I-SEM Training
Instructor Led Training

Part 1: SEMOpx Registration
Part 2: SEMOpx Bidding
Part 3: SEMOpx (DAM & IDM) Invoicing / Fund Transfer

Version 4

Agenda

Part 1: SEMOpx Registration
Learning Objectives
Topic 1: SEMOpx Registration
Topic 2: Viewing Registration Information
Topic 3: User Access Management
Topic 4: Transitional Arrangements
Topic 5: Course Summary

semopx

Agenda

Part 2: SEMOpx Bidding
Learning Objectives
Topic 1: Introduction to SEMOpx trading systems
Topic 2: SEMOpx Day-ahead Market
Topic 3: SEMOpx Intraday Auctions
Topic 4: FX Rate Application to Trading Days
Topic 5: : Intraday Continuous Trading
Topic 6: Course Summary

Part 3: SEMOpx (DAM & IDM) Invoicing / Fund Transfer
Learning Objectives
Topic 1: Introduction to SEMOpx clearing house model
Topic 2: Booking of trades for invoicing
Topic 3: Daily process and payment cycle
Topic 4: Course Summary

Part 1: SEMOpx Registration

SEMOpx Registration Agenda

Training Topic	Training Sub-Topic
Learning Objectives	
Topic 1: SEMOpx Registration	• Parties Involved • Entity Model • Process/Forms
Topic 2: Viewing Registration Information	• System Examples – ETS, M7, SMSS
Topic 3: User Access Management	• User Access Fundamentals
Topic 4: Transitional Arrangements	• Timelines for Remaining Transitional Registration
Topic 5: Course Summary	• Review of Learning Objectives • Contact Details • Questions

Learning Objectives

- By the end of this training session you should, <u>for the Day Ahead and Intraday markets:</u>

    – Understand the parties involved

    – Understand the entity model used to represent a company and its units

    – Have an awareness of the process for registration with each party

    – Have an awareness of how registrations look in the trading and clearing systems

    – Understand the remaining transitional registration timelines for SEMOpx registration

Topic 1: SEMOpx Registration

Overview

Capacity

Day-ahead

Intraday

Balancing
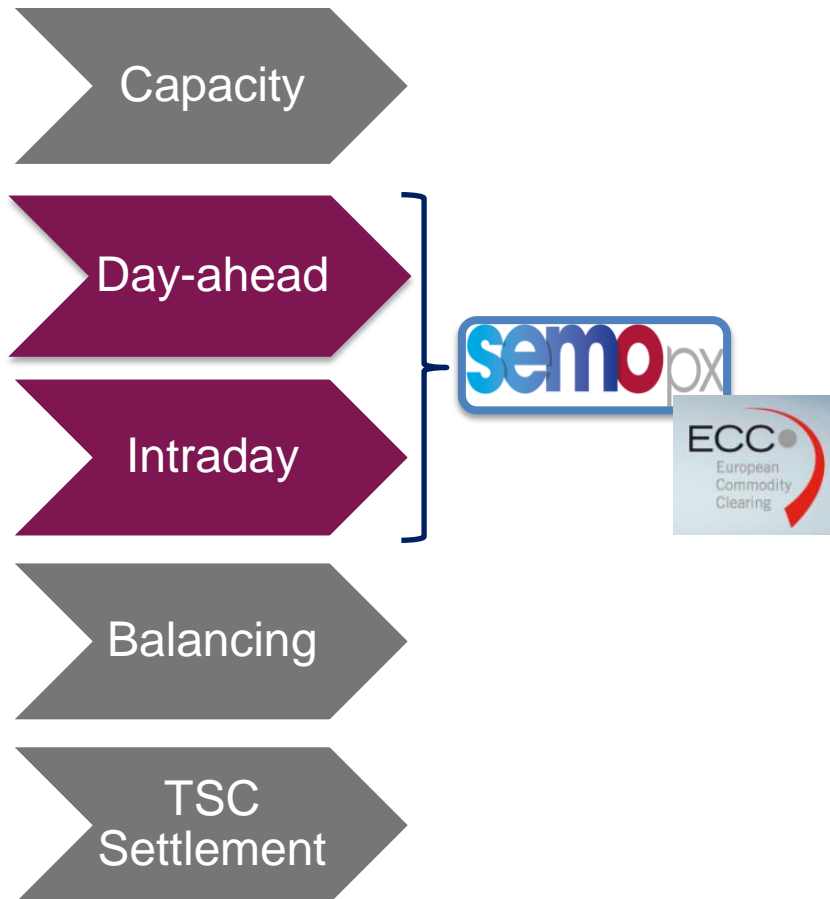
TSC Settlement

- Must be registered with SEMOpx and ECC
- Must also have units registered under TSC for imbalance settlement
- Can trade for other units in the SEMOpx markets where unit owner has given authorisation
- Contracted volumes go into imbalance settlement

- Governing rules are the
    - SEMOpx Rules
    - SEMOpx Operating Procedures
    - ECC Clearing Rules

Which units will participate?

	I-SEM Unit Types	Ex-Ante Markets
Generators	Dispatchable Generator	🟢
	Controllable/non-dispatchable Generator	🟢
	Non-controllable/non-dispatchable Generator	🟠
	Demand Side Unit	🟠
	Aggregated Generator Unit	🟠
	Assetless Unit	🟢
	Trading Unit	🟢
Suppliers	Supplier Unit (incl. ASU)	🟢
	Trading Site Supplier Unit	🟠

🟢 *Expected to participate*

🟠 *Potential to participate*

Parties Involved
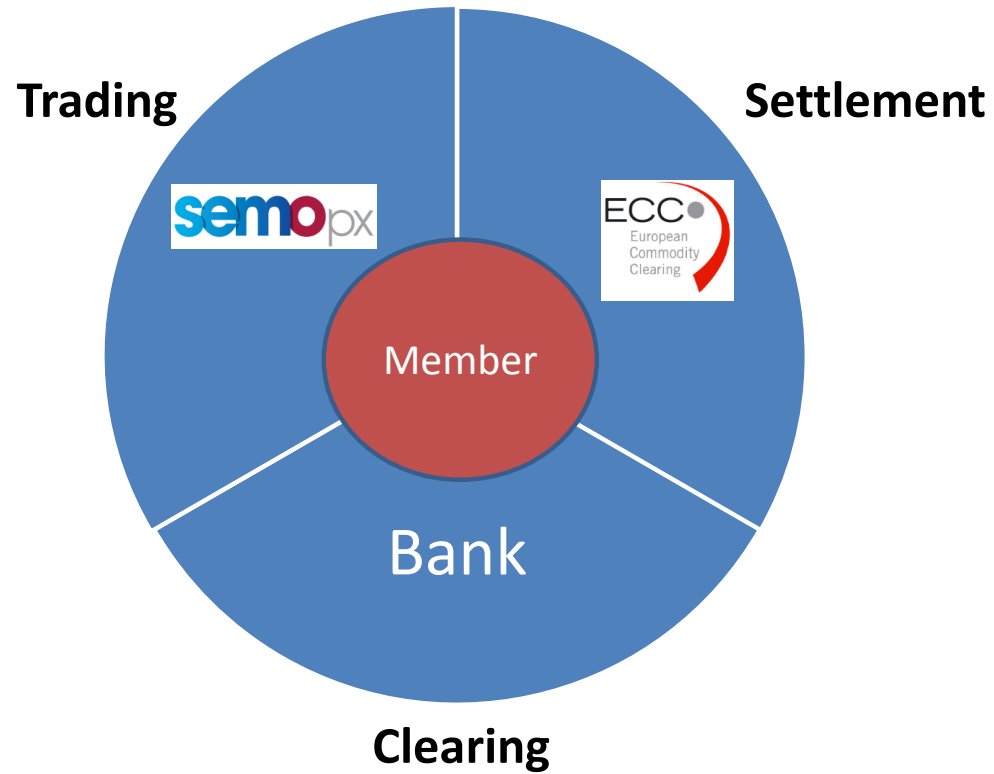
Entity Model (Own Units)

Entity Model (3rd Party Trading)

TP01b agreement in place to allow 3rd Party trading in SEMOpx markets by Company B using Company A's units

