

I-SEM Technical Specification (ITS)

VOLUME D: SEMOPX EX-ANTE MARKETS V6.0

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Document History

Version	Date	Author	Comment
1.0	08.07.2016	EirGrid and SONI	Initial Draft, covering NEMO Ex-Ante Markets
2.0	05.09.2016	EirGrid and SONI	Added new Section detailing Reporting for the Ex-Ante Markets. Minor updates to the document.
3.0	31.01.2017	EirGrid and SONI	Minor updates clarifying the time zone in which products are represented
4.0	05.05.2017	EirGrid and SONI	Minor update to Section 6.2 noting where updated releases of the API Documentation will be noted.
5.0	17.07.2017	EirGrid and SONI	The following updates have been included; <ul style="list-style-type: none"> • Change name from NEMO to SEMOpX • The Auction Timing for the first Intraday Auction is changed from 15:30 to 17:30 GMT/BST local time • The third Intraday Auction will be a local auction only and not cross border • Minor update to Figure 1 and Figure 3 • New Type 2 Documents for M7 • Updated API Documentation available. See Section 6.2 • Minor wording updates Please note: The updated time of the first auction and changing of the third auction to a local auction is subject to the completion of the Joint Project Board Change Control Process
6.0	13.10.2017	EirGrid and SONI	Updated links to the following documents: <ul style="list-style-type: none"> • ETS Client User Guide • ETS Client Installation Guide • ETS Market Results File • ECC SMSS XML Report Specification

Distribution List

Name	Organisation
All participants	

Source / Reference Documents

Document Name	System Version Number	Document Reference
ETS Client Installation Guide	Any version	1.0
ETS Client User Guide	3.0	1.0
M7 Client Installation Guide	6.0	1.0
M7 Client User Guide	6.0	1.0.3
M7 Continuous Export	6.0	1.0
M7 Participant Order and Trade Files	6.0	1.0.3

1 DISCLAIMER AND CONTENT INFORMATION

This document has been prepared to provide participants with sufficient information in order to develop their own systems to interface with the I-SEM.

The following disclaimers relate to the content of this document and associated volumes and any use by participants of the information provided therein.

1. EirGrid and SONI accept no responsibility for decisions made or actions taken by participants as a result of the information presented in this document or associated documents. Furthermore, EirGrid and SONI do not indemnify any commercial or organisational decisions made by participants in relation to the information herein.
2. This document represents the most up-to-date information on the I-SEM Systems as they have been developed. With this in mind, it is not appropriate simply to compare the document against the market rules; instead, the document is aligned with a release of the I-SEM Systems.
3. The information provided in this document is based entirely on documentation and information provided by the software vendor. Although EirGrid and SONI have made all reasonable efforts to ensure that the information presented is correct, it cannot guarantee the information provided.
4. Further changes to the processes described or schema elements presented may result as new information comes to light during future phases of the market development. To mitigate the impact of such changes, EirGrid and SONI will be issuing planned updates to this document and associated documents (where appropriate).

2 INTRODUCTION

2.1 SCOPE OF THIS DOCUMENT

The I-SEM¹ Technical Specification (ITS) comprises a number of volumes which provide participants with the information necessary for them to develop their own systems to interface with the I-SEM central market systems.

The volumes of the I-SEM Technical Specification are:

Volume	Document
A	ISEM TS (Overarching Volume)
B	ISEM TS (Technical Volume)
C	ISEM TS (Balancing Market Volume)
D	ISEM TS (SEMOpx Ex-Ante Markets Volume)
E	ISEM TS (Capacity Market Volume)
F	Intentionally blank
G	ISEM TS (Glossary)

Table 1: I-SEM Technical Specification Volumes

This volume covers all aspects of the SEMOpx Ex-Ante Markets Interfaces which form part of the I-SEM Systems. SEMOpx will operate the Nominated Electricity Market Operator (NEMO) Ex-Ante Markets, as described in EU Commission Regulation 2015/1222 Capacity Allocation and Congestion Management (CACM). This document principally addresses the functional aspects of the SEMOpx Ex-Ante Market interfaces and is provided to enable participants to communicate with the I-SEM SEMOpx Ex-Ante Market Systems. A separate *ITS Volume B (Technical Volume)* covers the technical aspects of the SEMOpx Ex-Ante Market interfaces.

The submission and retrieval of SEMOpx Ex-Ante Markets data using both Type 2 and Type 3 Communication Channels are covered in this document.

Definitions and terms contained within the *ITS Volume G (Glossary)* provide information to support the understanding of the content presented in the volumes of the I-SEM Technical Specification.

Notes:

1. References in this document to “query” relate to the retrieval of data from the I-SEM Systems as opposed to the concept of formal queries as defined in the Trading and Settlement Code.
2. Whilst this document refers to the market as “I-SEM”, the market will continue to legally be referenced as the “Single Electricity Market (SEM)”.

¹ The market arrangements and associated delivery project are known as the I-SEM, but parties are asked to note that the legal name for the new arrangements will be the Single Electricity Market (SEM).

2.2 STRUCTURE OF THIS DOCUMENT

The *I-SEM TS: SEMOpx Ex-Ante Markets Volume* is structured as follows:

- **Section 3** provides an overview of the SEMOpx Ex-Ante Markets including the Day-Ahead and Intraday Markets.
- **Section 4** provides information relating to the treatment of time in the SEMOpx Ex-Ante Markets Interfaces. This section will detail the time stamping and the trading times for each of the markets.
- **Section 5** provides information relating to the registration process for the SEMOpx Ex-Ante Markets.
- **Section 6** provides information relating to the Day-Ahead and Intraday Auctions Markets. This section will describe the mechanisms for participating in the Day-Ahead and Intraday Auction Markets, Intraday Continuous Market and Clearing and Settlement.
- **Section 7** provides information relating to the reports which can be accessed by participants for each of the Ex-Ante Markets and Clearing and Settlement functions.

