required Pmax For position 3: Handling partial non-availability

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
quantity	Quantity	The quantity to be auctioned for the interval in question. The principal quantity identified for a point

Reason	Attribute Name	Attribute Description
code	Reason Code	A99
text	Reason Text	Auction cancelled

3.4 Awarded bids for RR, BS and CR

Following the completion of the clearing activities, the clearing results (Reserve Capacity/Units awarded to the Participant and Marginal Price) will be published to the Participants, who have submitted valid offers to the auction, and the Market Operator.

3.4.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Reserve Allocation Result Document (A38)
docStatus	Document Status	Intermediate (A01) or Final (A02) or Cancelled (A09)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below

TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	RR (Replacement Reserve) (A98) CR (Contingency) (B55) BS (Black Start) (Z07)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Party (A03) for Business type A98 (Replacement Reserve) Resource Object (A06) for Business type Z07 (Black Start) and B55 (Contingency Reserve)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	EIC Code of Market Participant
marketAgreement.mRID	Agreement identification	Auction.mRID
measure_Unit.name	Measurement Unit	MAW for RR and CR C62 (dimensionless quantity) for BS
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Not used for Business type A98 (Replacement Reserve) EIC Code of the Resource Object for Business type Z07 (Black Start) and B55 (Contingency Reserve)
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete month in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ for Business type A98 (Replacement Reserve) Time interval field has to cover a complete year in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ for

		Business type B55 (Contingency Reserve) and Z07 (Black Start)
resolution	Resolution	PT30M (30 minutes) for Business type A98 (Replacement Reserve) P1Y (1 year) for Business type B55 (Contingency Reserve) and Z07 (Black Start)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Awarded Price
in_Quantity.quantity	In Quantity	Awarded quantity
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	Always = 0
Reason	Reason	Not used

3.5 Acknowledgment for all types of input files

The Acknowledgement business process is generic and can be used in all business processes in the two-tier electricity market:

- system level - to detect syntax errors (XML parsing errors, etc.);
- application level - to detect semantic errors (invalid data, wrong process, etc.).

In the event of a problem found at the first level, a technical acknowledgement of receipt can then be forwarded to the sender to inform them of this problem.

3.5.1 Interface Format

The interface will use the CIM Acknowledgement Market Document xsd:

- iec62325-451-1-acknowledgement_v7_0.xsd

Acknowledgement_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
sender_MarketParticipant.mRID	Sender identification / Coding scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender role	System operator (A04) or Market Operator (A11)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of the Resource Provider
receiver_MarketParticipant.marketRole.type	Receiver role	Receiver role
receiver_MarketDocument.mRID	Received document mRID	The unique identification of the document that has been received. The information is extracted from the received document.
receiver_MarketDocument.revisionNumber	Received document revision number	The version of the document that has been received. The information is extracted from the received document.
receiver_MarketDocument.type	Received document type	The type of the document that has been received. The information is extracted from the received document.

receiver_MarketDocument.title	Received file payload name	The payload file name of the document that has been received. The information is extracted from the received document
receiver_MarketDocument.createdDateTime	Received document time	The date and time of the creation of the document that has been received. The information is extracted from the received document
Time_Period	In Error Period	See below
TimeSeries	Rejected Time Series	See below
Reason	Reason	See below

Time_Period	Attribute Name	Attribute Description
timeInterval	Series Period	The beginning and ending date and time of the period covered by the received message.

TimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification of the time series
Version	Version	The identification of the version of the time series.

Reason	Attribute Name	Attribute Description
code	Reason Code	The motivation of an act in coded form.
text	Reason Text	The textual explanation corresponding to the reason code.

3.6 Anomaly for Forward Contract Nominations

According to the ENTSO-E ESS business process, for OTC trades, where market participants individually submit their nominations, the following steps are carried on:

- Verifies that the schedule is coherent independently from the counter nomination. At the end of the verification process an acknowledgement document is transmitted informing the market participant of the results of the initial verification.
- On reception of the nomination from the counter party the nominations are matched and if any mismatches are identified an anomaly report is submitted to both parties.
- At the closure of the submission gate, a final confirmation report is transmitted to the market participants informing them of what will be effectively scheduled from their nominations.

3.6.1 Interface Format

The interface will use the CIM Allocation Market Document xsd:

- iec62325-451-2-anomaly_v5_0.xsd

Anomaly_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
sender_MarketParticipant.mRID	Sender identification / Coding scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender role	System operator (A04) or Market Operator (A11)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of the Resource Provider
receiver_MarketParticipant.marketRole.type	Receiver role	Receiver role / Receiver provider (A27)
schedule_Time_Period.timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
Original_MarketDocument	Original_MarketDocument	See below

Original_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the document being exchanged.
MarketParticipant.mRID	Sender identification	TSOC EIC Code
RevisionNumber	Received document revision number	The identification of the version that distinguishes one evolution of a document from another.
Anomaly_TimeSeries	Anomaly_TimeSeries	See below

Anomaly_TimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification from the original document containing where the anomaly error was detected
Version	Version	Version from the original document containing where the anomaly error was detected
businessType	Business type	Business type from the original document containing where the anomaly error was detected
product	Product	Product from the original document containing where the anomaly error was detected
objectAggregation	Object aggregation	Object aggregation from the original document containing where the anomaly error was detected
in_Domain.mRID	Area / Coding scheme	In Domain from the original document containing where the anomaly error was detected
out_Domain.mRID	Area / Coding scheme	Out Domain from the original document containing where the anomaly error was detected
marketEvaluationPoint.mRID	Market	Market Evaluation Point from the original document containing where the anomaly error was detected
in_MarketParticipant.mRID	Party / Coding scheme	In Party from the original document containing where the anomaly error was detected
out_MarketParticipant.mRID	Party / Coding scheme	Out Party from the original document containing where the anomaly error was detected
marketAgreement.type	Agreement type	Market Agreement type from the original document containing where the anomaly error was detected
marketAgreement.mRID	Agreement identification	Market Agreement identification from the original document containing where the anomaly error was detected

curveType	Curve Type	Curve Type from the original document containing where the anomaly error was detected
measurement_Unit.name	Measurement unit	Measurement unit from the original document containing where the anomaly error was detected
Series_Period	Series_Period	See below
Reason	Reason	See below

Reason	Attribute Name	Attribute Description
code	Reason Code	Time series not matching (A09) Counterpart time series quantity differences (A29)
text	Reason Text	For reason Code = A09 – Time series not matching For reason Code = A29 – Counterpart time series quantity differences

Series_Period	Attribute Name	Attribute Description
timeInterval	Series Period	The beginning and ending date and time of the period covered by the received message.
Resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See Below

Point	Attribute Name	Attribute Description
Position	Position	Position of an interval in described Period (first value is 1)
Quantity	Quantity	Quantity in MWH of the product scheduled for the position within the time interval in question

3.7 Confirmation for Forward Contract Nominations

According to the ENTSO-E ESS business process, for OTC trades, where market participants individually submit their nominations, the following steps are carried on:

- Verifies that the schedule is coherent independently from the counter nomination. At the end of the verification process an acknowledgement document is transmitted informing the market participant of the results of the initial verification.
- On reception of the nomination from the counter party the nominations are matched and if any mismatches are identified an anomaly report is submitted to both parties.
- At the closure of the submission gate a final confirmation report is transmitted to the market participants informing them of what will be effectively scheduled from their nominations.