Overall Registration Process

Bank

Membership

semopx

SEMOpx Registration Guide

semopx

S00

SEMOpx - Registration Guide

DO NOT SEND BACK

Date:	17/05/2017
Document;	S00
Revision:	1.2

S00 SEMOpx – Registration Guide

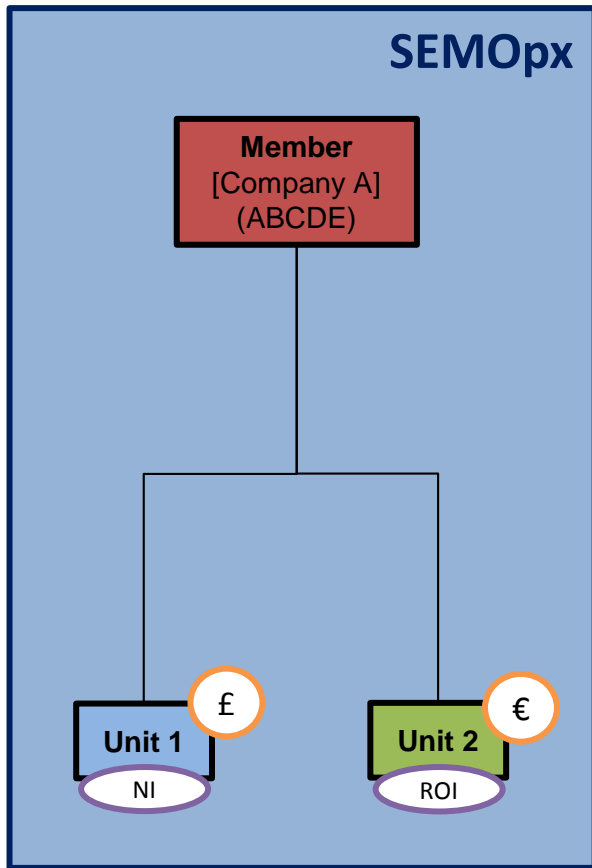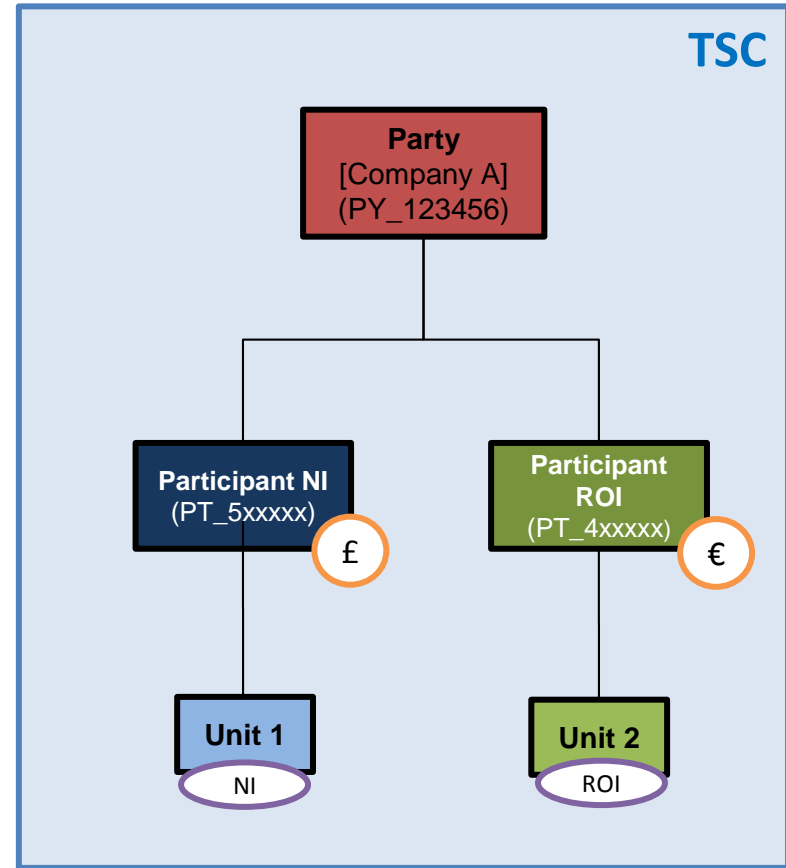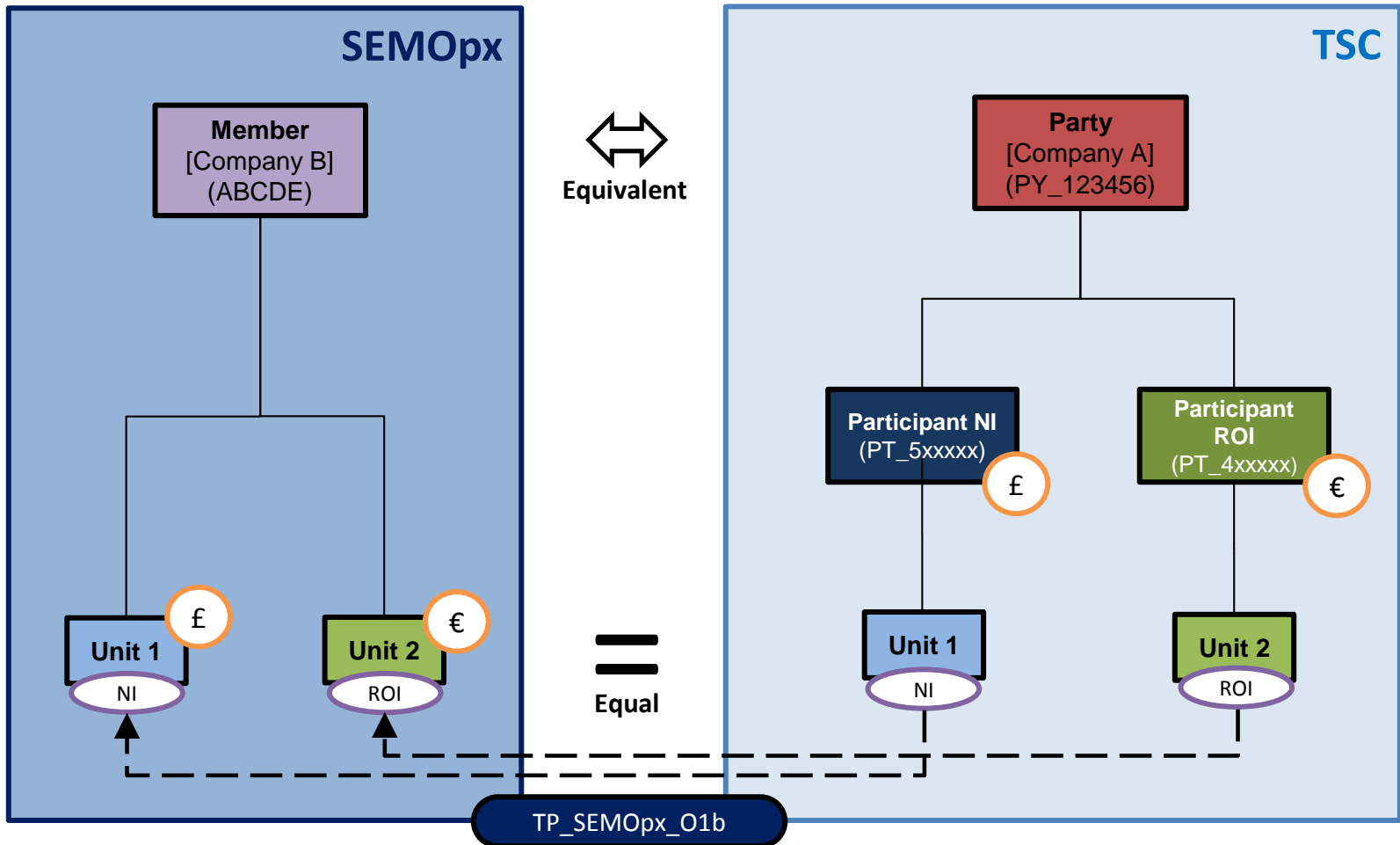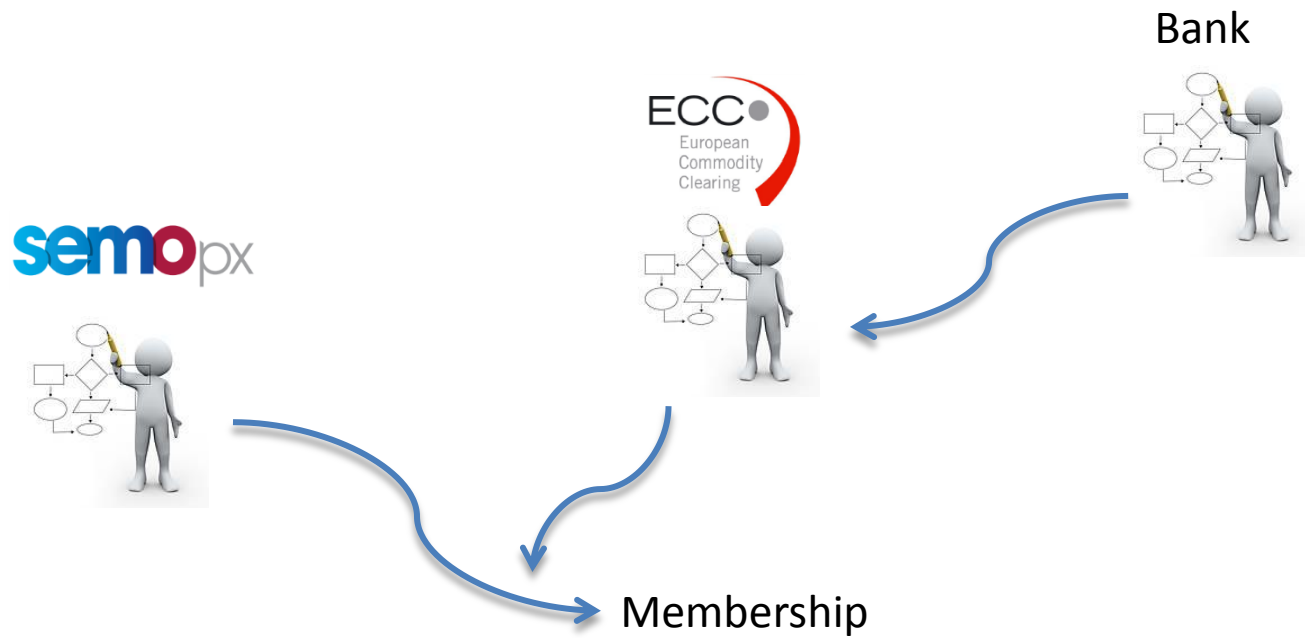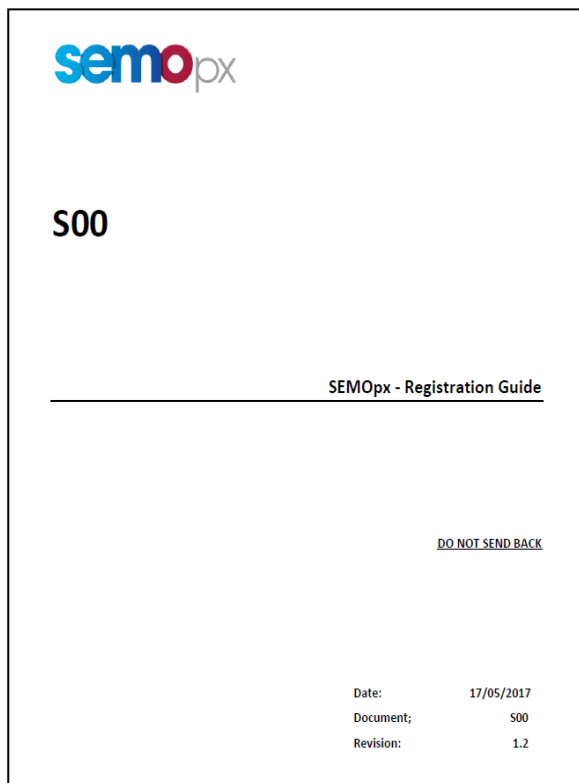## 3. SEMOpx Application Checklist

A checklist of the forms or supporting information required for a membership application is provided below.

Not all forms or supporting information may be relevant to all membership applications. Details of the relevancy of documentation are provided in the checklist below and further details are provided in Section 7.

Please use this checklist to confirm you have submitted all the required documentation with your membership application.

Document ID	Document Name	Relevance	Submission Format	
S01	SEMOpx - Member Application	Mandatory	Signed, scanned copy emailed to SEMOpx	☐
S02	SEMOpx - Unit Application	Mandatory	Signed, scanned copy emailed to SEMOpx	☐
S06	SEMOpx - User Access	Mandatory, for at least one user	Signed, scanned copy emailed to SEMOpx	☐
S07	SEMOpx - Trader Registration	Mandatory, for at least one trader	Signed, scanned copy emailed to SEMOpx	☐
S08	SEMOpx – REMIT Reporting Agreement	Optional [Agreement not yet available, to be confirmed in line with SEMOpx Rules approval]	Signed, scanned copy emailed to SEMOpx plus 1x original sent by registered post to SEMOpx	☐

Supporting Documents	Relevance	Submission Format	
Proof of Company Register	Mandatory – requirement dependent on jurisdiction of company	Signed, scanned copy emailed to SEMO	☐

Note: S90 SEMOpx – Registration Guide for the Transition from SEM to I-SEM

ECC Registration (NCM vs DCP)

Summary of ECC membership models and the implications of each:
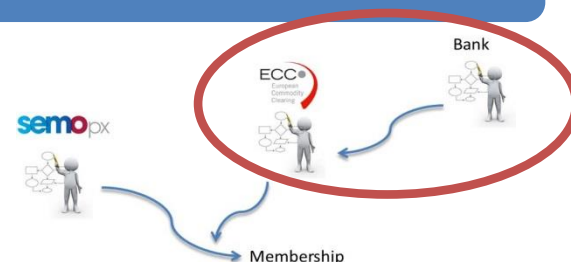
	Non-Clearing Member (NCM)	Direct Clearing Participant (DCP)
Bank	**Clearing Member**	**Settlement Bank**
Guarantee Function	**Yes,** by Clearing Member	**No,** not needed as uses pre-trade limits
Limit	**Voluntary,** set by Clearing Member	**Mandatory,** set by ECC based on collateral posted by DCP
Prefunding	No, guaranteed by Clearing Member	Collateral provided by DCP to set trade limit
Collateral	**Collected by Clearing Member**	**Deposited by DCP**
Default Fund Contribution	**Clearing Member obligation**	**DCP Obligation**
Margining	**Yes,** cleared and future exposure considered	**No,** as pre-trade limits