3 SEMOPX EX-ANTE MARKETS OVERVIEW

The Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on Capacity Allocation and Congestion Management (CACM) sets out regulations in relation to:

- The methods for allocating capacity in Day-Ahead and Intraday timescales; and
- The way in which capacity will be calculated across the different zones.

The intent of CACM is to establish harmonised cross-border markets in the Day-Ahead and Intraday timeframes and, in doing so, to deliver a more efficient European market to benefit customers. CACM is part of the implementation of the 'EU Target Model' and intends to provide the basis for the implementation of a single energy market across Europe.

The requirements in CACM are met by the following;

- 1) Day-Ahead implicit allocation of energy via Price Coupling (EU price coupled Day-Ahead auctions using EUPHEMIA, based on supplier and generator bidding); and
- 2) Intraday implicit allocation of energy via continuous trading (XBID) with the option of additional cross-border intraday auctions.

3.1 I-SEM MARKET DESIGN

In response to Article 4(1) of CACM, EirGrid Plc in Ireland and SONI Limited in Northern Ireland have been designated as Nominated Electricity Market Operators (NEMOs) for the I-SEM, in respect of Day-Ahead Market and Intraday Market (DAM and IDM respectively) in the I-SEM. They were designated on the basis that EirGrid and SONI intend to work together to jointly deliver NEMO services for the SEM across the island of Ireland bidding zone, through an appropriate joint arrangement. These services will be carried jointly as SEMOpx.

In order to discharge its obligations, EPEX Spot has been selected by SEMOpx to provide the service of the Power Exchange (PX) systems for both DAM and IDM. European Commodity Clearing (ECC) AG will provide clearing services for SEMOpx as Central Counter Party (CCP) with ECC Luxembourg S.a.r.l being the Settlement Entity.

As set out in the Market Coupling Operator (MCO) Plan (which is due for National Regulatory Authority approval in September 2016), the Day-Ahead Market will operate through Price Coupling of Regions (PCR) which runs the EUPHEMIA algorithm under existing European processes.

XBID is described as the European Intraday solution in the MCO Plan. XBID will not be available to Ireland and Northern Ireland for I-SEM Go-Live. It was therefore decided that an interim intraday solution would be put in place for I-SEM Go-Live. This design comprises an auction process, including two proposed implicit auctions, that allows trade between participants on the islands of Ireland and Britain which can change flows on the interconnectors. It is important to note that the third Intraday Auction will not be cross border for I-SEM go-live and will be a local auction only specific to the Island of Ireland. In addition to the interim Intraday auctions, a local continuous market within I-SEM will be operated. Trades in the Intraday implicit auctions will allow flows on the interconnectors to increase or decrease within the interconnector's operational limits. This interim arrangement (described in Section 3.3) will remain in place at least until it is possible for Ireland and Northern Ireland to become full members of XBID. XBID will comprise a continuous trading platform that supports continuous cross-border trades.

Figure 1 provides an overview of the key interactions between the SEMOpx Ex-Ante (DAM and IDM) Markets, Transmission System Operators (TSOs), Clearing Member, and the I-

SEM participants.