3.7.1 Interface Format

The interface will use the CIM Allocation Market Document xsd:

- iec62325-451-2-confirmation_v5_1.xsd

Confirmed_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
type	Message type	Final confirmation report (A08)
createdDateTime	ESMP_DateTime	The date and time of the creation of the document.
sender_MarketParticipant.mRID	Sender identification / Coding scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender role	Market Operator (A11)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of the Resource Provider
receiver_MarketParticipant.marketRole.type	Receiver role	Balance responsible party (A08)
confirmed_MarketDocument.mRID	Confirmed document mRID	The unique identification of the document that is confirmed. The information is extracted from the document to confirm.
confirmed_MarketDocument.revisionNumber	Confirmed document revision number	The version of the document that is confirmed. The information is extracted from the document to confirm.
domain.mRID	Domain	Cyprus Control Area EIC Code

subject_MarketParticipant.mRID	Subject Market Party	Not used
subject_MarketParticipant.marketRole.type	Subject Market Party Role	Not used.
process.processType	Process type	System operation closure (A04)
Confirmed_TimeSeries	Confirmed TimeSeries	See below
Imposed_TimeSeries	Imposed TimesSeries	See below
Reason	Reason	See below

Confirmed_TimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification from the original document that is confirmed
version	Version	The identification of the version from the original document that is confirmed
businessType	Business type	The business type from the original document that is confirmed
product	Product	The Product from the original document that is confirmed
objectAggregation	Object aggregation	The Object aggregation from the original document that is confirmed
in_Domain.mRID	Area / Coding scheme	The in Area from the original document that is confirmed
out_Domain.mRID	Area / Coding scheme	The out Area from the original document that is confirmed
marketEvaluationPoint.mRID	Market Evaluation Point	The Market Evaluation Point from the original document that is confirmed
in_MarketParticipant.mRID	Party / Coding scheme	The in Party from the original document that is confirmed
out_MarketParticipant.mRID	Party / Coding scheme	The out Party from the original document that is confirmed
marketAgreement.type	Agreement type	The Agreement type from the original document that is confirmed
marketAgreement.mRID	Agreement identification	The Agreement identification from the original document that is confirmed
curveType	Curve Type	The Curve Type from the original document that is confirmed

measure_Unit.name	Measurement unit	The Measurement unit from the original document that is confirmed
Imposed_TimeSeries	Imposed TimeSeries	See below
Reason	Reason	See below

Imposed_TimeSeries	Attribute Name	Attribute Description
mRID	mRID	A unique identification from the original document that is imposed
version	Version	The identification of the version from the original document that is imposed
businessType	Business type	The business type from the original document that is imposed
product	Product	The Product from the original document that is imposed
objectAggregation	Object aggregation	The Object aggregation from the original document that is imposed
in_Domain.mRID	Area / Coding scheme	The in Area from the original document that is imposed
out_Domain.mRID	Area / Coding scheme	The out Area from the original document that is imposed
marketEvaluationPoint.mRID	Market Evaluation Point	The Market Evaluation Point from the original document that is imposed
in_MarketParticipant.mRID	Party / Coding scheme	The in Party from the original document that is imposed
out_MarketParticipant.mRID	Party / Coding scheme	The out Party from the original document that is imposed
marketAgreement.type	Agreement type	The Agreement type from the original document that is imposed
marketAgreement.mRID	Agreement identification	The Agreement identification from the original document that is imposed
curveType	Curve Type	The Curve Type from the original document that is imposed
measure_Unit.name	Measurement unit	The Measurement unit from the original document that is imposed
Series_Period	Series Period	See below
Reason	Reason	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Series Period	The beginning and ending date and time of the period covered by the received message.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See Below

Point	Attribute Name	Attribute Description
Position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Quantity in MWH
Reason	Reason	See below

Reason	Attribute Name	Attribute Description
code	Reason Code	A20: Time series fully rejected A30: Imposed Time series from nominated party's time series
text	Reason Text	For ReasonCode = A20 - TS Rejected (CP Missing) For ReasonCode = A30 - Imposed Time series from nominated party's time series (Minimum rule)

4 Day Ahead Market Output XML Interfaces

4.1 Forecasted Market Clearing Prices

The Forecasted Market Clearing Prices are made public for all the participants as 10:00 every day. The forecasted market clearing price (MCP) is a calculated price based on historical data.

4.1.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Forecasted MCP (Z06)
docStatus	Document Status	Intermediate (A01)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	Market Operator (A11)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Cyprus (public) / coding scheme = A01
receiver_MarketParticipant.marketRole.type	Receiver role	Market Operator (A11)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code

period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Spot price (A62)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Scheduling Area (A01)
area_Domain.mRID	Area / Coding scheme	EIC code / coding scheme of Scheduling Area
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Not used
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Forecasted MCP Price
in_Quantity.quantity	In Quantity	Not used
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used

out_Quantity.quantity	Out Quantity	Not used
Reason	Reason	Not used

4.2 Market Clearing Prices

The Market Clearing Prices are made public for all the participants as soon as the gate Market clearing is closed.

4.2.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Price Document (A44)
docStatus	Document Status	Final (A02)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	Market Operator (A11)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Cyprus (Public) / coding schedule = A01
receiver_MarketParticipant.marketRole.type	Receiver role	Market Operator (A11)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Spot price (A62)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Scheduling Area (A01)
area_Domain.mRID	Area / Coding scheme	EIC code / coding scheme of Scheduling Area
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Not used
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Market Clearing Price
in_Quantity.quantity	In Quantity	Not used
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	Not used
Reason	Reason	Not used

4.3 DAM Cleared Energy volumes and Prices

The Cleared Energy volumes and Prices are available for the participant to download as soon as the gate Market clearing is closed. This data is also made available for TSOC's publishing system to publish the clearing result on TSOC's website and for the Settlement module of MMS.

4.3.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Cleared Energy Volumes and Prices (Z07)
docStatus	Document Status	Intermediate (A01) or Final (A02)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	Market Operator (A11)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below

TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Day ahead Cleared Energy Volumes and Prices (Z10)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Resource Object (A06)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Bid TS mRID of the original document
measure_Unit.name	Measurement Unit	MWH (Megawatt hour)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	EIC Code of the Resource Object
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Awarded Price
in_Quantity.quantity	In Quantity	Awarded quantity for purchase
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	Awarded quantity for sale

Reason	Reason	Not used

4.4 Market Schedules

At Opening of the Market clearing publication gate, DAM system publishes to Market Participants the accepted Energy Orders, energy quantities as well as the resulting MCPs. The "Market Schedule" refers to the sum of Physical Energy Deliveries and Offtakes (PDN/PON) for each Trading Period of all entities for a given Participant and the sold/bought quantity in the Day-Ahead Market (after the Day-Ahead Market results).