Non-Clearing Member (NCM) Model

Direct Clearing Participant (DCP) Model

Trading Agreement

Member

1 | Bids and Offers

Delivery | 6

Bilateral Agreement

Bilateral Agreement

Balance Responsible Agreement

Direct relationsip with ECC

Exchange

Settlement Bank

TSC Settlement

Collection of securities | 2

4 | Payments

3 | Settlement and Clearing

ECC
European Commodity Clearing

Contracted Quantities | 5
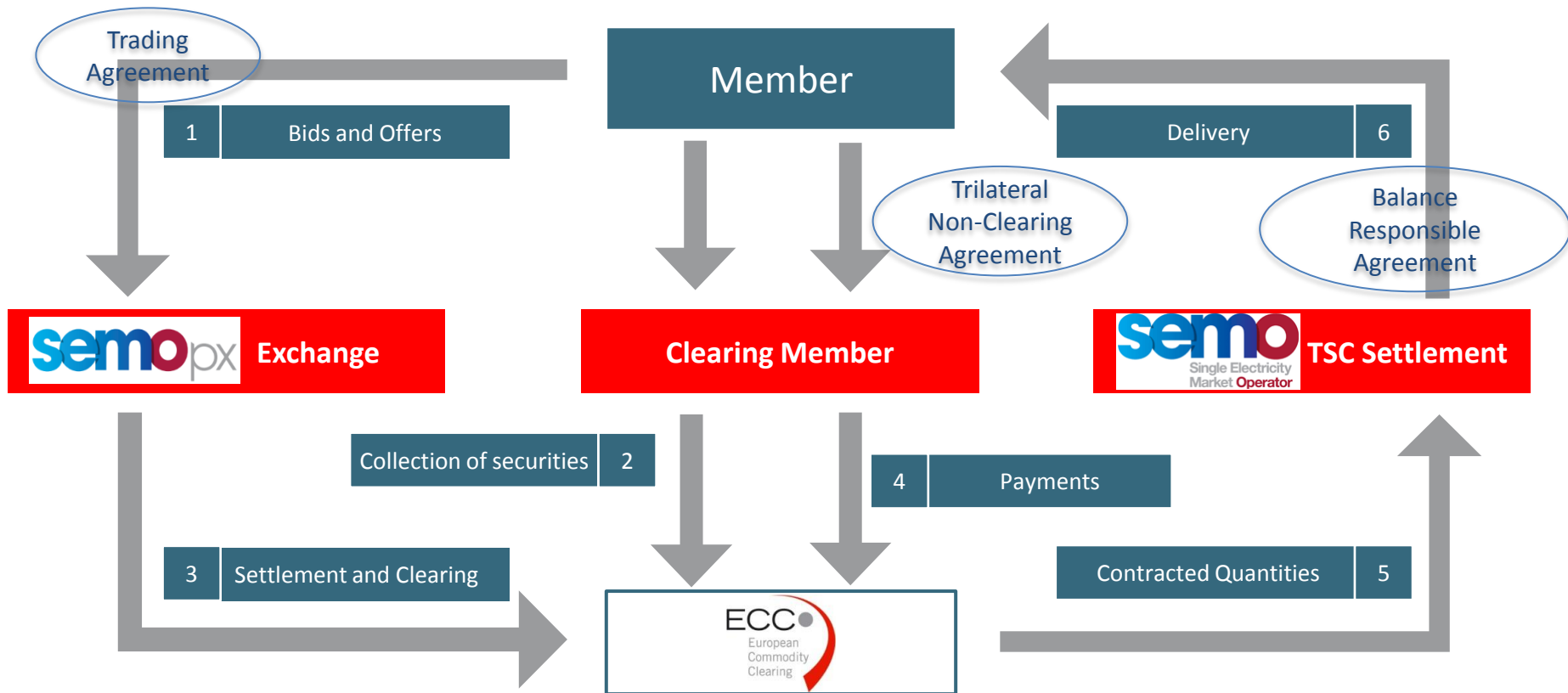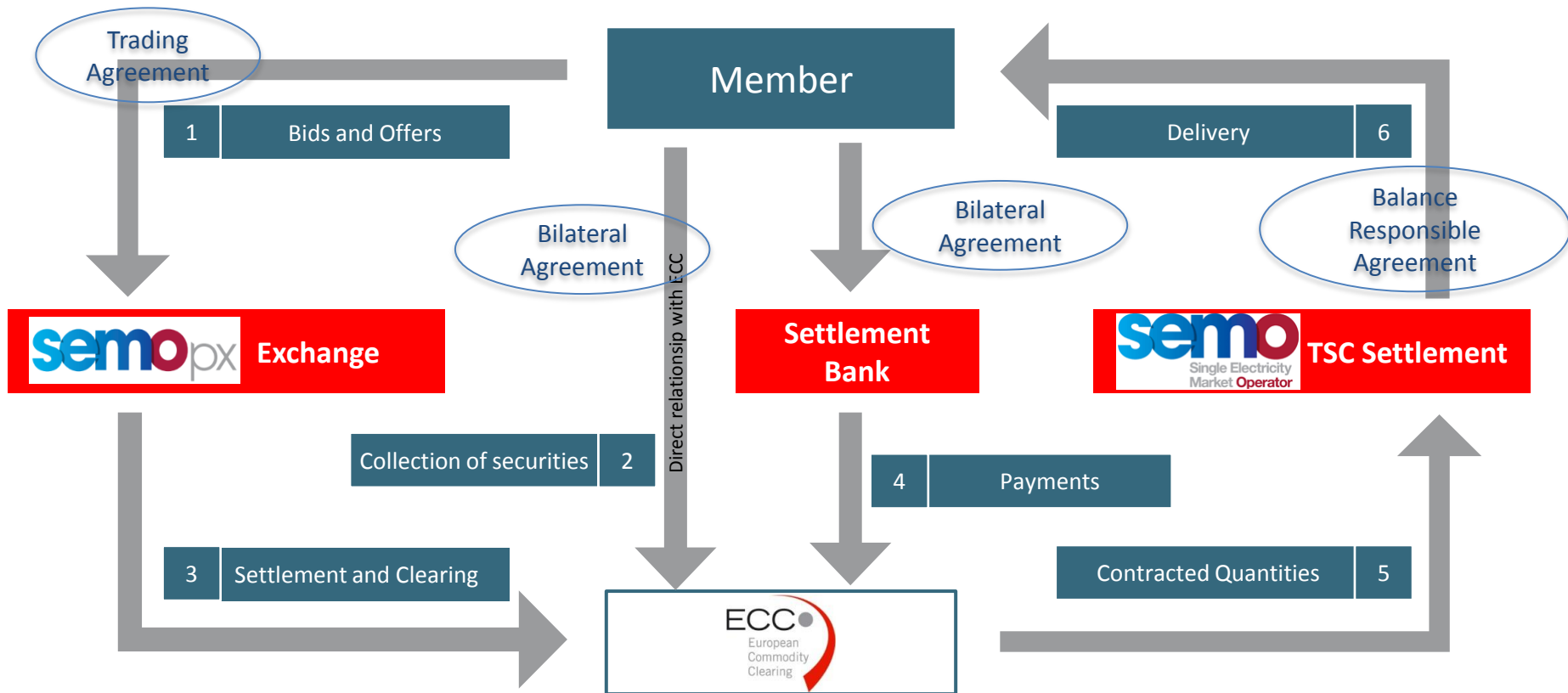
Ex-Ante Market Fees

		Non-Clearing Member	Direct Clearing Participant
Exchange	Variable Fee	Indicative Exchange Fee: 4.1 EUR-Cent/MWh [both Day Ahead and Intraday] "Indicative Fees in SEMOpx Consultation"	
	Annual Fee	Indicative Fee: 5,000 EUR per	
	Entry Fee	Indicative Fee: 5,000 EUR	
	Additional Logins	TBC	
Clearing House	Variable Fees	ECC Clearing Fees for spot market: 0.7 EUR-Cent/MWh for EUR contracts; 0.6 GBP-Pence/MWh for GBP contracts [both Day-Ahead and Intraday]	
	Annual Fee	None but variable fees of at least 1,000 EUR	12,500€ for all spot markets 9,000€ / 6,000£ for single market (e.g. Irish Spot Market)
	Expenses for cash	respective negative interest rate on cash collateral	
	Limit Adjustment Fee	depending on CM	100€ / 70£ per limit /collateral adjustment
Bank	Bank Fees	Individual Bank fees depending on bank and model "Examples from the Banking Information Session"	

Fees are settled via a DCP's Settlement Bank or a NCM's Clearing Member.

Day Ahead and Intraday Systems

EPEXSPOT

ETS
(EPEX Trading System)

EPEXSPOT

M7

ECC
European Commodity Clearing

SMSS

Day Ahead Auction

Intraday Auction 1

Intraday Auction 2

Intraday Auction 3

Intraday Continuous

Clearing and Settlement
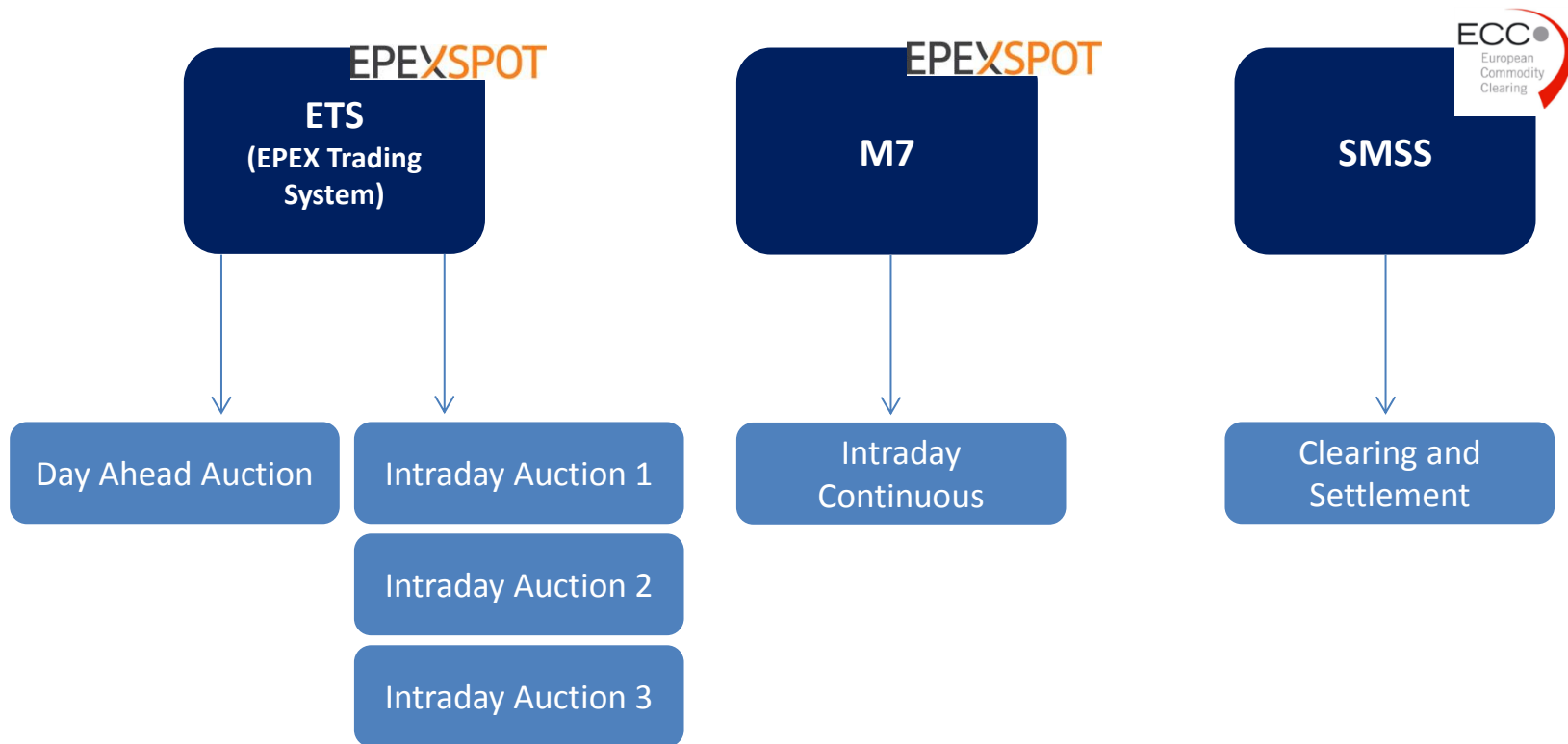
semopx

Summary of Key Points

Parties Involved
- Yourselves (as a Member), SEMOpx, ECC and a Bank.

Governing Rules
- SEMOpx Rules and ECC Clearing Rules.

Entity Model
- Different to TSC, but use Units as the link.

Registration Process
- Register with SEMOpx, ECC and contract a Bank.

Registration Guides and Application Forms
- Available from the SEMOpx website.

System Access
- Different systems for auctions, continuous and clearing.