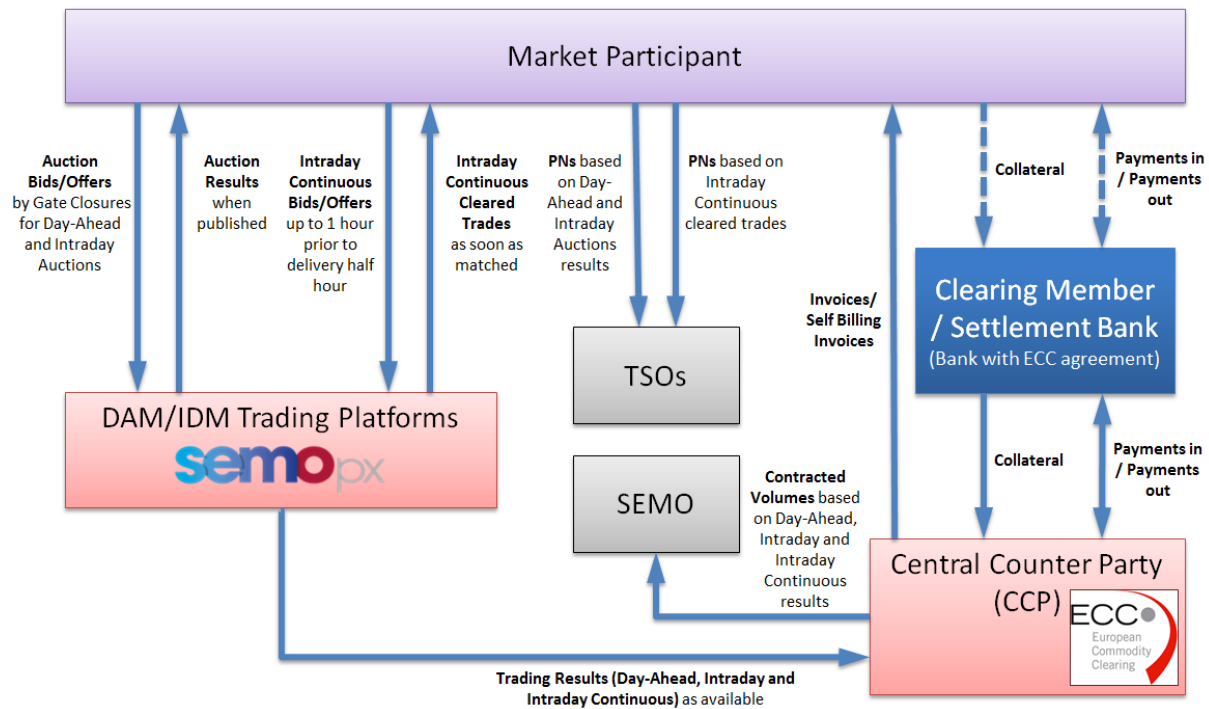


Figure 1 Participant Interactions

The Trading Day for the DAM and IDM is the 24 hour period from 23:00 GMT/BST local time (i.e. midnight to midnight Central European Time), although the period of trading for the IDM will be a subset of the Trading Day depending on when the trading occurs.

3.2 DAY-AHEAD MARKET

The Day-Ahead Market (DAM) is a pan-European market that schedules bids and offers (referred to as orders) and interconnector flows across participating regions of Europe. Participation in the DAM is voluntary, although participation is the only way for participants to establish a market position that backs their initial physical nominations, reducing their potential exposure to the IDM and Balancing Market (BM). Generators with non-firm access can trade in the DAM and IDM to levels above their firm access quantity.²

Participation in the DAM is at a unit level (i.e. individual generator units and supplier units) rather than at a member(aggregated) level.

The DAM gate closure is 11:00 GMT/BST local time D-1. Following the DAM gate closure time, all NEMOs across Europe submit anonymised orders to the Market Coupling Operator (MCO), and the DAM auction is run and completed by 12:00 GMT/BST local time D-1. The DAM auction utilises the EUPHEMIA software, which represents the trading zones within Europe and the interconnection / flow limits between those zones. EUPHEMIA determines forward contract positions for buyers and sellers, DAM prices (based on price coupling) and Day-Ahead interconnector flow levels. In the I-SEM, SEMOpX has procured the services of ECC as the Central Counter Party (CCP) for all DAM trades. Clearing and settlement functions for the DAM will also be carried out by ECC.

² However, if they do so, they the risk that they could be scheduled back to their firm capacity in the balancing market, with the reduction down to the firm capacity settled at the imbalance price.

Following receipt of DAM results, by 12:30 GMT/BST local time on the day prior to the Trading Day, participants are required to provide the TSO with an Initial Physical Notification (IPN) indicating the intended schedule of their generation and demand side units for the Trading Day. These physical notifications define the output (or change in output) of a unit between two defined points in time. Interconnectors are not required to provide physical nominations; instead, an Interconnector Reference Program is calculated by the TSOs based on DAM (and, when within-day, IDM) results.

3.3 INTRADAY MARKET

The Intraday Market (IDM) is an extension of the Day-Ahead Market, effectively allowing trading to occur later in the day, allowing participants to keep portfolios (individual units) in balance as information quality improves.

CACM requires the IDM to be based on continuous trading for cross-border trades. However, whilst trading in the IDM will eventually be possible on interconnectors via continuous trading across Europe, an interim measure is proposed (as XBID will not be available for I-SEM Go-Live). The interim measure is comprised of:

- Three auctions:
 - IDM-A1 will be cross border, at 17:30 GMT/BST local time on the day prior to the Trading Day, for the entire 24 hours of the Trading Day, by half hour;
 - IDM-A2 will be cross border, at 08:00 GMT/BST local time on the Trading Day, for the period from 11:00 GMT/BST local time to the end of the Trading Day, by half hour;
 - IDM-A3 will be local, at 14:00 GMT/BST local time on the Trading Day, for the period from 17:00 GMT/BST local time to the end of the Trading Day, by half hour; and
- Continuous local trading (buyers and sellers post offers and bids continuously and the trading platform matches compatible bids and offers (orders) to create trades; does not affect interconnector flows).

The IDM continuous process runs from the end of the DAM process to one hour before the real-time (i.e. the Balancing Market gate closure). By one hour prior to the start of the real-time half-hour trading period, participants are required to provide the TSO with Final Physical Notifications (FPNs), indicating the intended schedule of their generation and demand side units for the half hour (real-time) trading period. Arrangements for trading in the Balancing Market are detailed in *ITS Volume C (Balancing Market)*.

For IDM, trades are settled between the parties through SEMOpx using ECC as the Central Counter Party (CCP).

3.4 CLEARING AND SETTLEMENT

The clearing and settlement functions for the DAM and IDM will be carried out by ECC. The key timeline for the processing of clearing and settlement information by ECC as the Central Counter Party is described in Section 4.1.4.