4.4.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Finalized Schedule (A09)
process.processType	Process Type	Day Ahead (A01)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender Role	Market operator (A11)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	EIC of the participant.
EIC of the participant.	Receiver Role	Resource Provider (A27) System Operator (A04)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.

schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Production (A01) Consumption (A04)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code (for BT=A01) Not used (for BT=A02)
out_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code (for BT=A02) Not used (for BT=A01)
marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Not used
out_MarketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.type	Agreement type	Not used
marketAgreement.mRID	Agreement identification	Not used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MWH

curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Quantity in MWH
Reason	Reason	Not used

5 Balancing Market Output XML Interfaces

5.1 Commitment Schedules

The commitment schedules of the BSPs are published after every execution of the ISPs in order to update Generating Unit commitment decisions and Reserve awards. A Boolean indicates if BSP is committed or not:

- 1 means committed
- 0 means not committed

5.1.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Commitment Schedule (Z09)
process.processType	Process Type	System operation closure (A04)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender Role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	EIC of the participant.
EIC of the participant.	Receiver Role	Resource Provider (A27)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.

schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Production (A01) Consumption (A04)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code (for BT=A01) Not used (for BT=A04)
out_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code (for BT=A04) Not used (for BT=A01)
marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Not used
out_MarketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.type	Agreement type	Not used
marketAgreement.mRID	Agreement identification	Not used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	C62 (dimensionless quantity)

curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Quantity (1 means committed, 0 means not committed)
Reason	Reason	Not used

5.2 Reserve Awards

Following the completion of the ISP clearing activities, the ISP clearing results (Reserve Capacity/Units awarded to the Participant and Marginal Price) will be published to the Participants, who have submitted valid reserve offers to the ISP.

5.2.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Reserve Allocation Result Document (A38)
docStatus	Document Status	Final (A02)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below

TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Automatic frequency restoration reserve (A96) = aFRR Capacity Offer Manual frequency restoration reserve (A97) = mFRR Capacity Offer Frequency containment reserve (A95) = FCR Capacity Offer
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Resource Object (A06)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MAW (Megawatt)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	EIC Code of the Resource Object
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Awarded Price
in_Quantity.quantity	In Quantity	Awarded quantity for purchase

in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	Awarded quantity for sale
Reason	Reason	Not used

5.3 Marginal Reserve Prices

Following the completion of the ISP clearing activities, the Marginal Reserve Prices are made public for all the participants.

5.3.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Price Document (A44)
docStatus	Document Status	Final (A02)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Cyprus (Public) / coding scheme = A01
receiver_MarketParticipant.marketRole.type	Receiver role	System Operator (A04)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Automatic frequency restoration reserve (A96) = aFRR Capacity Offer Manual frequency restoration reserve (A97) = mFRR Capacity Offer Frequency containment reserve (A95) = FCR Capacity Offer
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Scheduling Area (A01)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MAW (Megawatt)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Not used
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Marginal Reserve Price
in_Quantity.quantity	In Quantity	0
in_Quantity_quality	In Quality	Not used

out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	0
Reason	Reason	Not used

5.4 Indicative Dispatch Schedules

The Indicative dispatch Schedules of BSPs refers to the indicative Energy schedule of a Balancing Service Provider for each Trading Period, which is attained by the solution of the Integrated Scheduling Process. They are published after every execution of the ISPs.

5.4.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Indicative Dispatch Schedule (Z10)
process.processType	Process Type	System operation closure (A04)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender Role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	EIC of the participant.
EIC of the participant.	Receiver Role	Resource Provider (A27)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Production (A01) Consumption (A04)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code (for BT=A01) Not used (for BT=A04)
out_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code (for BT=A04) Not used (for BT=A01)
marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Not used
out_MarketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.type	Agreement type	Not used
marketAgreement.mRID	Agreement identification	Not used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MAW
curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not used

Series_Period	Attribute Name	Attribute Description

timeInterval	Time Interval	This information provides the start and end date and time of the period being reported.
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Quantity (in MAW)
Reason	Reason	Not used

5.5 Planned Activation of Balancing Energy Offers

Following the completion of the ISP clearing activities, the Indicative Activation of Balancing Energy Offer will be published to the Participants.

5.5.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Activated balancing quantities (A83)
docStatus	Document Status	Intermediate (A01)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Control area balance energy (A86)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Resource Object (A06)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH (Megawatt hour)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	EIC Code of the Resource Object
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Awarded Price
in_Quantity.quantity	In Quantity	Awarded quantity for purchase
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	Awarded quantity for sale
Reason	Reason	Not used

5.6 Planned Marginal Balancing Energy Prices

Following the completion of the ISP clearing activities, the Indicative Marginal Balancing Energy prices are made public for all the participants.

5.6.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Price Document (A44)
docStatus	Document Status	Intermediate (A01)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Cyprus (Public) / coding scheme = A01
receiver_MarketParticipant.marketRole.type	Receiver role	System Operator (A04)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Control area balance energy (A86)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Scheduling Area (A01)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH (Megawatt hour)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Not used
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Marginal Balancing Energy Price
in_Quantity.quantity	In Quantity	0
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	0
Reason	Reason	Not used

5.7 Prospective Payments

Following the completion of the ISP clearing activities, the prospective payments as calculated by the ISP clearing will be published to the Participants. The prospective payments for the Balancing Energy Offer Acceptance are provided only for the units that have been shuted down by the ISP.

5.7.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Prospective payment Document (Z13)
docStatus	Document Status	Intermediate (A01)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below

TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Prospective payment for start-up cost (Z14) Prospective payment for the Balancing Energy Offer Acceptance (Z15)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Resource Object (A06)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH (Megawatt hour)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	EIC Code of the Resource Object
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	30 min as a step time (PT30M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Amount referring to the business type
in_Quantity.quantity	In Quantity	0
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used

out_Quantity.quantity	Out Quantity	0
Reason	Reason	Not used

5.8 Balancing Energy Offer Awards

Following the completion of the RTBM clearing activities, the Balancing Energy Offer Awards will be published to the Participants. The file generated will contain 1 interval of 5 minutes.

5.8.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Activated balancing quantities (A83)
docStatus	Document Status	Final (A02)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Control area balance energy (A86)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Resource Object (A06)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH (Megawatt hour)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	EIC Code of the Resource Object
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete RTBM horizon in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	5 min as a step time (PT5M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Awarded Price
in_Quantity.quantity	In Quantity	Awarded quantity for purchase
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	Awarded quantity for sale
Reason	Reason	Not used

5.9 Marginal Balancing Energy Prices

Following the completion of the RTBM clearing activities, the Marginal Balancing Energy Prices are made public for all the Participants. The file generated will contain 1 interval of 5 minutes.

5.9.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	Price Document (A44)
docStatus	Document Status	Final (A02)
process.processType	Process type	System Operation Closure (A04)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Cyprus (Public) / coding scheme = A01
receiver_MarketParticipant.marketRole.type	Receiver role	System Operator (A04)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	Control area balance energy (A86)
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Scheduling Area (A01)
area_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH (Megawatt hour)
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Not used
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	Time interval field has to cover a complete RTBM horizon in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	5 min as a step time (PT5M)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	Marginal Balancing Energy Price
in_Quantity.quantity	In Quantity	0
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	0
Reason	Reason	Not used

5.10 Dispatch Instructions

The results of each RTBM clearing calculations are transformed into a Dispatch Instruction file that is published to the Participants. The file generated will contain 1 interval of 5 minutes.