Topic 2: Viewing Registration Information

Translation of Names

Entity/Attribute	SEMOpx Rules	SEMOpx - ETS	SEMOpx - M7	ECC - SMSS
Company	Exchange Member [e.g. ABC]	n/a	n/a	Trading Participant [e.g. ABCEX]
Units	Units [e.g. GU_nnnnnn, SU_nnnnnn, AU_nnnnnn]	Portfolio [e.g. GU_nnnnnn, SU_nnnnnn, AU_nnnnnn]	Balancing Group [e.g. GU_nnnnnn, SU_nnnnnn, AU_nnnnnn]	Exchange Trading Account [e.g. GU_nnnnnn, SU_nnnnnn, AU_nnnnnn]
Jurisdiction	Registered Currency Zone of Unit under TSC [e.g. ROI/NI]	Market Area [e.g. ROI-DA, NI-IDA1 etc..] Area [e.g. ROI-EIRGRID-DA, NI-SONI-IDA1 etc..]	Area [e.g. NI/ROI]	Product Group [e.g. SEMOPX_ST_POWER_EGRD, SEMOPX_IT1_POWER_SONI etc..]
Market Segment	Market Segment [e.g. Day Ahead, Intraday Auction 1 etc..]	Market Area [e.g. ROI-DA, NI-IDA1 etc..] Area [e.g. ROI-EIRGRID-DA, NI-SONI-IDA1 etc..]	n/a	Product Group [e.g. SEMOPX_ST_POWER_EGRD, SEMOPX_IT1_POWER_SONI etc..]

Auction (ETS) System Example

Market Global View - Factory View [Epex Trading System]

File View Format Settings Window Help

Day Type
Auction Day — ☐ Date Range

From Date	Auction Status	Auction Group	Auction Name	Market Area	Area	Participant
21/07/2017	All	All	All	All	All	All

Delivery Day	Area	Portfolio	Auction Date Time	Order Book Status	Duration	Currency	Linear	Last Update Time	Block	Last Update Time	Complex	Last Update Time
All	All	All	All	All	All	All	All	All	All	All	All	All
22/07/2017	NI-SONI-DA	GU_500001	SEMO-DA-12.00 2017-07-21-12:00	OBK Closed	60 min	GBP	none		none		none	
22/07/2017	NI-SONI-DA	SU_503888	SEMO-DA-12.00 2017-07-21-12:00	OBK Closed	60 min	GBP	none		none		none	
22/07/2017	NI-SONI-IDA1	GU_500001	SEMO-IDA1-16.30 2017-07-21-16:30	OBK Open	30 min	GBP	none		none		none	
22/07/2017	NI-SONI-IDA1	SU_503888	SEMO-IDA1-16.30 2017-07-21-16:30	OBK Open	30 min	GBP	none		none		none	
21/07/2017	NI-SONI-IDA2	GU_500001	SEMO-IDA2-09.00 2017-07-21-09:00	OBK Closed	30 min	GBP	none		none		none	
21/07/2017	NI-SONI-IDA2	SU_503888	SEMO-IDA2-09.00 2017-07-21-09:00	OBK Closed	30 min	GBP	none		none		none	
21/07/2017	NI-SONI-IDA3	GU_500001	SEMO-IDA3-15.00 2017-07-21-15:00	OBK Closed	30 min	GBP	none		none		none	
21/07/2017	NI-SONI-IDA3	SU_503888	SEMO-IDA3-15.00 2017-07-21-15:00	OBK Closed	30 min	GBP	none		none		none	
22/07/2017	ROI-EIRGRID-DA	GU_400255	SEMO-DA-12.00 2017-07-21-12:00	OBK Closed	60 min	EUR	none		none		none	
22/07/2017	ROI-EIRGRID-DA	SU_400077	SEMO-DA-12.00 2017-07-21-12:00	OBK Closed	60 min	EUR	none		none		none	
22/07/2017	ROI-EIRGRID-IDA1	GU_400255	SEMO-IDA1-16.30 2017-07-21-16:30	OBK Open	30 min	EUR	none		none		none	
22/07/2017	ROI-EIRGRID-IDA1	SU_400077	SEMO-IDA1-16.30 2017-07-21-16:30	OBK Open	30 min	EUR	none		none		none	
21/07/2017	ROI-EIRGRID-IDA2	GU_400255	SEMO-IDA2-09.00 2017-07-21-09:00	OBK Closed	30 min	EUR	none		none		none	
21/07/2017	ROI-EIRGRID-IDA2	SU_400077	SEMO-IDA2-09.00 2017-07-21-09:00	OBK Closed	30 min	EUR	none		none		none	
21/07/2017	ROI-EIRGRID-IDA3	GU_400255	SEMO-IDA3-15.00 2017-07-21-15:00	OBK Closed	30 min	EUR	none		none		none	
21/07/2017	ROI-EIRGRID-IDA3	SU_400077	SEMO-IDA3-15.00 2017-07-21-15:00	OBK Closed	30 min	EUR	none		none		none	

Show Linear Show Block Show Complex Show Market Results Show Indexes

Messages:

Time	Text
21 July 2017 14:51:52	Cancelled Block Bid(s) PART-TS01 / NI-SONI-IDA1 / 30 min / 2017-07-22-14:30
21 July 2017 14:49:44	Submitted Block Bid(s) PART-TS01 / NI-SONI-IDA1 / 30 min / 2017-07-22-14:30
21 July 2017 14:44:54	Cancelled LinearOrder PART-TS01 / NI-SONI-DA / 60 min / 2017-07-22-10:00
21 July 2017 14:44:39	Submitted LinearOrder PART-TS01 / NI-SONI-DA / 60 min / 2017-07-22-10:00
21 July 2017 14:43:49	Submitted LinearOrder PART-TS01 / NI-SONI-DA / 60 min / 2017-07-28-10:00
21 July 2017 14:43:49	Submitted LinearOrder PART-TS01 / NI-SONI-DA / 60 min / 2017-07-22-10:00

Filters
Including Auction Name, Market Area, Area, Participant

Messages
Provides timeline as offers are submitted or cancelled etc..

TRADER500@sepwets407:4443 ✉ 15:17:22

Continuous (M7) System Example

Order Book Details — Block Market Overview — Market Overview — Own Orders — Order Entry — Messages

Market Overview*
Provides an overview of active orders for predefined contracts as well as trade information (Last Price, Quantity and Total Traded Quantity).

Own Order
Displays a list of all orders (active or not) entered by the logged in user or other users from the same company submitted on the same balancing group.

Order Entry
Main Interface used to enter/modify orders.

Order Book Details*
Provides a non-aggregated view of active orders for a selected contract.

Message
Displays all the messages of the last 24 hours generated by the system that the logged user is authorized to receive.

Block Market Overview*
Provides an overview of active orders entered for user-defined block contracts. (not applicable to SEMOpx)

Settlement (SMSS) System Example

Topic 3: User Access Management

User Access Management

User

User Access

System Access
(via common user login)

SEMOpx Contacts

ECC Contacts

System

ETS
(2 User)

M7
(1 User + 1 Reporting)

SMSS
(1:1 + 1-2 Invoice Users)

- Traders
- Front Office Manager
- Back Office Manager
- IT Contact
- Compliance Officer
- Risk Officer
- Legal Contact

- General
- Invoicing
- Emergency Contact

Rights

Read   Write   Read   Write   Reporting   Read   Write

Type

2 or 3   2 and/or 3   2 and 3

Changes via submission of off-line forms

Topic 4: Timelines for Transitional Registration

Transitional Registration Plan
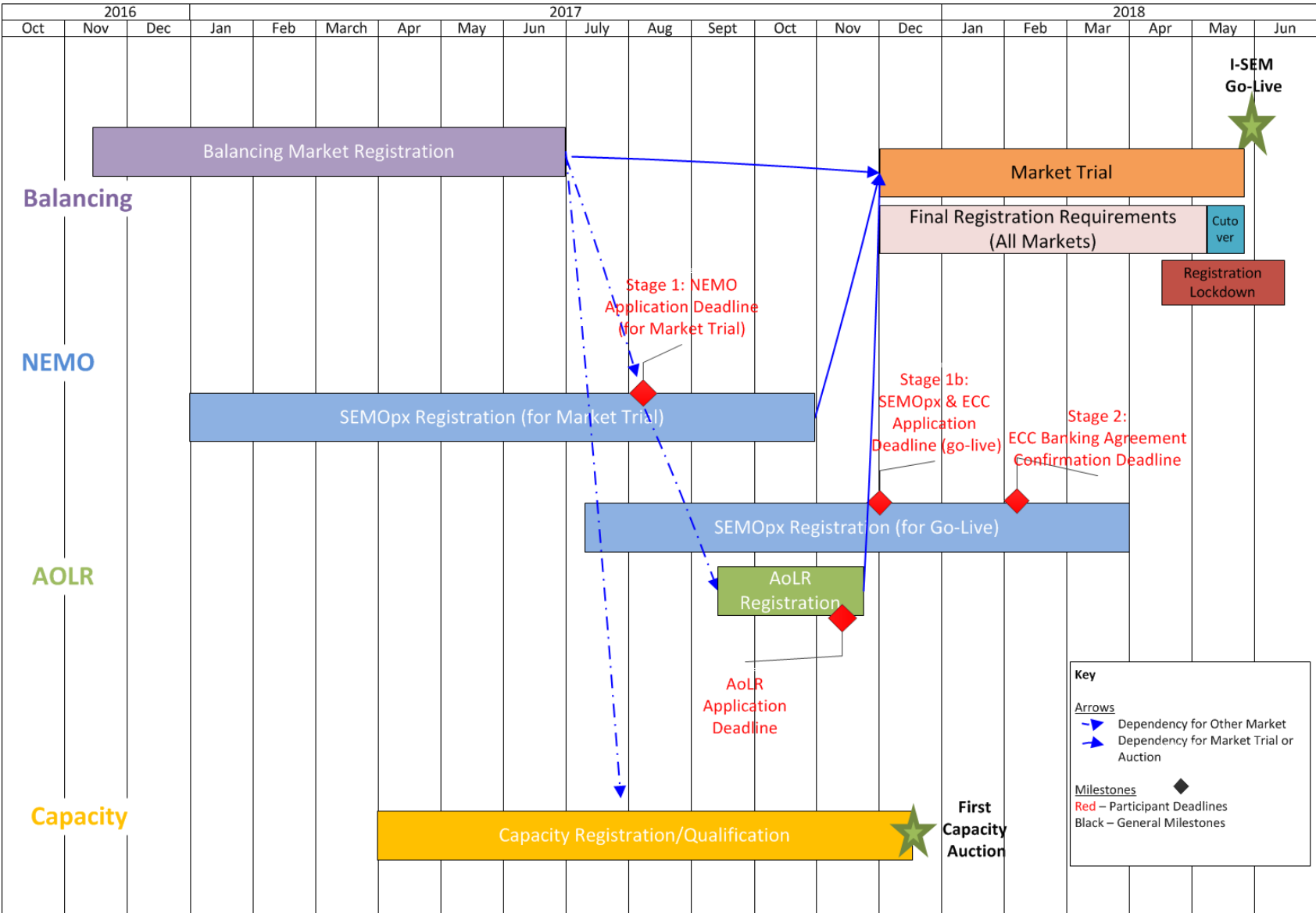
SEMOpx/ECC Registration Key Dates

SEMOpx Application	ECCApplication	Agreements	Final Requirements & Agreements
7th August 2017	**7th August 2017**	**27th October 2017**	**7th February 2018**
• **S01** Member Application • **S02** Unit Application • **S06** User Access • **S07** Trader Registration	• **KYC –** Know your Customer • **TP_SEMOpx_01a** or **b** - Trading Participant in the Spot Market [own/3rd party] Agreement • **TP07** VAT Details • **TP10** Setup of User IDs • Supporting Info • **NCM01** Application for Admissions NCM (NCM only) • **DCP01** Application for Admission as DCP (DCP only) • **CM02** Clearing Agreement (DCP Only)	**SEMOpx** • **S03** Exchange Member Agreement	**SEMOpx** • **S08** REMIT Reporting Service **ECC** • **O09** Limit Adjustment Form (DCP only) • **O10** Cash Collateral Form (DCP only) • **NCM02** NCM Agreement (NCM only)

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Key Dates for Transitional Registration

ECC Member?	What to participate in Market Trial	What to be ready for I-SEM go-live	SEMOpx & ECC Forms Deadline Stage 1	ECC Deadline Stage 2 or changes to NCM/DCP setup	Comment
New	Yes	Yes	**7 Aug 2017**	7 Feb 2018	Applications after 7 Aug 2017 are not guaranteed to be ready for market trial
	No	Yes	1 Dec 2017	7 Feb 2018	Applications after 1 Dec 2017 are not guaranteed to be ready for go-live
Existing	Yes	Yes	**7 Aug 2017**	7 Feb 2018	Applications after 7 Aug 2017 are not guaranteed to be ready for market trial
	No	Yes	7 Feb 2018	7 Feb 2018	Applications after 7 Feb 2018 are not guaranteed to be ready for go-live

Stage 1 = All ECC forms **except clearing member/settlement bank confirmation**

Stage 2 = All remaining forms **including bank info**

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Topic 5: Course Summary

Review of Learning Objectives

As a result of this training module, <u>for Day Ahead and Intraday Markets</u>, you should now:

Understand the parties involved ✓

Understand the entity model used to represent a company and its units ✓

Have an awareness of the process for registration with each party ✓

Have an awareness of how registrations look in the trading and clearing systems ✓

Understand the remaining transitional registration timelines for SEMOpx registration ✓

semopx

Contact Details

The following are the key contact details for SEMOpx and ECC. If you have any questions or queries on the registration process please feel free to contact SEMOpx in the first instance.