4 TREATMENT OF TIME IN THE SEMOPX EX-ANTE MARKETS

4.1 TRADING PERIODS

SEMOpx will use ETS (EPEX Trading System) as the system for the Day-Ahead and Intraday Auction Markets. For the Intraday Continuous Market, the trading system is M7 (ex-ComXerv)

For **ETS** – Trading periods are expressed in the following ways:

For Type 2:

- Format: «YYYY-MM-DDTHH:MMZ»
- Short format: (09:00 – 10:00) = 09-10 for hours.
- Will be defined in UTC

For Type 3:

- The format is «YYYY-MM-DDTHH:MM:SSZ»
- Will be defined in UTC

For **M7** – Trading periods are expressed in the following ways:

For Type 2:

- Format: «DD.MM.YYYY hh:mm:ss »
- Short format: 09:00 – 09:30 =09H1 for half hours.
- Will be defined in UTC

For Type 3, messages sent via the API

- The format is «YYYY-MM-DDTHH:MM:SS.mmmZ»
- Will be defined in UTC

4.1.1 DAY-AHEAD AUCTION MARKET (ETS)

Bid and offer data (orders) may be submitted by participants to their SEMOpx, via the SEMOpx ETS trading platform, between:

- “DAM gate opening time” - 19 days prior to DAM gate closure; and
- “DAM gate closure time” - 11:00 D-1 GMT/BST local time

4.1.2 INTRADAY AUCTION MARKET

The interim Intraday Auction Market, including two proposed implicit auctions, allows trading between participants on the islands of Ireland and Britain which can change flows on the interconnectors for the first and second auctions. The third auction is local auction for I-SEM go-live. Bid and offer data (orders) may be submitted by participants to SEMOpx, via the SEMOpx ETS trading platform, with the following timing restrictions:

- “IDM-A1 gate opening time” - 19 days prior to IDM-A1 gate closure; and
- “IDM-A1 gate closure time” - 17:30 GMT/BST local time on the day prior to the Trading Day.
- “IDM-A2 gate opening time” - 19 days prior to IDM-A2 gate closure; and
- “IDM-A2 gate closure time” - 08:00 GMT/BST local time on the Trading Day.

- “IDM-A3 gate opening time” - 19 days prior to IDM-A3 gate closure; and
- “IDM-A3 gate closure time” - 14:00 GMT/BST local time on the Trading Day.

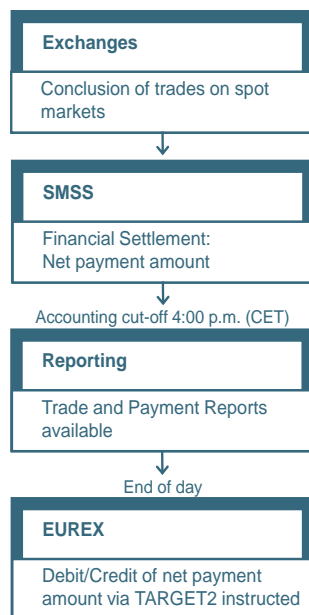
4.1.3 INTRADAY CONTINUOUS MARKET

As the European cross-border IDM solution (known as XBID) will not be in place for the I-SEM Go-Live, and a regional continuous solution as part of an XBID Local Implementation Project is not feasible to establish for the I-SEM Go-Live, continuous trading will be restricted to the island of Ireland. Bid and offer data (orders) may be submitted by participants to SEMOpx, via the SEMOpx M7 trading platform, with the following timing restrictions:

- “Local continuous gate opening time” -11:45 GMT/BST local time on D-1; and
- “Local continuous gate closure time” - 1 hour prior to the start of the relevant Trading Period.

4.1.4 CLEARING AND SETTLEMENT

Clearing and settlement of the SEMOpx Markets will occur on a daily basis. The below diagram outlines the key timeline for the processing of clearing and settlement information by ECC as the Central Counter Party (CCP).



- ECC established a daily booking cut at 16:00:00 CET. All trades concluded before the booking cut are financially settled on the following TARGET2 operating day, all other trades are settled one day later.
- The commodity amounts of all trades are netted to one net payment amount per Clearing Member and are reported in daily Payment Reports available as a summary or a detailed report.
- Payments in EUR are processed on TARGET2 operating days at around
- 8 a.m. CET before market opening via the EUREX infrastructure.
- Payments in USD and GBP are processed overnight at fixed times on all currency-specific business days according to Clearstream Banking Luxembourg payment cycles.

Figure 2 Timeline for processing of clearing and settlement

4.2 TIME REPRESENTATION

4.2.1 TYPE 2 – TIME REPRESENTATION

Bid and offer data submitted to the ETS Trading Platforms via Type 2 is based on products defined in GMT/BST time zone. All data outputs provided via Type 2 will be based on products which are represented by the GMT/BST time zone.

All data submitted to the M7 Trading Platforms via Type 2 submission will be based on products that are represented in GMT/BST time zone. All data outputs provided via Type 2 will be based on products which are represented by the GMT/BST time zone.

4.2.2 TYPE 3 – TIME REPRESENTATION

All data submitted to the ETS via Type 3 will be in UTC. All data outputs provided via Type 3 will be in UTC Time.

All data submitted to M7 Trading Platforms via Type 3 submission will be in UTC. All data outputs provided via Type 3 will be in UTC Time.

5 REGISTRATION

Participants will need to register with SEMOpx and ECC before being able to trade in the DAM/IDM Auctions and IDM continuous market. They will also need to have registered for the Balancing Market to ensure that Imbalance Settlement occurs correctly.

The registration process will be initiated by contacting SEMOpx and the submission of registration related forms and data to SEMOpx. Details of the data requirements and submissions process will be published in updated versions of the *I-SEM Technical Specifications Volume C: Balancing Market and Volume D: SEMOpx Ex-Ante Markets*.

Upon receipt of the relevant information, the registration process will begin with SEMOpx as the trading exchange and also with ECC as the Central Counter Party involved in the clearing and settlement of the DAM/IDM trades.

The process will involve validating that the participant is eligible for participation in the SEMOpx markets and ensuring the relevant contractual agreements and technical and operational processes are in place.