5.10.1 Interface Format

The interface will use the CIM Schedule Market Document xsd:

- iec62325-451-2-schedule_v5_1.xsd

Schedule_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message Type	Dispatch Instruction (Z14)
process.processType	Process Type	System operation closure (A04)
process.classificationType	Schedule Classification Type	Exchange (A01)
sender_MarketParticipant.mRID	Sender Identification / Coding Scheme	TSOC EIC Code
sender_MarketParticipant.marketRole.type	Sender Role	System Operator (A04)
receiver_MarketParticipant.mRID	Receiver Identification / Coding Scheme	EIC of the participant.
EIC of the participant.	Receiver Role	Resource Provider (A27)
createdDateTime	Message Date and Time	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
schedule_Time_Period.timeInterval	Message Time Interval	The beginning and ending date and time of the period covered by the message containing the schedule.
domain.mRID	Domain	Cyprus Control Area EIC Code
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
version	version	The version number assigned to the time series in question. The time series version shall be the same as the document version number for its initial transmission. Each time a time series is modified the version number is assigned the same value as the schedule document version number used to transmit the modified information.
businessType	Business type	Start-up Instruction (Z16) Shutdown Instruction (Z17) Ramp Rate Intruction (Z18) Unit on AGC (Z19) Resource with a minimum run time of longer than 10 minutes (Z20) Resource partially available for dispatch (Z21) Resource unavailable for dispatch (Z22) Resource already dispatched (Z23) Awarded FCR in Up direction (Z24) Awarded FCR in Down direction (Z25) Awarded aFRR in Up direction (Z26) Awarded aFRR in Down direction (Z27) Awarded mFRR in Up direction (Z28) Awarded mFRR in Down direction (Z29) Awarded RR in Up direction (Z30) Awarded RR in Down direction (Z31) Dispatch MW Gross (Z32) Dispatch MW Net (Z33)
product	Product	Active power (8716867000016)
objectAggregation	Object aggregation	Resource Object (A06)
in_Domain.mRID	Area / Coding scheme	Cyprus Control Area EIC Code
out_Domain.mRID	Area / Coding scheme	Not used

marketEvaluationPoint.mRID	Market Evaluation Point	Resource Object EIC Code
in_MarketParticipant.mRID	Party / Coding scheme	Not used
out_MarketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.type	Agreement type	Not used
marketAgreement.mRID	Agreement identification	Not used
connectingLine_RegisteredResource.mRID	Registered Resource Identification	Not used
measurement_Unit.name	Measurement unit	MAW for BT= Z18, Z24, Z25, Z26, Z27, Z28, Z29, Z30, Z31, Z32, Z33 C62 (dimensionless quantity) for Z16, Z17, Z19, Z20, Z21, Z22, Z23
curveType	Curve Type	Sequential fixed size block (A01)
Period	Series_Period	See below
Reason	Reason code	Not used

Series_Period	Attribute Name	Attribute Description
timeInterval	Time Interval	This information provides the start and end date and time of the period being reported. Time interval field has to cover a complete RTBM horizon in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	5 min as a step time (PT5M)
Point	Point	List of values, see below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
Quantity	Quantity	Quantity (Boolean for Z16, Z17, Z19, Z20, Z21, Z22, Z23 – MW for Z18, Z24, Z25, Z26, Z27, Z28, Z29, Z30, Z31, Z32, Z33)
Reason	Reason	Not used

6 Settlement Application Output XML Interfaces

6.1 Statement file

The Settlement Statement is a document that outlines what the buyer must pay to the vendor on settlement day. It includes all the charges and payments that have resulted from the Settlement, as well as the credit/debit from this settlement.

6.1.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	DAM (Day-Ahead Market) Statement (Z20) IMB (Imbalance) Statement (Z21) ANS (Ancillary Services) Statement (Z22) UPL (Uplift Account) Statement (Z25) NOC (Non-Compliance Charge) Statement (Z26) REC (Reconciliation) Statement (Z27) AGG (Aggregate Settlement) Statement (Z28)
docStatus	Document Status	Intermediate (A01) Final (A02)
process.processType	Process type	Settlement (Z02)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01

sender_MarketParticipant.marketRole.type	Sender role	Imbalance settlement responsible (A05)
receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	Accounting period	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	For message type Z20 (DAM Statement) B01: $DAER_{o,p,ro,t}$ B02: $DAEP_{b,lr,ro,t}$ For message type Z21 (IMB Statement) B10: $CINSTQ_{brp,bsp,type,t}$ B11: $CCUE_{brp,bsp,type,t}$ B12: $CUNINSTQ_{brp,bre,type,t}$ B13: $ABE\_UP_{brp,bsp,type,u}$ B14: $ABE\_DN_{brp,bsp,type,u}$ B15: $INST_{brp,bsp,type,t}$ B16: $MQ_{p,ro,type,t}$ B17: $INSTQ_{brp,bsp,type,t}$ B18: $MSQ_{p,ro,type,t}$ B19: $MSQM_{brp,bsp,type,t}$ B20: $UNINSTQ_{brp,bre,type,t}$ B21: $Dispatch\_Instruction\_MW_{brp,bre,u}$ B22: $CBSE_{p,ro,type,t}$ B23: $Tot\_MQ_{brp,t}$

		B24: Tot_UNINSTQ$_{brp,t}$ B25: Tot_IMB_Credit_bsp$_{brp,bsp,t}$ B26: Tot_IMB_Debit_bsp$_{brp,bsp,t}$ B27: Tot_IMB_Remuneration$_{brp,t}$ For message type Z22 (ANS Statement) B30: CFCR$_{p,bsp,type,t}$ B31: CaFRR$_{p,bsp,type,t}$ B32: CmFRR$_{p,bsp,type,t}$ B33: CRR$_{p,bsp,type,t}$ B34: RMGC_U$_{p,ro,t}$ B35: CCUA$_{p,ro,t}$ B36: CSUC$_{p,ro,t}$ B37: PFCR_UP$_{p,bsp,type,t}$ B38: PFCR_DN$_{p,bsp,type,t}$ B39: PaFRR_UP$_{p,bsp,type,t}$ B40: PaFRR_DN$_{p,bsp,type,t}$ B41: PmFRR_UP$_{p,bsp,type,t}$ B42: PmFRR_DN$_{p,bsp,type,t}$ B43: PRR_UP$_{p,bsp,type,t}$ B44: PRR_DN$_{p,bsp,type,t}$ B45: EMGC$_{p,ro,t}$ B46: CUA$_{p,ro,t}$ For message type Z25 (UPL Statement) B50: UPLIFT1$_{lr,t}$ B51: UPLIFT2_1$_{lr,t}$ B52: UPLIFT_bre2_2$_{brp,bre,t}$ For message type Z26 (NOC Statement) B60: NCEO_D$_{p,D}$ B61: NCAS_D$_{p,bsp,D}$ B62: FMP_D$_{p,D}$ B63: NCNDP_D$_{p,D}$ B64: NCAV_D$_{p,D}$ B65: NCTD_D$_{p,D}$