SEMOpx

SEMOpx
The Oval
160 Shelbourne Road,
Ballsbridge
Dublin 4
D04 FW28
Ireland

If you have any questions on the application process or details please contact:
ROI: 1800 72 6772
NI: 0800 072 6772
International: + 353 (1) 237 0584

info@semopx.com

ECC

European Commodity Clearing AG
Member Readiness
Augustusplatz 9
04109 Leipzig
Germany

If you have any questions on the ECC application process or details please contact:
 +49 341 24680 261

MemberReadiness@ecc.de

Part 2: SEMOpx Bidding

SEMOpx Bidding Agenda

Training Topic
Learning Objectives
Topic 1: Introduction to SEMOpx trading systems
Topic 2: SEMOpx Day-ahead Market
Topic 3: SEMOpx Intraday Auctions
Topic 4: FX Rate Application to Trading Days
Topic 5: : Intraday Continuous Trading
Topic 6: Course Summary

Learning Objectives

- After completing self-learning and instructor-led training for this course, you will have an understanding of:

- how to access SEMOpx systems

- the timelines for data submission for day-ahead auctions, intraday auctions

- the process for data submission for intraday continuous market

- the products available in each of the market segments

- how to access data publications

Topic 1: Introduction to SEMOpx trading systems

Introduction

- This presentation is the instructor led training for SEMOpx bidding.

- Self-learning for this course provided an overview of the market systems in SEMOpx:
  - SEMOpx day-ahead market system
  - SEMOpx intraday auctions system
  - SEMOpx continuous intraday trading system

- The instructor led material provides some more detailed examples for:
  - Submission of orders in SEMOpx trading systems
  - Gate Windows for each market segment
  - Products available for each market segment
  - FX rate application for trading day

SEMOpx Introduction

Capacity

Day-ahead

Intraday

Balancing

TSC Settlement
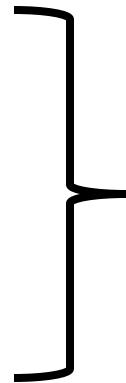
SEMOpx is the exchange operator for EirGrid and SONI NEMOs.

SEMOpx provides exchange operator services for the day-ahead and intraday market segments.

SEMOpx – Service Providers

- SEMOpx have engaged two service providers:
  - EPEX Spot; and
  - ECC

- EPEX Spot support trading services:
  - EPEX Spot provide and support for trading systems (ETS and M7)
  - EPEX Spot perform market coupling services

- ECC act as the central counter party:
  - ECC act as guarantor for all trades on the SEMOpx exchange
  - ECC provide settlement, invoicing and banking services

SEMOpx Trading Systems Overview

EPEXSPOT

ETS
(EPEX Trading System)

EPEXSPOT

M7

Day Ahead Auction

Intraday Auction 1

Intraday Auction 2

Intraday Auction 3

Intraday Continuous
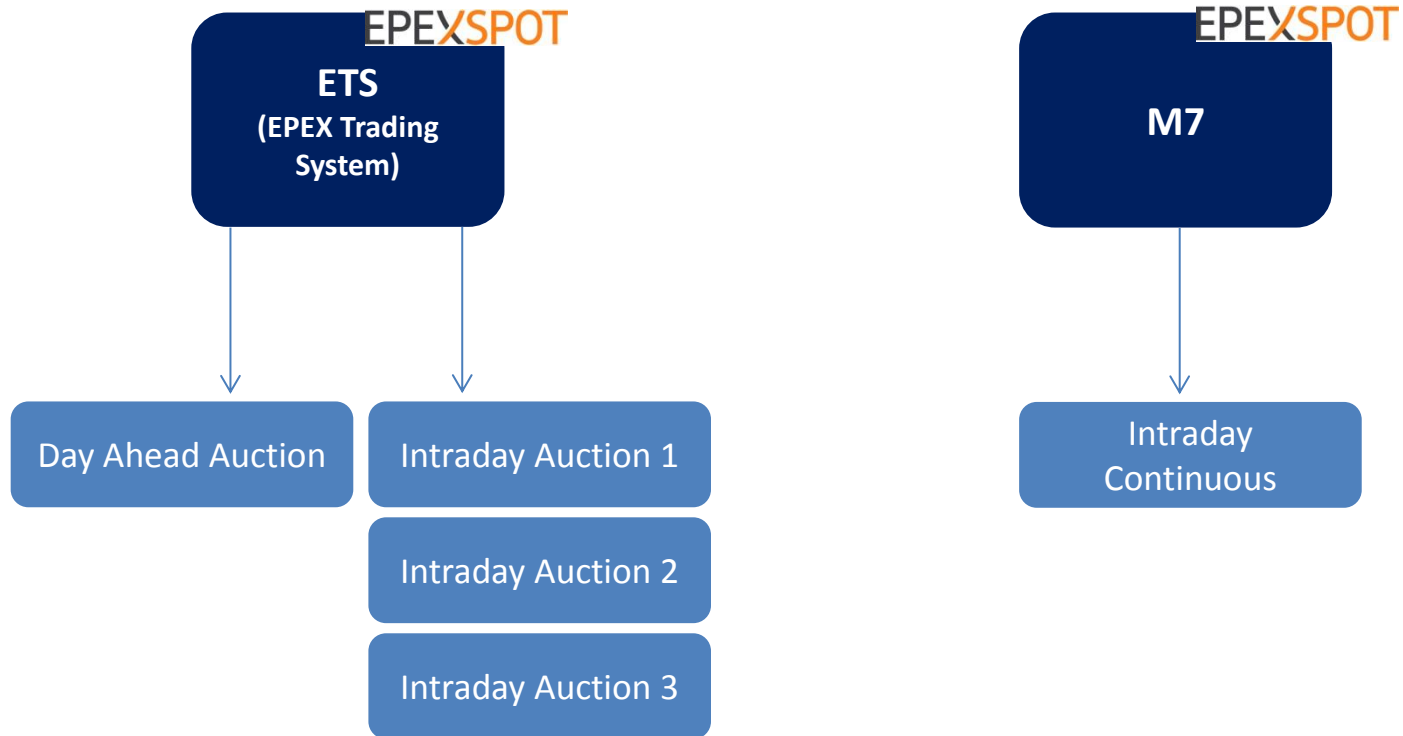
General Overview ETS

Market Overview

- **EPEX Trading System (ETS)** for day-ahead auction

- **Portfolio will be set up corresponding to the Unit ID**
  - Used to submit orders
  - Retrieved in the result files
  - The day-ahead auction in ETS uses the Price Matching Broker (PMB) and EUPHEMIA which is the day-ahead market pricing algorithm

- It is used throughout Europe to perform daily price coupling

- Determines prices, schedules and IC flows across markets

- Will be used for all SEMOpx auctions:
  - Day-ahead auction
  - Intraday auctions

General Overview ETS

Market Overview

- **EPEX Trading System (ETS)** for intraday auctions

- **Portfolio will be set up corresponding to the Unit ID**
  - Used to submit orders
  - Retrieved in the result files
  - The intraday auctions in ETS uses a separate instance of Price Matching Broker (PMB) and EUPHEMIA which is the intraday auctions market pricing algorithm

- It is used in the SEM-GB region to perform daily price coupling

- Determines prices, schedules and IC flows across the SEM-GB border (IDA 1 & 2 ONLY)
- IDA 3 is a local auction and therefore no cross border flows are produced in this market segment

Topic 2: SEMOpx Day-ahead Market

The I-SEM High Level Design - *Day-ahead*

Capacity

Day-ahead

Intraday

Balancing

TSC Settlement

- Day-ahead market is the "exclusive" route to market for day-ahead physical positions

- Part of Single Day-Ahead Coupling; Local Trading only

- **Unit based** participation (both generation and demand)

- Allows generators to offer based on availability and suppliers to bid based on forecast offtake

- Limited capability in DAM to represent technical capability of generators

- Effectively participation in ex-ante markets is as offers to sell and bids to buy by traders

- Some portfolio participation allowed

SEMOpx Day-Ahead Market

- The day-ahead market auction is held daily at 11:00 GMT/BST on D-1.

- The auction is part of Single Day Ahead Coupling (SDAC):

  - Day ahead Auction is an auction run by SDAC where ROI and NI are not coupled to GB.

  - Local Trading only within the Single Electricity Market

- SEMOpx is the point of contact for participants:

  - Participants submit orders and receive results through SEMOpx

Auction Timings and Trading Periods

The table below summarises the SEMOpx auctions:

Market Name	Trading System	Gate Window Closure	Delivery Periods	Market Coupling
DAM	ETS	11:00 (D-1)	23:00 – 23:00 (24 * 1 hour)	Local trading only
IDA – 1	ETS	17:30 (D-1)	23:00 – 23:00 (48 * ½ hour)	Coupled with GB
IDA – 2	ETS	08:00 (D)	11:00 – 23:00 (24 * ½ hour)	Coupled with GB
IDA – 3	ETS	14:00 (D)	17:00 – 23:00 (12 * ½ hour)	Local trading only

SEMOpx Day-Ahead Market Key Characteristics

DAM Specification	Characteristic
Order book opening	19 days before Delivery, at 23:00 GMT/BST
Order book closure	Daily at 11:00 GMT/BST
Product	Hourly products for delivery D+1
Order types	Simple Orders and Scalable Complex Orders
Currency	Bidding and settlement in EUR for ROI. Bidding and settlement in GBP for NI. Matching in EUR. Conversion using FX rate.
Pmin-Pmax	ROI: -500 EUR; +4000 EUR NI: -1500 GBP; +9000 GBP
Price tick	0.01 EUR/MWh for bidding in ROI 0.01 GBP/MWh for bidding in NI (publication of prices with three digits)
Volume tick	0.1 MW

MRC Normal process - Timeline

Publication of CZC by the TSOs

By 09:30

PX Order book Gate Closure Time

11:00

Publication of Preliminary Results

11:42

Publication of Final Results

11:55

Start of Notification process

As of 12:00

- **Sending of order books to the Coupling System**
- **Calculation of the Market Coupling Results**
- **First validation by the SDAC PXs**

- **Final validation by the SDAC PXs and TSOs**

- **Notification process**

Day-Ahead Auction Order Type Overview

Simple Orders

- PQ pairs with no conditions attached
- Orders aggregated into hourly curve

Scalable Complex Orders

- Price-quantity pairs with conditions
- Explicit representation of TOD and COD

*Subject to PCR testing

Topic 3: SEMOpx Intraday Auctions

Interim Intraday Solution – Auctions

- Two intraday auctions are regionally coupled:
  - IDA1 and IDA2 are coupled
  - IDA3 will be local only
  - Allow trading between SEM and GB market

- Regional coupling functionally the same as European coupling:
  - Same function as in DAM but with SEM and GB only
  - Single set of results for SEM and GB markets in coupled auctions
  - SEMOpx still point of contact for participants

- Intraday auctions cover different time periods:
  - IDA1 24 hours; IDA2 12 hours and IDA3 6 hours