The SEMOpx registration process is outlined in *Figure 3* below:

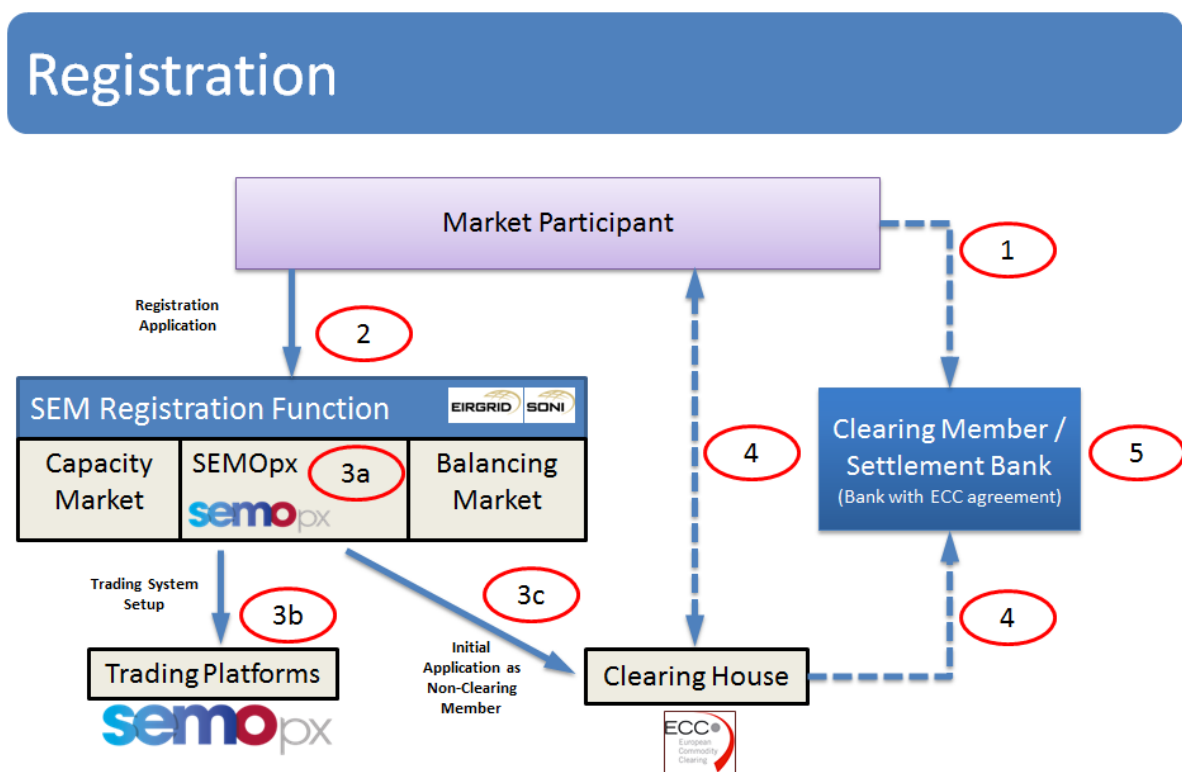


Figure 3 SEMOpx Registration Process

Descriptions of each numbered item in the diagram above are provided below:

- 1) Participant negotiates clearing member agreement with clearing member.
- 2) Participant sends in SEMOpx registration. **Note:** If the participant does not already have the relevant units registered for the Balancing Market then they will need to register for this at the same time to allow correct treatment of the unit in the imbalance settlement.

- 3a) SEMOpx processes application.
- 3b) SEMOpx organises setup for trading on the trading platforms.
- 3c) SEMOpx performs initial vetting of clearing forms and sends on the application to the clearing house (ECC) to process.
- 4) Participant liaises directly with ECC and clearing member to complete tri-lateral clearing as a non-clearing member.
- 5) Approval as Non-Clearing Member (NCM) or Direct Clearing Participation (DCP) with ECC is precondition to a successful registration with SEMOpx.

Once all agreements and setups have been completed for the trading platform, clearing and the Balancing Market, the registration will be approved by SEMOpx with an effective date.

In addition, the intention is to provide participants with an option for DCP in the SEMOpx markets.

6 SEMOPX EX-ANTE MARKETS DOCUMENTATION

6.1 OVERVIEW

This section details the various Technical Documents provided for each of the SEMOpx Ex-Ante Markets. SEMOpx will use ETS as the system for the Day-Ahead and Intraday Auction markets. For the Intraday Continuous market, the trading system is M7 (ex-ComXerv). ECC offers online access to the settlement systems for trading participants via its Spot Market Settlement System (SMSS) Member Area.

An overview of the systems and communication channels are provided in Figure 4 below. This illustrates the options available for participants to communicate with the various platforms. Participants may use both Type 2 and Types 3 Communications. The Communication Channel for Type 2 is screen (GUI) based and provides a human-to-computer communications. Type 3 Communications provide an automated, computer-to-computer interface.