		B66: NCBEO_$D_{brp,bsp,D}$ B67: NCRO_$D_{p,D}$ B68: NCDI$_{brp,bsp,t}$ B69: NCNPBE_UP$_{p,bsp,type,t}$ B70: NCNPBE_DN$_{p,bsp,type,t}$ B71: NCNRR_$D_{p,D}$ For message type Z27 (REC Statement) B80: CRG$_{p,t}$ B81: CRO$_{p,t}$ B82: CRG_RES$_{p,t}$ B83: C_LR$_{p,t}$ B84: DeltaQG$_{p,ro,type,vl,t}$ B85: DeltaQO$_{p,ro,type,vl,t}$ B86: DeltaQG_RES$_{p,ro,type,vl,t}$ B87: DeltaEQ_LR$_{p,ro,type,vl,t}$ B88: REC_UPLIFT2_1$_{lr,t}$ For message type Z28 (AGG Statement) C01: AGG_CINSTQ_$D_{brp,D}$ – Difference C02 : CINSTQ_$D_{brp,D}$ – Current C03 : CINSTQ_Dbrp,D - Previous C04 : AGG_CUNINSTQ_$D_{brp,D}$ - Difference C05: CUNINSTQ_$D_{brp,D}$ – Current C06: CUNINSTQ_$D_{brp,D}$ - Previous C07: AGG_CAFCR_$D_{p,D}$ - Difference C08: CAFCR_$D_{p,D}$ - Current C09: CAFCR_$D_{p,D}$ - Previous C10: AGG_CAaFRR_$D_{p,D}$ – Difference C11: CAaFRR_$D_{p,D}$ - Current C12: CAaFRR_$D_{p,D}$ - Previous

		C13: AGG_CAmFRR_$D_{p,D}$ - Difference C14: CAmFRR_$D_{p,D}$ - Current C15: CAmFRR_$D_{p,D}$ - Previous C16: AGG_CARR_$D_{p,D}$ - Difference C17: CARR_$D_{p,D}$ - Current C18: CARR_$D_{p,D}$ - Previous C19: AGG_RMGC_$D_{p,D}$ - Difference C20: RMGC_$D_{p,D}$ - Current C21: RMGC_$D_{p,D}$ - Previous C22: AGG_CCUA_$D_{p,ro,D}$ - Difference C23: CCUA_$D_{p,ro,D}$ - Current C24: CCUA_$D_{p,ro,D}$ - Previous C25: AGG_CSUC_$D_{p,ro,D}$ - Difference C26: CSUC_$D_{p,ro,D}$ - Current C27: CSUC_$D_{p,ro,D}$ – Previous C28: AGG_UPLIFT1_$D_{lr,D}$ - Difference C29: UPLIFT1_$D_{lr,D}$ - Current C30: UPLIFT1_$D_{lr,D}$ - Previous C31: AGG_NCAS_$D_{p,bsp,D}$ - Difference C32: NCAS_$D_{p,bsp,D}$ - Current C33: NCAS_$D_{p,bsp,D}$ - Previous C34: AGG_FMP_$D_{p,D}$ – Difference C35: FMP_$D_{p,D}$ - Current C36: FMP_$D_{p,D}$ - Previous C37: AGG_NCNDP_$D_{p,D}$ - Difference C38: NCNDP_$D_{p,D}$ - Current C39: NCNDP_$D_{p,D}$ - Previous

		C40: AGG_NCAV_$D_{p,D}$ - Difference C41: NCAV_$D_{p,D}$ - Current C42: NCAV_$D_{p,D}$ - Previous C43: AGG_NCTD_$D_{p,D}$ - Difference C44 NCTD_$D_{p,D}$ - Current C45: NCTD_$D_{p,D}$ - Previous C46: AGG_NCBEO_$D_{brp,bsp,D}$ - Difference C47: NCBEO_$D_{brp,bsp,D}$ – Current C48: NCBEO_$D_{brp,bsp,D}$ - Previous C49: AGG_NCRO_$D_{p,D}$ - Difference C50: NCRO_$D_{p,D}$ - Current C51: NCRO_$D_{p,D}$ - Previous C52: AGG_NCDI_$D_{brp,D}$ - Difference C53: NCDI_$D_{brp,D}$ - Current C54: NCDI_$D_{brp,D}$ – Previous C55: AGG_NCNPBE_TOT_$D_{p,D}$ - Difference C56: NCNPBE_TOT_$D_{p,D}$ - Current C57: NCNPBE_TOT_$D_{p,D}$ - Previous C58: AGG_NCEO_$D_{p,D}$ – Difference C59: NCEO_$D_{p,D}$ –Current C60: NCEO_$D_{p,D}$ – Previous C61: AGG_NCNRR_$D_{p,D}$ – Difference C62: NCNRR_$D_{p,D}$ –Current C63: NCNRR_$D_{p,D}$ - Previous
product	Product	Active Energy (8716867000030)
objectAggregation	Object aggregation	Party (A03) or Resource Object (A06), for the following BT:

		B01, B02, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B20, B21, B22, B25, B26, B30, B31, B32, B33, B34, B35, B36, B37, B38, B39, B40, B41, B42, B43, B44, B45, B46, B52, B61, B66, B68, B69, B70, B84, B85, B86, B87, C22, C23, C24, C25, C26, C27, C31, C32, C33 C46, C47, C48
area_Domain.mRID	Area / Coding scheme	EIC code / coding scheme of Scheduling Area
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH Megawatt hour
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Used for: B01, B02, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B20, B21, B22, B25, B26, B30, B31, B32, B33, B34, B35, B36, B37, B38, B39, B40, B41, B42, B43, B44, B45, B46, B52, B61, B66, B68, B69, B70, B84, B85, B86, B87, C22, C23, C24, C25, C26, C27, C32, C33, C46, C47, C48
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	ESMP_DateTimeInterval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ
resolution	Resolution	5 min as step time (PT5M) or 30 min as a step time (PT30M) or daily (P1D) depending on the determinant resolution
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	For all BT = Amount referring to the business type

in_Quantity.quantity	In Quantity	For BT = B13, B14, B15, B16, B17, B18, B19, B20, B21, B23, B24, B37, B38, B39, B40, B41, B42, B43, B44, B45, B46, B84, B85, B86, B87
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	For all BT = 0
Reason	Reason	Not used

6.2 Notice file

The Billing Notice is a document that outlines what the buyer must pay to the vendor on billing period. It includes all the charges and payments that have resulted from the Billing, as well as the credit/debit from this billing.

6.2.1 Interface Format

The interface will use the CIM Energy Account Market Document xsd:

- iec62325-451-4-settlement_v4_0.xsd

EnergyAccount_MarketDocument	Attribute Name	Attribute Description
mRID	mRID	Unique identification of the message for which the time series data is being supplied.
revisionNumber	revisionNumber	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Type	Message/Document Type	DAM Notice (Z30) IMB Notice (Z31) ANS Notice (Z32) TUS Notice (Z33) DUS Notice (Z34) UPL Notice (Z35) NOC Notice (Z36) REC Notice (Z37) AGG Notice (Z38)
docStatus	Document Status	Intermediate (A01) Final (A02)
process.processType	Process type	Billing (Z03)
process.classificationType	Classification type	Detail (A01)
sender_MarketParticipant.mRID	Sender identification / Coding scheme	EIC Code of Cyprus / coding scheme = A01
sender_MarketParticipant.marketRole.type	Sender role	Imbalance settlement responsible (A05)

receiver_MarketParticipant.mRID	Receiver identification / Coding scheme	EIC Code of Market Participant
receiver_MarketParticipant.marketRole.type	Receiver role	Resource Provider (A27)
createdDateTime	createdDateTime	Date and time of transmission of the data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
domain.mRID	Domain / Coding scheme	Cyprus Control Area EIC Code
period.timeInterval	ESMP_DateTimeInterval	See below
TimeSeries	Time Series	See below