The I-SEM High Level Design - *Intraday*

Capacity

Day-ahead

Intraday

Balancing

TSC Settlement

- Envisaged as the market where participants adjust day-ahead positions based on improved forecasts and other technical information

- Still the "exclusive" route to market for intraday physical positions ahead of gate closure

- SEMC decision based on continuous EU solution (XBID)

- However, XBID project planning is on-going

- Pre-requirements for SEM joining will not have been completed

- Interim intraday solution has been developed

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SEMOpx Intraday Auctions Key Characteristics

DAM Specification	Characteristic
Order book opening	19 days before Delivery, at 23:00 GMT/BST
Order book closure	IDA 1: Daily at 17:30 GMT/BST IDA 2: Daily at 08:00 GMT/BST IDA 3: Daily at 14:00 GMT/BST
Product	30 min products IDA1 for 48 ½hr periods with auction at 17:30 GMT/BST (D-1) for delivery 23:00 (D-1)-23:00 (D) GMT/BST IDA2 24 ½hr periods with auction held in the morning of D at 08:00 (D) GMT/BST for delivery period 11:00-23:00 GMT/BST IDA3 12 ½hr periods with auction held in the afternoon of D at 14:00 GMT/BST for delivery period 17:00-23:00 GMT/BST
Order types	Simple Orders and Scalable Complex Orders
Currency	Bidding and settlement in EUR for ROI. Bidding and settlement in GBP for NI. Matching in EUR. Conversion using FX rate.
Pmin-Pmax	ROI: -150 EUR; +3000 EUR NI: -450 GBP; +4500 GBP
Price tick	0.01 EUR/MWh for bidding in ROI 0.01 GBP/MWh for bidding in NI (publication of prices with three digits)
Volume tick	0.1 MW

Intraday Auction Order Type Overview
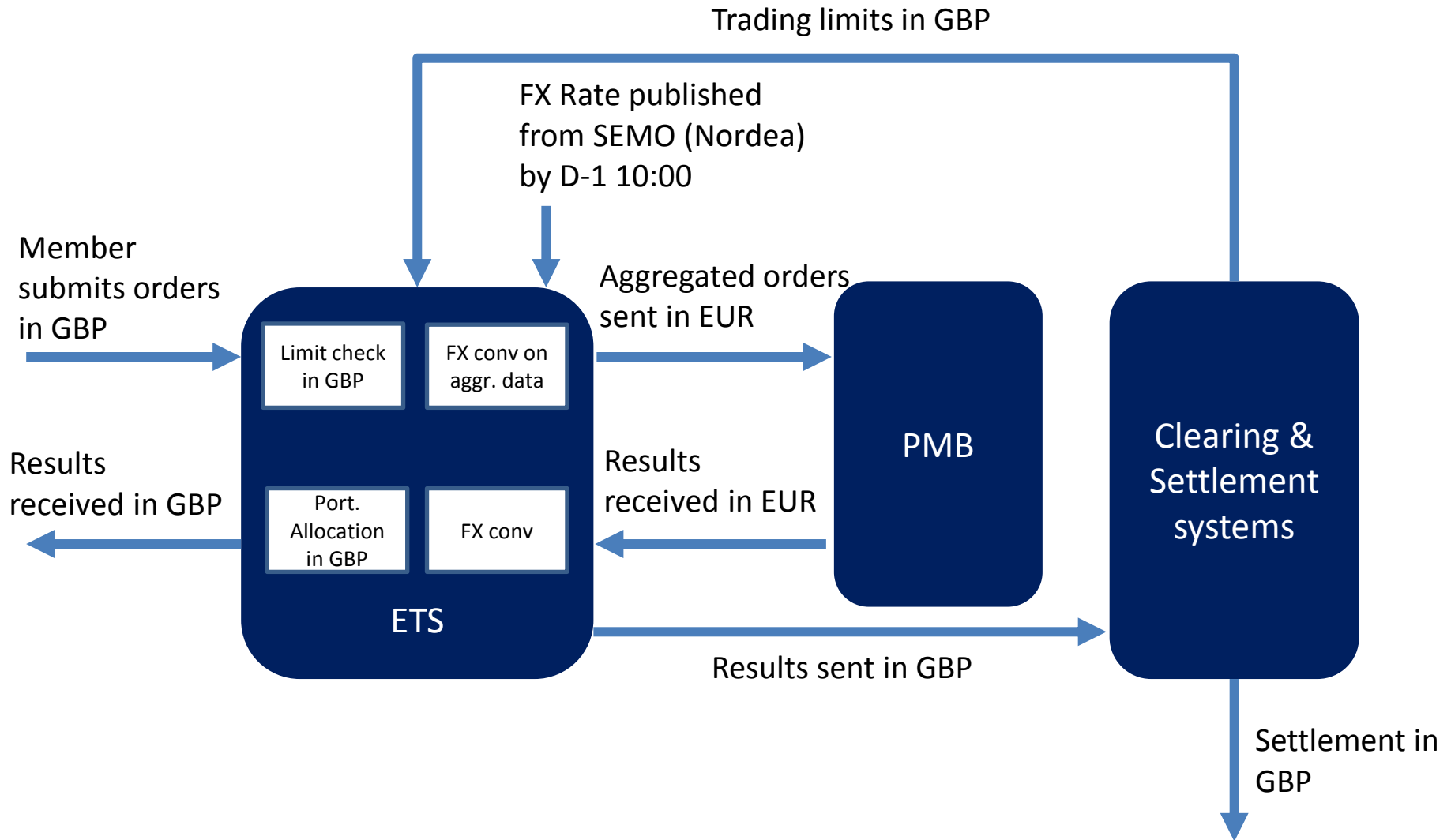
Simple Orders
- Price-quantity pairs with no conditions

Scalable Complex Orders
- Price-quantity pairs with conditions
- Cost and technical data

Topic 4: FX Rate Application to Trading Days

Currency Handling

Trading limits in GBP

FX Rate published
from SEMO (Nordea)
by D-1 10:00

Member
submits orders
in GBP

ETS

Limit check
in GBP

FX conv on
aggr. data

Port.
Allocation
in GBP

FX conv

Aggregated orders
sent in EUR

PMB

**Clearing &
Settlement
systems**

Results
received in GBP

Results
received in EUR

Results sent in GBP

Settlement in
GBP

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Trading Day Exchange Rate

Market Segment	Currency	Trading Periods Applicable
DAM	Submit in GBP, Matched in EURO	1-24 60 Min (23:00 D-1 to 23:00 D)
IDA1	Submit in GBP, Matched in EURO	1-48 30 Min (23:00 D-1 to 23:00 D)
IDA2	Submit in GBP, Matched in EURO	25-48 30 Min (11:00 D to 23:00 D)
IDA3	Submit in GBP, Matched in EURO	36-48 30 Min (17:00 D to 23:00 D
IDC	N/A – Euro Only	N/A

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Topic 5: Intraday Continuous Trading

SEMOpx Interim Intraday Continuous Trading

- The SEMOpx Intraday Continuous Market trading day is divided into 48 (30 minute) trading periods, compared with 1-hour periods in the Day Ahead Market. D-1 and D are the day D and the day before D. Both days start at 23:00. The market opens after the Day Ahead Auction Closure, D-1, runs continuously and closes 60 minutes ahead of every 30 minute trading period. The trading day starts at 23:00 D-1 and lasts until 23:00 D.

- The SEMOpx Intraday Continuous Market allows market Participants to adjust their physical positions closer to real time. The need to do so can arise for a number of reasons, including orders failing to clear in the Day Ahead Market, new information becoming available (for example plant failures and forecast changes), and congestion on interconnectors driving price differentials between zones, and assetless traders wishing to exit their positions. This market offers a huge amount of flexibility as Participants can trade themselves out of their contracted positions 24/7.

- In the interim intraday solution, trading in the SEMOpx continuous market is local only (i.e. trades in the SEM only with no cross border trades).

SEMOpx Intraday Continuous Market Key Characteristics

IDC Specification	Characteristic
Bidding areas	Two bidding areas: ROI and NI No congestion between ROI and NI
Trading modality	Continuous, 24/7 No interruption and restart of trading during intraday auction sessions
Order book opening	11h45 GMT on D for 48 half an hour products for delivery D+1
Order book closure	60 min before delivery
Coupling & topology	No Coupling, isolated
Product	30 min
Order types	Limit orders, Fill or Kill, Immediate or Cancel, Good till date, Iceberg, block orders
Currency	Bidding and settlement in EUR for ROI and NI Matching in EUR
Pmin-Pmax	ROI and NI: -9999.99 EUR; +9999.99 EUR
Price tick	0.01 EUR/MWh
Volume tick	0.1 MW

Interim Intraday Local Continuous - Diagram

- SEMOpx Interim Intraday Local Continuous:
  - Ability to adjust positions for forecast updates and scheduling outcomes from DAM/IDA
  - 30 minute trading period granularity
  - Trading until 1 hour ahead of delivery (rolling half hour gate closure)

Example: At 11:00 1 hour gate closes for 12:00 to 12:30
At 11:30 1 hour gate closes for 12:30 to 13:00
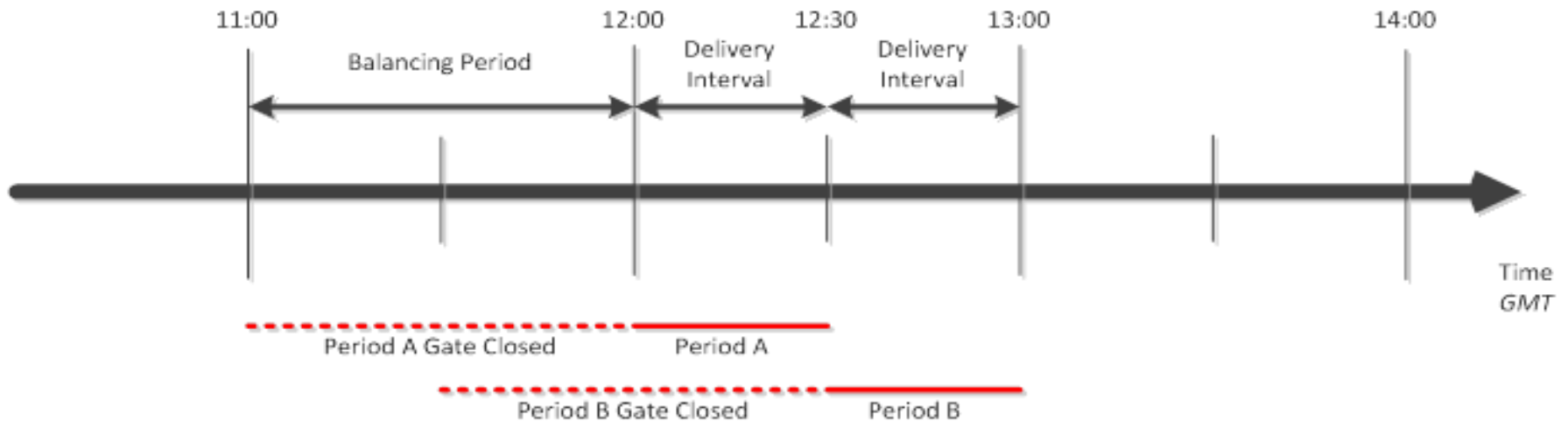
Intraday Continuous Trading

- Allows for trading continuously :
  - Participants enter orders to buy or sell energy
  - SEMOpx displays the order book of active orders anonymously
  - Participants can match their order with ones they see in the order book on a continuous basis
  - Once an order is matched to another, a trade is created

- Trading is open up to one hour ahead:
  - Trading can take place at any time up to the close of trading
  - Trading available overnight

- Runs in parallel to the auctions:
  - Continuous trading is not suspended when auctions are occurring

Continuous Market Orders

- Simple orders:
  - Price quantity pair(s)

- Fill-or-kill:
  - Order should be fully accepted or fully rejected immediately
  - Does not allow for partial acceptance

- Immediate or cancel:
  - Order should be accepted immediately or cancelled
  - Allows for partial acceptance of the order

- All or none:
 - Order must be matched for full amount, no time limit

Continuous Market Orders

- Good for session:
  - Order is valid until trading is closed for the product
  - I.e. order is valid until 1 hour before delivery