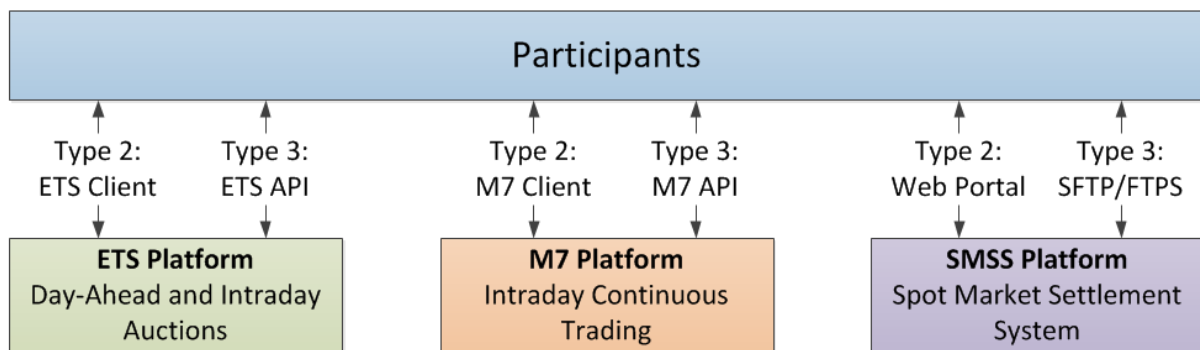


Figure 4 SEMOpx Ex-Ante Markets system overview

The following documentation is provided for each of the SEMOpx Ex-Ante Markets;

- Day-Ahead and Intraday Auction Markets
 - ETS Trading Platform Documentation
 - Type 2: ETS Trading Client
 - Installation Guide
 - User Guide
 - Type 3: ETS API
 - Technical Specification
- Intraday Continuous Trading Market
 - M7 Trading Platform Documentation
 - Type 2: M7 Trading Client
 - Installation Guide
 - User Guide
 - Continuous Export
 - Participant Trade & Order Files
 - Type 3: M7 API
 - Technical Specification
- Clearing and Settlement

- SMSS Platform Documentation
 - Type 2: Web Portal
 - Member Area User Guide
 - Reporting
 - Risk and Limit Management
 - Type 3: SFTP/FTPS
 - Technical Specification

6.2 PROVISION OF APIS (ETS & M7)

The ETS and M7 API Technical Specifications are not publically available. Participants can obtain the API documentation following the signing of a Non-Disclosure Agreement (NDA). Participants interested in obtaining the API documentation must send an email to semproject@sem-o.com noting their interest.

Please refer to the ISEM ITS R7Release Notes for notice of the availability of updated versions of the API documentation.

6.3 DAY-AHEAD AND INTRADAY AUCTION MARKETS

6.3.1 TYPE 2: ETS CLIENT

Description: ETS Client is the front-end of the auction trading system. It will enable to submit orders to the market and retrieve market results.

Documentation:

- Installation guide:
<http://www.sem-o.com/ISEM/General/SEMOpx%20Client%20Installation%20Guide.pdf>
- User guide:
<http://www.sem-o.com/ISEM/General/SEMOpx%20Trader%20Client%20Guide.pdf>

6.3.2 Type 2: ETS Market Result File

Description: The ETS Market Results file can be downloaded from ETS Client. It contains the trades executed for a specific auction for the participants. There will be one file per auction containing the results from both the Republic of Ireland and Northern Ireland. The file will be available after result publication, per auction.

Documentation:

- File specifications found in Appendix I of the ETS Client User Guide:
<http://www.sem-o.com/ISEM/General/SEMOpx%20Trader%20Client%20Guide.pdf>

6.3.3 TYPE 3: ETS API

Description: The ETS API is a communication channel that enables participants to send/receive messages to/from ETS. Participants can implement functions to manage their orders and retrieve market results.

Documentation:

- Only available on demand to the SEMOpx. Please refer to Section 6.2

6.4 INTRADAY CONTINUOUS MARKET

6.4.1 TYPE 2: M7 CLIENT

Description: M7 Client is the front-end of the continuous trading system. It will enable participants to submit orders, view the order book and retrieve market results.

Documentation:

- Installation guide:

<http://www.sem-o.com/ISEM/General/M7 ComTrader Setup Guide v1.0.pdf>

- User guide:

<http://www.sem-o.com/ISEM/General/M7 Trader Manual ComTrader v1.0.3.pdf>

6.4.2 TYPE 2: M7 CONTINUOUS EXPORT

Description: the continuous export is a function that can be activated via the M7 Client. It enables participants to continuously export the trades executed by the participant in CSV format.

Documentation:

- Export file specifications:

http://www.sem-o.com/ISEM/General/M7%20Continuous%20Export%20v1_0.pdf

6.4.3 TYPE 2: PARTICIPANT TRADE FILES

Description: The Participant Trade file can be downloaded by the back office users of M7. One xml file per trading day is generated. It contains the trade details of the participants executed on the trading date.

Documentation:

- File specification:

<http://www.sem-o.com/ISEM/General/M7 XML Reports v1.0.3.pdf>

6.4.4 TYPE 2: PARTICIPANT ORDER FILES

Description: The Participant Order File can be downloaded by the back office users of M7. One xml file per trading day is generated. It contains the orders (including modification) submitted by the participants on the trading date.

Documentation:

- File specification:

<http://www.sem-o.com/ISEM/General/M7 XML Reports v1.0.3.pdf>

6.4.5 TYPE 3: M7 API

Description: M7 API is a communication channel that enables participants to send/receive messages to/from M7. Participants can implement functions to manage their orders and retrieve market results.