Timeseries	Attribute Name	Attribute Description
mRID	mRID	Unique identifier of the data time series.
businessType	Business type	For message type Z30 (DAM Notice) D01: DAER_$D_{p,D}$ D02: DAEP_$D_{lr,D}$ D03: DAM_$NET_{p,D}$ For message type Z31 (IMB Notice) D10: CINSTQ_$M_{brp,M}$ D11: CUNINSTQ_$M_{brp,M}$ D12: CINSTQ_bsp_$M_{brp,bsp,M}$ D13: CCUE_bsp_$M_{brp,bsp,M}$ D14: CQHV_tlf_LR_$M_{lr,M}$ D15: CBSE_$M_{p,ro,M}$ D16: Tot_IMB_Credit_bsp_$M_{brp,bsp,M}$ D17: Tot_IMB_Debit_bsp_$M_{brp,bsp,M}$ D18: Tot_IMB_Credit_$M_{brp,M}$ D19: Tot_IMB_Debit_$M_{brp,M}$ For message type Z32 (ANS Notice) D20: CAFCR_$M_{p,M}$ D21: CAaFRR_$M_{p,M}$ D22: CAmFRR_$M_{p,M}$

		D23: CARR_$M_{p,M}$ D24: RBS_$M_{p,ro,type,M}$ D25: RMGC_$M_{p,M}$ D26: CCUA_$M_{p,ro,M}$ D27: CSUC_$M_{p,ro,M}$ D28: Tot_ANS_Credit_bsp_$M_{p,bsp,M}$ D29: Tot_ANS_Credit_$M_{p,M}$ For message type Z33 (TUS Notice) D30: CTUOS_$M_{lr,M}$ For message type Z34 (DUS Notice) D40: CDUOSL_$M_{lr,M}$ D41: CDUOSM_$M_{lr,M}$ D42: CDUOS_$M_{lr,M}$ For message type Z35 (UPL Notice) D50: UPLIFT1_$M_{lr,M}$ D51: UPLIFT2_$M_{brp,M}$ D52: UPLIFT3_$M_{lr,M}$ D53: UPLIFT4_$M_{lr,M}$ D54: UPLIFT5_$M_{lr,M}$ D55: UPLIFT6_$M_{lr,M}$ D56: UPLIFT7_$M_{lr,M}$ D57: UPLIFT2_1_$M_{lr,M}$ D58: UPLIFT2_2_$M_{brp,M}$ D59: Tot_UPL_Debit_$M_{p,M}$ G11: Tot_UPL_Credit_$M_{p,M}$ For message type Z36 (NOC Notice) D60: NCEO_$M_{p,M}$ D61: NCAS_$M_{p,M}$ D62: FMP_$M_{p,M}$ D63: NCNDP_$M_{p,M}$ D64: NCAV_$M_{p,M}$ D65: NCTD_$M_{p,M}$

		D66: NCBEO_$M_{brp,M}$ D67: NCRO_$M_{p,M}$ D68: NCRO_RR_$M_{p,M}$ D69: NCRO_BS_$M_{p,M}$ D70: NCDI_$M_{brp,M}$ D71: NCNPBE_TOT_$M_{p,M}$ D73: NCBAL_LOAD_$M_{lr,M}$ D74: NCBAL_GEN_$M_{p,bsp,M}$ D75: NCCU_$M_{p,bsp,M}$ D76: NCNRR_$M_{p, M}$ D77: Tot_NOC_Debit_bsp_$M_{p,bsp,M}$ D78: Tot_NOC_Debit_$M_{p,M}$ D79: Tot_Credit_bsp_$M_{p,bsp,M}$ G01: Tot_Debit_bsp_$M_{p,bsp,M}$ G02: Tot_Credit_$M_{p,M}$ G03: Tot_Debit_$M_{p,M}$ G04: Net_payment$_{p,M}$ For message type Z37 (REC Notice) D80: C_LR_$M_{p,M}$ D81: CRO_$M_{p,M}$ D82: CRG_RES_$M_{p,M}$ D83: CRG_$M_{p,M}$ D84: REC_CTUOS_$M_{lr,M}$ D85: REC_CDUOSL_$M_{lr,M}$ D86: REC_CDUOSM_$M_{lr,M}$ D87: REC_UPLIFT2_1_$M_{lr,M}$ D88: REC_UPLIFT3_$M_{lr,M}$ D89: REC_UPLIFT5_$M_{lr,M}$ D90: REC_UPLIFT6_$M_{lr,M}$ D91: REC_UPLIFT7_$M_{lr,M}$ D92: REC_UPLIFT2_2_$M_{brp,M}$ D93: REC_cash_$MO_{p,M}$

		D94: REC_cash_$MP_{p,M}$ For message type Z38 (AGG Notice) E01: AGG_CINSTQ_$M_{brp,M}$ - Difference E02: CINSTQ_$M_{brp,M}$ - Current E03: CINSTQ_$M_{brp,M}$ - Previous E04: AGG_CUNINSTQ_$M_{brp,M}$ - Difference E05: CUNINSTQ_$M_{brp,M}$ - Current E06: CUNINSTQ_$M_{brp,M}$ - Previous E07: AGG_CAFCR_$M_{p,M}$ - Difference E08: CAFCR_$M_{p,M}$ - Current E09: CAFCR_$M_{p,M}$ - Previous E10: AGG_CAaFRR_$M_{p,M}$ - Difference E11: CAaFRR_$M_{p,M}$ - Current E12: CAaFRR_$M_{p,M}$ - Previous E13: AGG_CAmFRR_$M_{p,M}$ - Difference E14: CAmFRR_$M_{p,M}$ - Current E15: CAmFRR_$M_{p,M}$ - Previous E16: AGG_CARR_$M_{p,M}$ - Difference E17: CARR_$M_{p,M}$ - Current E18: CARR_$M_{p,M}$ - Previous E19: AGG_RBS_$M_{p,ro,type,M}$ - Difference E20: RBS_$M_{p,ro,type,M}$ - Current E21: RBS_$M_{p,ro,type,M}$ - Previous E22: AGG_RMGC_$M_{p,M}$ - Difference E23: RMGC_$M_{p,M}$ - Current E24: RMGC_$M_{p,M}$ - Previous

		E25: AGG_CCUA_$M_{p,ro,M}$ - Difference E26: CCUA_$M_{p,ro,M}$ - Current E27: CCUA_$M_{p,ro,M}$ - Previous E28: AGG_CSUC_$M_{p,ro,M}$ - Difference E29: CSUC_$M_{p,ro,M}$ - Current E30: CSUC_$M_{p,ro,M}$ - Previous E31: AGG_CTUOS_$M_{lr,M}$ - Difference E32: CTUOS_$M_{lr,M}$ - Current E33: CTUOS_$M_{lr,M}$ - Previous E34: AGG_CDUOSL_$M_{lr,M}$ - Difference E35: CDUOSL_$M_{lr,M}$ - Current E36: CDUOSL_$M_{lr,M}$ - Previous E37: AGG_CDUOSM_$M_{lr,M}$ - Difference E38: CDUOSM_$M_{lr,M}$ - Current E39: CDUOSM_$M_{lr,M}$ - Previous E40: AGG_UPLIFT1_$M_{lr,M}$ - Difference E41: UPLIFT1_$M_{lr,M}$ - Current E42: UPLIFT1_$M_{lr,M}$ - Previous E43: AGG_UPLIFT2_$M_{brp,M}$ - Difference E44: UPLIFT2_$M_{brp,M}$ - Current E45: UPLIFT2_$M_{brp,M}$ - Previous E46: AGG_UPLIFT3_$M_{lr,M}$ - Difference E47: UPLIFT3_$M_{lr,M}$ - Current E48: UPLIFT3_$M_{lr,M}$ - Previous E49: AGG_UPLIFT4_$M_{lr,M}$ - Difference E50: UPLIFT4_$M_{lr,M}$ - Current