- Good till Date:
  - Order is valid until a particular time
  - Time is set by the user when entering the order

- Iceberg order:
  - A larger order is displayed as a series of smaller orders
  - When one part of the order is accepted, the next becomes available
  - Allows users to hide the full extent of their buy/sell
  - E.g. a 100MW order may be broken into 4x25MW order

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Continuous Market Orders

- Block order:
  - Block of energy with a single price
  - Price reflects per unit cost of the block
  - Block may span multiple trading periods
  - Entire block will be considered as one (unit price x volume)

- Pre-defined block:
  - Block for pre-defined time periods set by SEMOpx
  - Allows for ease of access to commonly traded periods
  - None defined for go-live due to lack of information on trading
  - Can be explored further in discussion with exchange committee

Topic 6: Course Summary
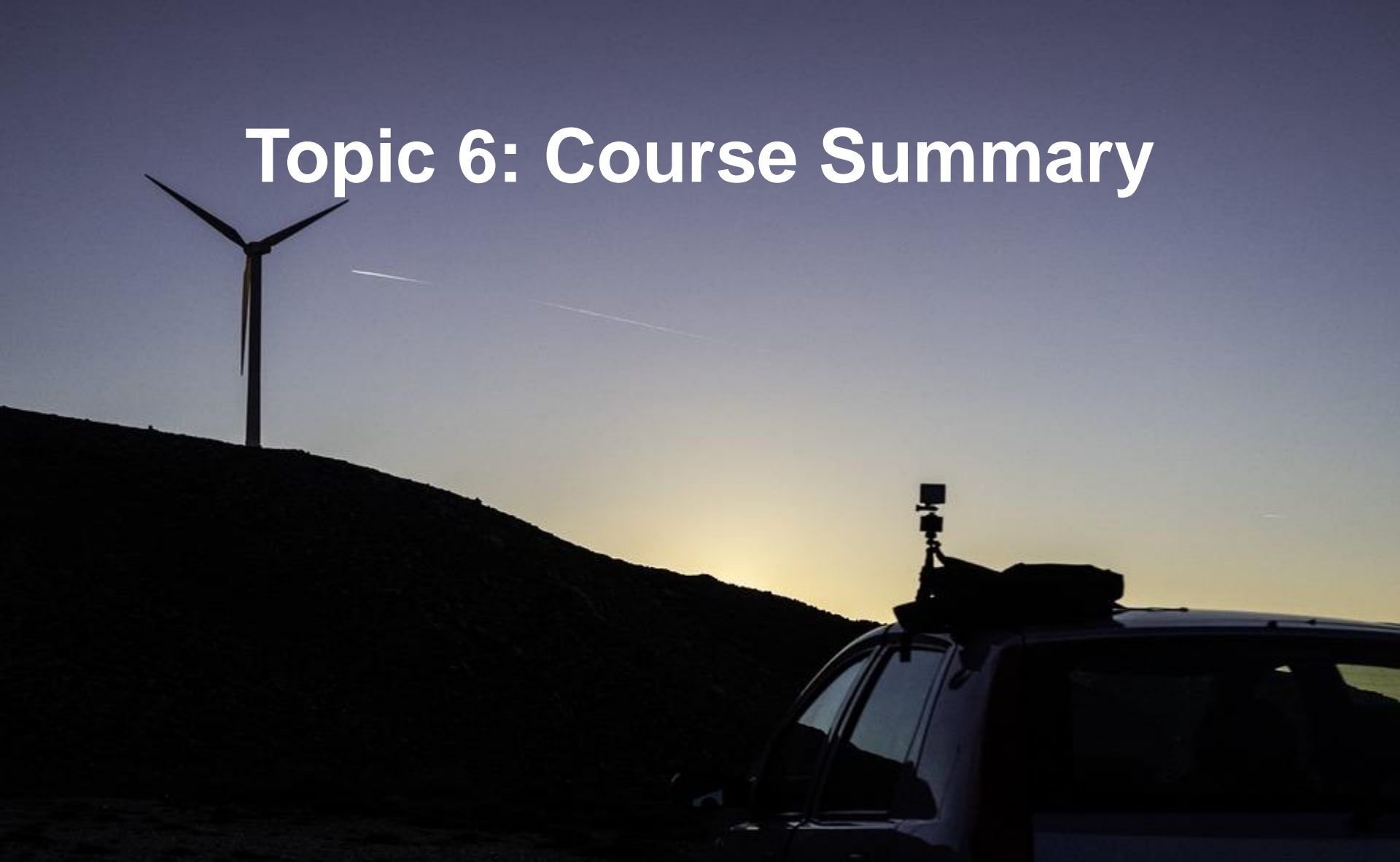
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Review of Learning Objectives

After completing self-learning and instructor-led training for this course you should understand:

How to access SEMOpx systems ✓

The timelines for data submission for day-ahead auctions, intraday auctions ✓

The process for data submission for intraday continuous market ✓

The products available in each of the market segments ✓

How to access data publications ✓

Part 3: SEMOpx Invoicing / Funds Transfer

SEMOpx Invoicing / Funds Transfer Agenda

| Training Topic |
| --- |
| Learning Objectives |
| Topic 1: Introduction to SEMOpx clearing house model |
| Topic 2: Booking of trades for invoicing |
| Topic 3: Daily process and payment cycle |
| Topic 4: Course Summary |

Learning Objectives

- After completing self-learning and instructor-led training for this course, you will have an understanding of:

  – the timings and processes involved in invoicing and funds transfer

  – the timings and processes involved in limit management

  – VAT treatment and the invoice content

Topic 1: Introduction to SEMOpx clearing house model

SEMOpx and Central Clearing

- SEMOpx is a NEMO for Ireland and Northern Ireland:
  - Responsible for trades, market coupling etc.

- NEMOs act as central counter party (CCP) for all trades:
  - Buy from the sellers and sell to the buyers
  - If any shortfall by participant, CCP guarantees payment
  - This ensures all trades on the exchange are low risk

- SEMOpx have procured ECC as service provider:
  - Act as CCP on behalf of SEMOpx
  - Perform clearing, credit risk and settlement services
  - Act as guarantor for all payments

Central Counter Party Model - Basic

| Buyer	→	Central Counter Party (ECC)	→	Seller
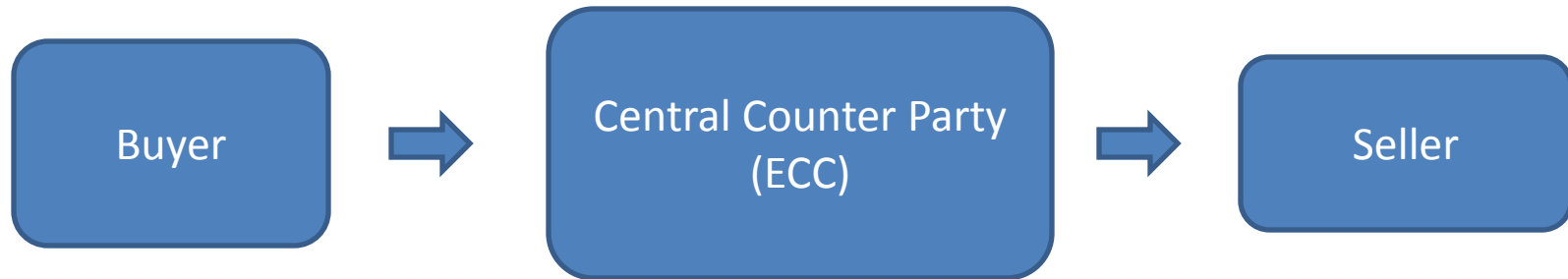
- CCP is in the middle of each transaction:
  - Buyer and seller interact with CCP and not each other for payment

- CCP guarantees the payment:
  - If the buyer does not pay, CCP still pays the seller
  - This provides strong protection to those selling energy
  - CCP will need to cover the risk of non-payment by buyers

Central Counter Party – Risk Mitigation

- ECC are exposed to the risk of non-payment:
  - Have to pay sellers regardless

- ECC cover this risk in many ways:
  - Use of credit cover
  - Admission criteria to join the exchange

- Key measure is the use of banks as clearers for participants:
  - Each participant needs to sign up to an approved bank
  - ECC settles with the banks, the banks settle with participants
  - This reduces the risk to the market (i.e. risk of bank missing payment versus individual companies missing payments)
  - This is illustrated in the following slide

Central Counter Party Model - Banks
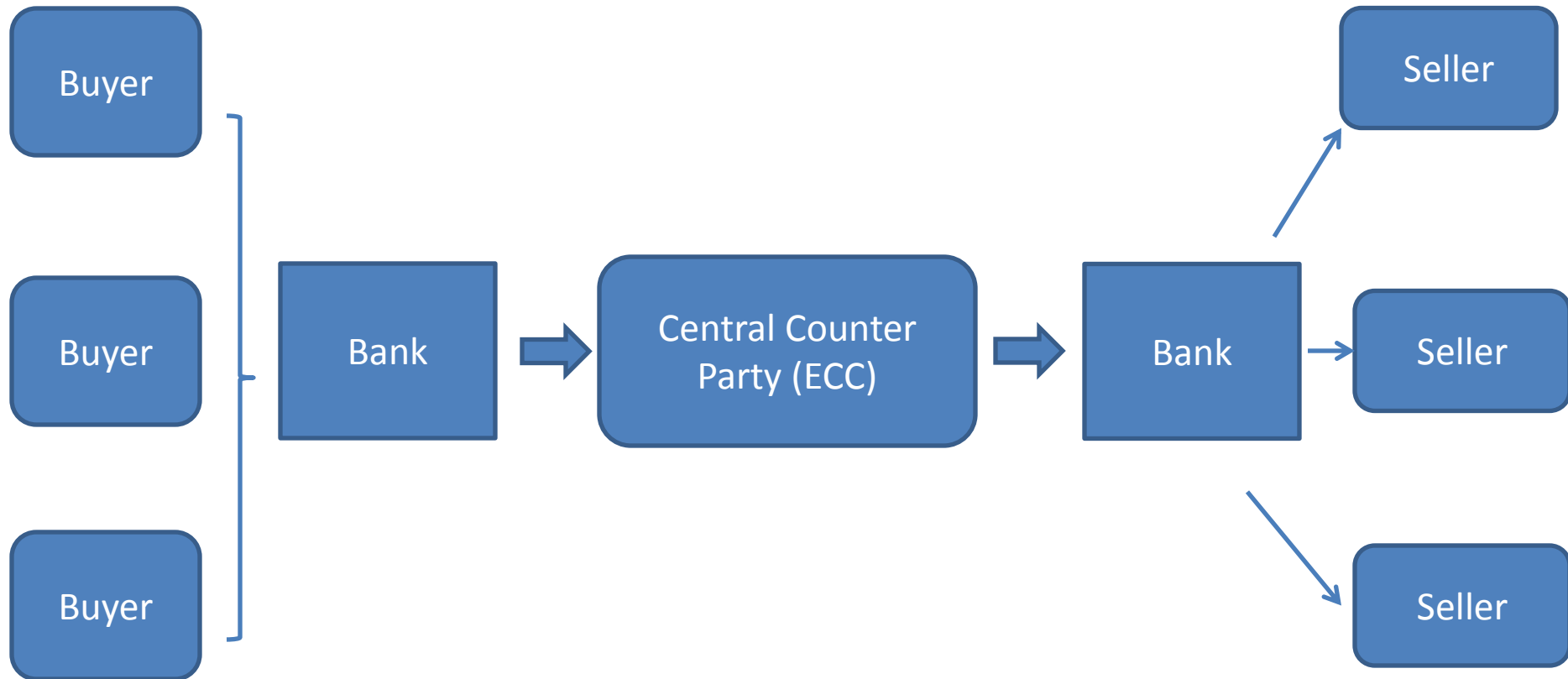
Topic 2: Booking of trades for invoicing

Trades in SEMOpx

- Trades may come from either:
  - SEMOpx auctions
  - SEMOpx continuous intraday trading

- Trades sent from SEMOpx to ECC:
  - Once an order is accepted it is sent to ECC for clearing
  - Once sent to ECC it becomes a contract