Documentation:

- Only available on demand to the SEMOpX. Please refer to Section 6.2

6.5 CLEARING AND SETTLEMENT

6.5.1 TYPE 2: ECC MEMBER AREA

Description: The ECC Member Area is the gateway to the settlement services of European Commodity Clearing AG (ECC). With the help of the Member Area ECC provides a 24/7 online access to the ECC settlement systems for trading participants. ECC offers a client self service area via its Spot Market Settlement System (SMSS) Member Area. The following functions are available in the ECC Member Area:

- Transactions – Overview of Spot and Derivatives Market transactions
- Accounts – Access to internal delivery accounts for emission allowances
- Limit Maintenance – Management of trading limits

Documentation:

- Documentation – as changed from time to time – for those reports can be obtained here:
<https://www.ecc.de/ecc-en/member-section/user-guides-manuals>

6.5.2 TYPE 2: ECC REPORTS

Description: ECC offers its clients a bundle of trade, payment and invoice related reports which can be subscribed to in the ECC SMSS Member Area. Various reports can be subscribed to in the XML and PDF format (spot trades/payments/deliveries/invoices/margin). Also historical transactions can be exported via the Member Area of the ECC website. The SMSS XML Report Specification (available at the link below) contains the description of the XML reports generated by the ECC SMSS.

Documentation:

- Documentation – as changed from time to time – for those reports can be obtained here:
<https://www.ecc.de/ecc-en/member-section/smss-report-specifications>

6.5.3 TYPE 3: ECC FILE TRANSFER SERVER

Description: ECC offers a file transfer server to exchange reports subscribed to via its SMSS Member Area and ECC Product Specification Files. Access to the file transfer server is provided on the user level over a secure connection and is administrated by ECC. The file transfer user name and password are identical to the access data for the ECC Member Area. These can be applied for from ECC using the form T10 for private data as well as the T10p for public data (ECCPUBLIC). These forms can be downloaded from www.ecc.de. Full details are provided in the ECC FILE TRANSFER SERVICE User Guide in the link below.

Documentation:

- Documentation – as changed from time to time – for connecting to the file transfer server can be obtained here:
<https://www.ecc.de/ecc-en/member-section/user-guides-manuals>

6.5.4 ECC RISK MANAGEMENT

Description: As a Central Counter Party, ECC assumes the counterparty risk for all transactions concluded at its partner exchanges. Full details of how ECC manage risk are detailed in the link below.

Documentation:

- Details on ECCs risk management – as changed from time to time – can be obtained here:
<https://www.ecc.de/ecc-en/risk-management/margining>

6.5.5 ECC LIMIT MANAGEMENT

Description: Trading limits enable participants to proactively manage their risk exposure, and thus constitute a cornerstone for securing the functionality and integrity of commodity wholesale markets. Trading limits are technically provided in each trading system of the exchange or the clearing system of ECC and are contractually agreed between the clearing member and the non-clearing member.

Documentation:

- Details on ECCs limit management – as changed from time to time – can be obtained here:
<https://www.ecc.de/ecc-en/risk-management/trading-limits>

7 REPORTING

This section details the reports which can be accessed by participants for each of the Ex-Ante Markets and Settlement functions.

7.1 DAY-AHEAD AND INTRADAY MARKET AUCTION REPORTS

SEMOpX will use ETS as the system for the Day-Ahead and Intraday Auction markets. Reports containing market results are available via the Client and the API. The details of the reports available via the ETS Client and API are contained in the following sections.

7.1.1 TYPE 2: ETS CLIENT

The ETS Client allows users the ability to export the data which is currently displayed on various screens, such as Market Results and the Indexes screen. The screen columns are configurable in the settings of the ETS Client. The market data displayed on the screen can be retrieved using the export function available in the search panel on the screen. There are two options available in some screens where the data can be exported to Excel or CSV.

7.1.1.1 ETS MARKET RESULTS

Report Name	ETS Market Results
Retrieval mechanism	The ETS Market Results file can be retrieved by participants using the export function with the ETS Client. The Market Results screen displays the market results which can be exported using a button click on the screen. By clicking on this button the user initiates a CSV Export of the Market Results.
Content	The ETS Market Results for a given area set and delivery day contain; <ul style="list-style-type: none"> • Prices • Volumes • Trades executed by the participant • Block bids and execution status
Format	CSV
Reference	The report details are contained in Appendix I of the ETS Client User Guide, located in Section 6.3.2

Table 2: ETS Market Results File

7.1.2 TYPE 3: ETS API

The ETS API can be used to automatically retrieve the market results from the Day-Ahead and Intraday Auctions. The same report is available through the API as through the ETS Client. A specific method call returns the ETS Market Results file. The results file is in CSV format as a string as part of the XML response message.

7.2 INTRADAY CONTINUOUS MARKET REPORTS

M7 is the trading system which is used for the Intraday Continuous market. Reports relating to this market are available from both the Client, WebGUI and via the API. The reports available for M7 are contained in the following sections.

7.2.1 TYPE 2: M7 CLIENT

The M7 Client allows users the ability to export the data which is currently displayed on various panels including Market Overview, Own Trades and Orders. The panel columns are configurable in the settings of the M7 Client. The market data displayed on screen can be retrieved using the export function available in the title bar of the panel, as shown in *Figure 5* below. The data can be exported to either Excel or CSV.