		E51: UPLIFT4_$M_{Ir,M}$ - Previous E52: AGG_UPLIFT5_$M_{Ir,M}$ - Difference E53: UPLIFT5_$M_{Ir,M}$ - Current E54: UPLIFT5_$M_{Ir,M}$ - Previous E55: AGG_UPLIFT6_$M_{Ir,M}$ - Difference E56: UPLIFT6_$M_{Ir,M}$ - Current E57: UPLIFT6_$M_{Ir,M}$ - Previous E58: AGG_UPLIFT7_$M_{Ir,M}$ - Difference E59: UPLIFT7_$M_{Ir,M}$ - Current E60: UPLIFT7_$M_{Ir,M}$ - Previous E61: AGG_NCAS_$M_{p,M}$ - Difference E62: NCAS_$M_{p,M}$ - Current E63: NCAS_$M_{p,M}$ - Previous E64: AGG_FMP_$M_{p,M}$ - Difference E65: FMP_$M_{p,M}$ - Current E66: FMP_$M_{p,M}$ - Previous E67: AGG_NCNDP_$M_{p,M}$ - Difference E68: NCNDP_$M_{p,M}$ - Current E69: NCNDP_$M_{p,M}$ - Previous E70: AGG_NCAV_$M_{p,M}$ - Difference E71: NCAV_$M_{p,M}$ - Current E72: NCAV_$M_{p,M}$ - Previous E73: AGG_NCTD_$M_{p,M}$ - Difference E74: NCTD_$M_{p,M}$ - Current E75: NCTD_$M_{p,M}$ - Previous E76: AGG_NCBEO_$M_{brp,M}$ - Difference E77: NCBEO_$M_{brp,M}$ - Current

		E78: NCBEO_$M_{brp,M}$ - Previous E79: AGG_NCRO_$M_{p,M}$ - Difference E80: NCRO_$M_{p,M}$ - Current E81: NCRO_$M_{p,M}$ - Previous E82: AGG_NCRO_RR_$M_{p,M}$ - Difference E83: NCRO_RR_$M_{p,M}$ - Current E84: NCRO_RR_$M_{p,M}$ - Previous E85: AGG_NCRO_BS_$M_{p,M}$ - Difference E86: NCRO_BS_$M_{p,M}$ - Current E87: NCRO_BS_$M_{p,M}$ - Previous E88: AGG_NCDI_$M_{brp,M}$ - Difference E89: NCDI_$M_{brp,M}$ - Current E90: NCDI_$M_{brp,M}$ - Previous E91: AGG_NCNPBE_TOT_$M_{p,M}$ - Difference E92: NCNPBE_TOT_$M_{p,M}$ - Current E93: NCNPBE_TOT_$M_{p,M}$ - Previous E94: AGG_NCBAL_LOAD_$M_{lr,M}$ - Difference E95: NCBAL_LOAD_$M_{lr,M}$ - Current E96: NCBAL_LOAD_$M_{lr,M}$ - Previous E97: AGG_NCBAL_GEN_$M_{p,bsp,M}$ - Difference E98: NCBAL_GEN_$M_{p,bsp,M}$ - Current E99: NCBAL_GEN_$M_{p,bsp,M}$ - Previous F01: AGG_NCCU_$M_{p,ro,M}$ - Difference

		F02: NCCU_$M_{p,ro,M}$ - Current F03: NCCU_$M_{p,ro,M}$ - Previous F04: AGG_NCEO_$M_{p,M}$ – Difference F05: NCEO_$M_{p,M}$ – Current F06: NCEO_$M_{p,M}$ – Previous F07: AGG_NCNRR_$M_{p,M}$ – Difference F08: NCNRR_$M_{p,M}$ – Current F09: NCNRR_$M_{p,M}$ – Previous F10: AGG_UPLIFT2_1_$M_{lr,M}$ – Difference F11: UPLIFT2_1_$M_{lr,M}$ - Current F12: UPLIFT2_1_$M_{lr,M}$ - Previous F13: AGG_UPLIFT2_2$_{brp,M}$_M – Difference F14: UPLIFT2_2_$M_{brp,M}$ - Current F15: UPLIFT2_2_$M_{brp,M}$ – Previous F16: AGG_CCUE_bsp_$M_{brp,bsp,M}$– Difference F17: CCUE_bsp_$M_{brp,bsp,M}$ – Current F18: CCUE_bsp_$M_{brp,bsp,M}$ – Previous F19: AGG_CINSTQ_bsp_$M_{brp,bsp,M}$ – Difference F20: CINSTQ_bsp_$M_{brp,bsp,M}$ – Previous F21: CINSTQ_bsp_$M_{brp,bsp,M}$ – Current F22: ~~AGG_~~Tot_IMB_Credit_bsp_$M_{brp,bsp,M}$ – Difference F23: Tot_IMB_Credit_bsp_$M_{brp,bsp,M}$ – Current F24: AGG_Tot_IMB_Credit_bsp_$M_{brp,bsp,M}$ – Previous

		F25: AGG_Tot_IMB_Debit_bsp_$M_{brp,bsp,M}$ – Difference F26: Tot_IMB_Debit_bsp_$M_{brp,bsp,M}$ – Current F27: Tot_IMB_Debit_bsp_$M_{brp,bsp,M}$ – Previous F28: AGG_Tot_IMB_Credit_$M_{brp,M}$ – Difference F29: Tot_IMB_Credit_$M_{brp,M}$ – Current F30: Tot_IMB_Credit_$M_{brp,M}$ – Previous F31: AGG_Tot_IMB_Debit_$M_{brp,M}$ – Difference F32: Tot_IMB_Debit_$M_{brp,M}$ – Current F33: Tot_IMB_Debit_$M_{brp,M}$ – Previous F34: AGG_Tot_ANS_Credit_bsp_$M_{p,bsp,M}$ – Difference F35: Tot_ANS_Credit_bsp_$M_{p,bsp,M}$ – Current F36: Tot_ANS_Credit_bsp_$M_{p,bsp,M}$ – Previous F37: AGG_Tot_ANS_Credit_$M_{p,M}$ – Difference F38: Tot_ANS_Credit_$M_{p,M}$ – Current F39: Tot_ANS_Credit_$M_{p,M}$ – Previous F40: AGG_Tot_UPL_Credit_$M_{p,M}$ – Difference F41: Tot_UPL_Credit_$M_{p,M}$ – Current F42: Tot_UPL_Credit_$M_{p,M}$ – Previous F43: AGG_Tot_UPL_Debit_$M_{p,M}$ – Difference F44: Tot_UPL_Debit_$M_{p,M}$ – Current