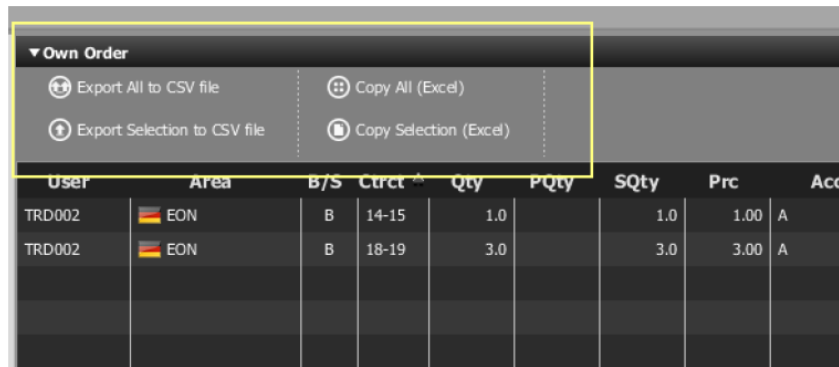


Figure 5: M7 Client Export Functionality

7.2.1.1 CONTINUOUS EXPORT

Report Name	Continuous Export
Retrieval mechanism	The Continuous Export function is an option within the M7 Client. If the Continuous Export functionality is turned on, trades are written to a file which is stored in a specific location. As new trades are executed they are appended to the file while existing trade records in the file are never modified or deleted, this will result in the file content and size continually increasing for as long as the client session is running.
Content	There are two options available for the data that is contained within the file; <ul style="list-style-type: none"> My Trades - Only trades executed based on orders owned by the logged in user are written to the export file Member trades - All trades for the member of the logged in user are written to the export file
Format	CSV
Reference	The report details are contained in Section 6.4.2

Table 3: Continuous Export File

7.2.2 TYPE 2: XML EXPORT

Participants can subscribe to one or more daily reports by logging into a WebGUI. Report options include Daily Trade Confirmation and Daily Order Maintenance Reports. These end-of-day reports are used to display data for generated trades and bids or order maintenance during the previous trading day.

7.2.2.1 TRADE FILE

Report Name	Daily Trade Confirmation
Retrieval mechanism	Participants log into the WebGUI where they can subscribe to the Daily Trade Confirmation Report. This report is generated on a daily basis. The report can be retrieved by participants via the WebGUI.
Content	For the trading day the report shows all unmodified, modified, reversed, cancelled and matched trades. The trade information contains the following information; <ul style="list-style-type: none">• Price• Volume• Area/market• Product• Contract• Execution time• Trade ID• Order ID
Format	XML
Reference	The report details are contained in Section 6.4.3

Table 4: Daily Trade Confirmation

7.2.2.2 ORDER FILE

Report Name	Daily Order Maintenance
Retrieval mechanism	Participants log into the WebGUI where the Daily Order Maintenance Report can be subscribed to. This report is generated on a daily basis. The report can be retrieved by participants via the WebGUI.
Content	The report contains a list of all orders which have been modified for each member during the trading day in continuous trading. The report details are arranged by; <ul style="list-style-type: none">• Traders• Currency• Contracts• Measures taken
Format	XML
Reference	The report details are contained in Section 6.4.4

Table 5: Daily Order Maintenance

7.2.3 TYPE 3: M7 API

The M7 API enables participants to automatically retrieve all market data by making requests through the API for;

- Market Data(Order Book/Own Orders/Own Trades)
- Reference Data(Market Status/Trading Limit)
- Public Messages(trades executed on the market, events)

The API has a broadcast functionality which allows clients to subscribe to a private restricted stream via the M7 API and to request and receive information from M7 about market activities performed by participants who have the same assignments and privileges.

7.3 CLEARING AND SETTLEMENT REPORTS

The Clearing and Settlement Reports are retrieved through the European Commodity Clearing AG (ECC) Member Area which is accessible via a web portal. The Reporting options are contained within the Member Area where participants can choose from various reporting options as shown in *Figure 6* below;

Figure 6: ECC Member Area

7.3.1 TYPE 2: SUBSCRIPTION REPORTS

There are four types of reports available for participants, which include;

Report Name	Spot Trade Report	Payment Report	Invoice Report	Margin Report
Content	This daily report contains market transactions details per trading day including; <ul style="list-style-type: none"> • Clearing Member • Exchange • No. of Contracts • Total Quantity • Price • Currency • Exchange Fees 	This daily report includes details of a specific payment transaction as follows; <ul style="list-style-type: none"> • Payment day • Transaction IDs • Currency • Payable Amounts 	The invoice report contains all purchases and sales. In addition the report includes; <ul style="list-style-type: none"> • Clearing fees for the previous month if applicable including VAT 	This daily report includes the total margin requirements calculated for daily contracts; <ul style="list-style-type: none"> • Clearing Member • Trading Participant • Margin Account • Margin Requirement • Currency
Format	pdf or XML	pdf or XML	pdf	pdf or XML
Retrieval mechanism	Email or SFTP/FTPS	Email or SFTP/FTPS	Email or SFTP/FTPS	Email or SFTP/FTPS
Reference	A sample of the Trade, Payment, Invoice and Margin reports are contained in Section 6.5.2			

Table 6: Clearing & Settlement Reports

The two file transfer mechanisms which can be utilised are FTPS (explicit FTP over TLS) with login/password. The other option is SFTP with login/password or private/public key. The password corresponds to the personal password for the ECC member area.

7.3.2 TYPE 2: TRADE LIMITS

Report Name	Trade Limits
Retrieval mechanism	Participants can request read-only access to view Trade Limits relating to their own trading activity using a search functionality within the Member Area. The Trade Limits can be retrieved using the export function available by button click on the screen. By clicking on this button the user initiates an XML export of all limits shown in the search result list. The created export file is downloaded by the user as a zip compressed file.
Content	The Limit data according to Limit definition available is as follows; <ul style="list-style-type: none"> • Limit Value • Limit Begin • Limit End • Effective Begin • Effective End • Minimum Order Price • Maximum Order Price • Status
Format	XML
Reference	A sample of the report is contained in Section 6.5.2

Table 7: Trade Limit Report