		F45: Tot_UPL_Debit_$M_{p,M}$ – Previous F46: AGG_Tot_NOC_Debit_bsp_$M_{p,bsp,M}$ – Difference F47: Tot_NOC_Debit_bsp_$M_{p,bsp,M}$ – Current F48: Tot_NOC_Debit_bsp_$M_{p,bsp,M}$ – Previous F49: AGG_Tot_NOC_Debit_$M_{p,M}$ – Difference F50: Tot_NOC_Debit_$M_{p,M}$ – Current F51: Tot_NOC_Debit_$M_{p,M}$ – Previous F52: AGG_Tot_Credit_bsp_$M_{p,bsp,M}$ – Difference F53: Tot_Credit_bsp_$M_{p,bsp,M}$ – Current F54: Tot_Credit_bsp_$M_{p,bsp,M}$ – Previous F55: AGG_Tot_Debit_bsp_$M_{p,bsp,M}$ – Difference F56: Tot_Debit_bsp_$M_{p,bsp,M}$ – Current F57: Tot_Debit_bsp_$M_{p,bsp,M}$ – Previous F58: AGG_Tot_Credit_$M_{p,M}$ – Difference F59: Tot_Credit_$M_{p,M}$ – Current F60: Tot_Credit_$M_{p,M}$ – Previous F61: AGG_Tot_Debit_$M_{p,M}$ – Difference F62: Tot_Debit_$M_{p,M}$ – Current F63: Tot_Debit_$M_{p,M}$ – Previous F64: AGG_Net_payment$_{p,M}$ – Difference F65: Net_payment$_{p,M}$ – Current F66: Net_payment$_{p,M}$ – Previous

product	Product	8716867000030 Active Energy
objectAggregation	Object aggregation	Party (A03) or Resource Object (A06) for the following BT: D12, D13, D15, D24, D26, D27, D74, D75, E19, E20, E21, E25, E26, E27, E28, E29, E30, E97, E98, E99, F01, F02, F03, F16, F17, F18, F19, F20, F21
area_Domain.mRID	Area / Coding scheme	EIC code / coding scheme of Scheduling Area
marketParticipant.mRID	Party / Coding scheme	Not used
marketAgreement.mRID	Agreement identification	Not used
measure_Unit.name	Measurement Unit	MWH Megawatt hour
currency_Unit.name	Currency	EUR
marketEvaluationPoint.mRID	Market Evaluation point	Used for the following BT: D12, D13, D15, D24, D26, D27, D74, D75, , E19, E20, E21, E25, E26, E27, E28, E29, E30, E97, E98, E99, F01, F02, F03, F16, F17, F18, F19, F20, F21
Series_Period	Period	See below

Series_Period	Attribute Name	Attribute Description
timeInterval	ESMP_DateTimeInterval	Time interval field has to cover a complete day in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ for Message type Z30 (DAM Notice) Time interval field has to cover a complete month in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ for Message type Z31 (IMB Notice), Z32 (ANS Notice), Z33 (TUS Notice), Z34 (DUS Notice), Z35 (UPL Notice), Z36 (NOC Notice) Time interval field has to cover a complete quarter in business time zone, expressed in UTC - format YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ for Message type Z37 (REC Notice), Z38 (AGG Notice)

resolution	Resolution	1 day (P1D) for Message type Z30 (DAM Notice) 1 month (P1M) for Message type Z31 (IMB Notice), Z32 (ANS Notice), Z33 (TUS Notice), Z34 (DUS Notice), Z35 (UPL Notice), Z36 (NOC Notice), Z37 (REC Notice), Z38 (AGG Notice)
Point	Point	See below

Point	Attribute Name	Attribute Description
position	Position	A sequential value representing the relative position within a given time interval.
price.amount	Price	For all BT = Amount referring to the business type
in_Quantity.quantity	In Quantity	Only for BT = D14 (message type Z31)
in_Quantity_quality	In Quality	Not used
out_Quantity_quality	Out Quality	Not used
out_Quantity.quantity	Out Quantity	For all BT = 0
Reason	Reason	Not used

7 Market Participants Input Web Service Interfaces

Every XML files that can be submitted using the GUI of the MMS can also be submitted via the web service using the SOAP protocol (Simple Object Access Protocol) over https.

There is a web service dedicated for each file type and descriptions can be found under /web-server/cxf/ext:

- InboundMarketParticipantService
  - receiveTechnoEconomicDeclaration
  - receiveReserveBidMarketDocument
  - receiveScheduleMarketDocument

8 MMS Output Web Service Interfaces

Every XML files that can be downloaded using the GUI of the MMS can also be downloaded via the web service using the SOAP protocol (Simple Object Access Protocol) over https.

There is a web service dedicated for that and descriptions can be found under /web-server/cxf/ext:

- TsocDocumentServiceSoap
  - getDocumentPayload

3 parameters must be provided:

- Type (code to be used to select the type of document to download – see table below)
- Market Day (expected UTC format is yyyy-mm-ddThh:mm:ssZ – example: 2022-01-28T22:00:00Z)
- Market Party (must be the Market party identiciation as defined in the standing data)

The flowing table is a mapping between the XML document type that can be downloaded and the code that must be used.

Type of file	Code to be used in the webservice query	Described in chapter
Non-Availability Declaration	NAD	2.1
Techno Economic Declaration	TED	2.2
DAM Energy Orders Document	RBM	2.3
RRQN Replacement Reserve Quantities Nominations	RRQN	2.4
PDON and PSUTC Nomination document	PDON	2.5
Forward Contract Nominations	FCN	2.6
RR Bid Document	BIDRR	2.7
CR Bid Document	BIDCR	2.7
BS Bid Document	BIDBS	2.7
Balancing Energy Offer	BEO	2.8
Balancing Reserve Capacity Offers	BRCO	2.9
Forecast Market Participant RES Injection	FORMPRESI	2.10
Net Delivery Position Report	NDP	3.1
Forward Market Mismatch Report	FMMQ	3.2
RR Auction Specification Document	RRAUCSPEC	3.3
BS Auction Specification Document	BSAUCSPEC	3.3

CR Auction Specification Document	CRAUCSPEC	3.3
BS Awarded bid Document	AWBIDBS	3.4
CR Awarded bid Document	AWBIDCR	3.4
RR Awarded bid Document	AWBIDRR	3.4
Anomaly Report	ANO	3.6
Confirmations of Nominations Report	CONF	3.7
Market Clearing Price Forecasts	MCPF	4.1
Market Clearing Prices	MCP	4.2
Cleared Energy Volumes and Prices	CEVP	4.3
Market Schedules	MS	4.4
Commitment Schedules	COMMSHED	5.1
Reserve Awards	RESAWAR	5.2
Marginal Reserve Prices	MARRESPRI	5.3
Indicative Dispatch Schedules	IDISPSCHED	5.4
Planned Activation of Balancing Energy Offers	PABEO	5.5
Planned Marginal Balancing Energy Prices	PMARBEPRI	5.6
Prospective Payments	PRP	5.7
Balancing Energy Offer Awards	BEOA	5.8
Marginal Balancing Energy Prices	MBEP	5.9
Dispatch Instructions	DISP	5.10
Statement Document	STAT	6.1
Notice Document	NOTICE	6.2