- All contracts are irrecoverable:
  - Payment is guaranteed and must be made
  - Volumes must be submitted to SEMO
  - SEMO will manage settlement of delivery of the energy

Flow of a Trade
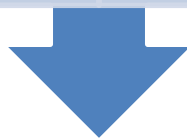
Order (Participant)

Bid to buy or offer to sell	Submitted by the participant SEMOpx

Trade (SEMOpx)

| Order which has been accepted by SEMOpx (i.e. will form a contract)	Has not yet been notified to ECC, not a binding contract

Contract (ECC)

Trade which has been notified to ECC	Forms a binding contract for payment and delivery

Timing of Trades being Transferred to ECC

- Auction trades will be sent at set times:
  - Will be sent following each auction
  - Approximately 30 minutes after publication of results

- Continuous trades will be sent every 15 minutes:
  - Continuous trades bundled every 15 minutes
  - After a trade is matched, it will be sent at the next available window

- Trades will be sent automatically:
  - Includes outside of working hours and non-working days
  - Trades will still become binding contracts automatically
  - No action required of participant to send trades to ECC
  - Settlement of contracts will still only take place on working days

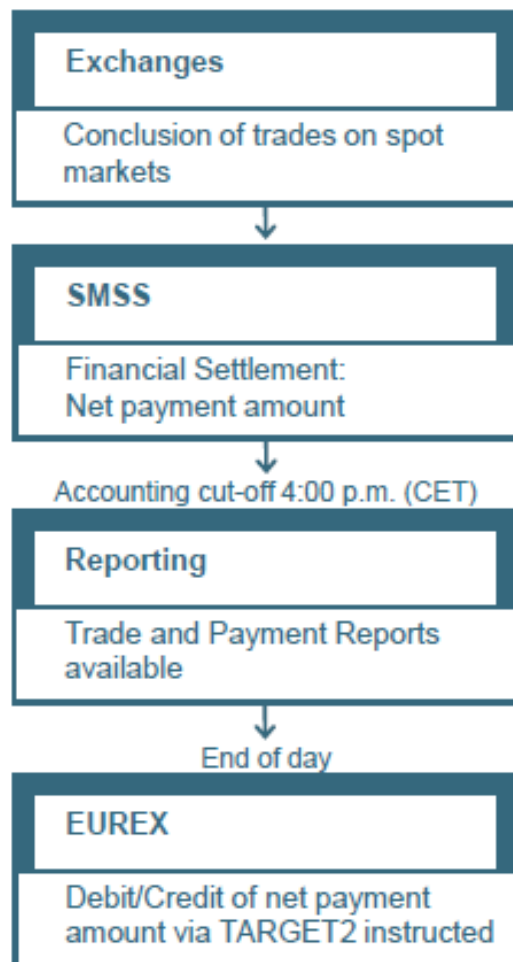# Topic 3: Daily process and payment cycle
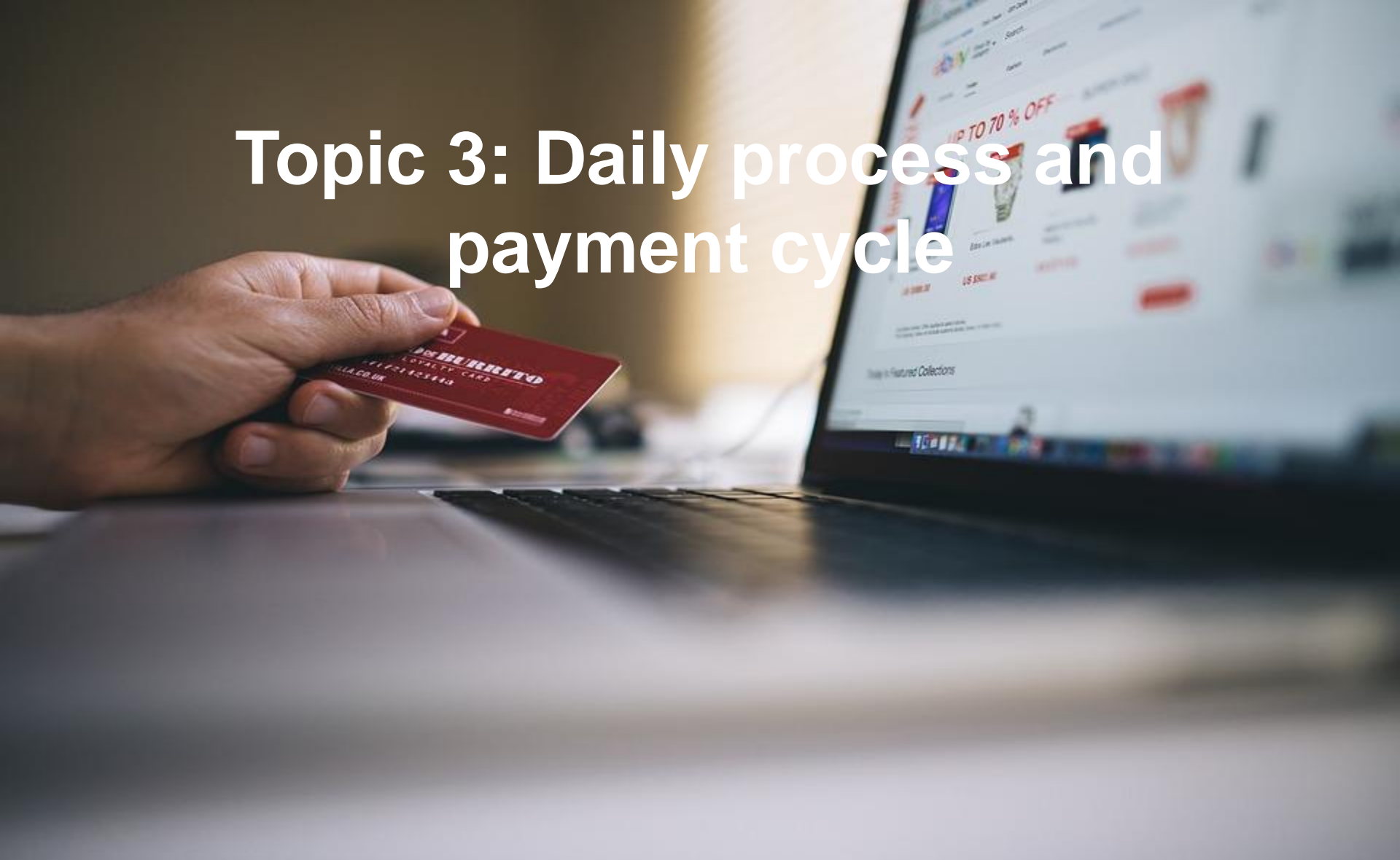
ECC Key Daily Processes

The key daily functions that ECC carries out are:

- Physical Settlement of contracts:
    - Automatic transfer of contract quantities to SEMO

- Financial Settlement:
    - Formation of binding contracts
    - Settlement of contracts into settlement amounts
    - Issuance of payment orders and invoices
    - Transfer of funds to and from the banks

- Credit risk management:
    - Calculation of credit risk exposures/margins
    - Management of trading limits

The focus of this course is the financial settlement function. The other two functions will be covered in more detail in the SEMOpx Settlements course.

Financial Settlement

Exchanges

Conclusion of trades on spot markets

↓

SMSS

Financial Settlement: Net payment amount

Accounting cut-off 4:00 p.m. (CET)

↓

Reporting

Trade and Payment Reports available

End of day

↓

EUREX

Debit/Credit of net payment amount via TARGET2 instructed

- ECC established a daily booking cut at 15:00. 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 07:00 before market opening via the EUREX infrastructure in the CM/NCM model or through the settlement bank account for DCPs.

- Payments in EUR and GBP are processed overnight at fixed times on all currency-specific business days according to Clearstream Banking Luxembourg payment cycles. 08:00 CET for EUR and 09:00 CET for GBP

* https://www.ecb.europa.eu/paym/t2/html/index.en.html

ECC - Working Days

- Settlement of energy takes place on ECC working days

- ECC uses TARGET2 for bank transfers
  - Standard for inter-bank transfers

- ECC defines working days based on the TARGET2 calendar:
  - Cannot transfer money on TARGET2 non-working days
  - Covers weekends and bank holidays
  - Full list available at the link below
  - https://www.ecb.europa.eu/paym/t2/html/index.en.html

Daily Booking Cut

- Booking cut determines when trades are settled:
  - Trades before the booking cut are settled that day
  - Trades after the booking cut are settled the following working day

- Booking cut occurs at 15:00 each working day
  - All contracts prior to the cut are then entered into payment reports
  - Delivery date of the contract does not affect settlement
  - Multiple delivery dates may be covered by one cut (e.g. D and D+1)

- Payment reports issued following booking cut:
  - Outlines the payments for the following working day
  - Transfer of funds will occur each working morning

- Different timing for EUR and GBP transfers
  - EUR at 07:00
  - GBP at 08:00

Booking Cut Example
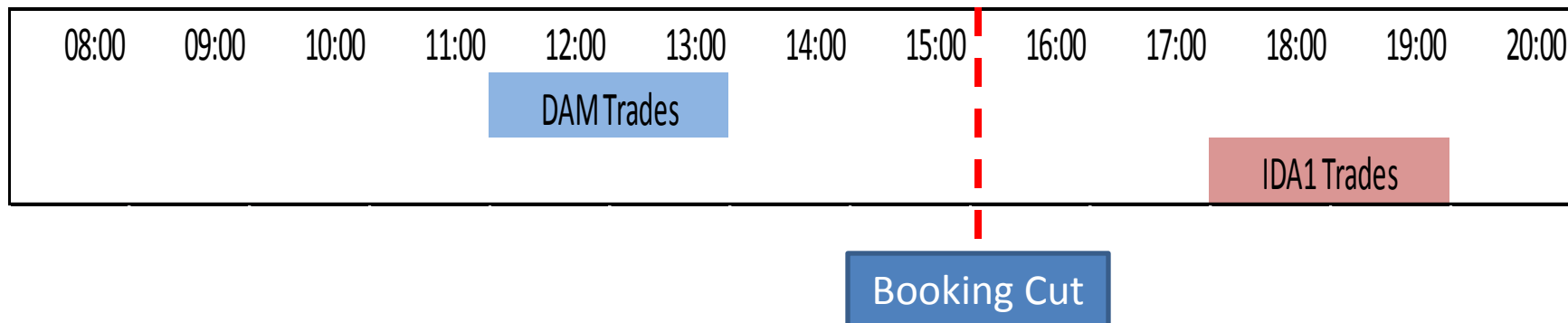
- The DAM trades are sent to ECC before the cut at 15:00 GMT/BST:
  - Included in that days payment report (D); settled on D+1

- IDA1 trades are sent to ECC after the cut:
  - Included in the next payment report (D+1); settled on D+2

- Trades included in different reports for the same delivery date:
  - DAM and IDA1 refer to the same delivery date
  - Due to timing the payments for DAM and IDA are settled on different days
  - Operational time of booking determines time of settlement

Reporting

- ECC Spot Market Settlement System (SMSS)
  - Settlement of Spot Market Transactions
  - Online access to the SMSS via the "ECC Member Area"

- Primarily used to view reports on trades/payments:
  - Transactions can be viewed and reports can be subscribed to in the ECC Member Area.
  - Reports: Pdf, XML ,FTP Server and/or email
  - Covers reports on trades, payments and invoices

Trade Reports and Payment Reports

- Two main reports produced by ECC:
  - Trades Reports and Payment Reports

- Payment reports are an instruction to move funds:
  - Will be sent on working days based on the booking cut
  - Outlines trades for the applicable booking cut
  - Instruction to the bank to transfer funds
  - Will be issued at COB on D for payment on D+1

- Trade reports are a record of trades on a day:
  - Will outline the trades for that operational day
  - Is not a payment instruction

Trade Report and Payment Report

- Company X trades in the DAM each day:
  - During the week, trades appear before each days booking cut
  - Booked before closing – included in the payment report
  - Traded during the day - included in the trading report
  - Payment report and trading report contain same trades

- Company X continues to trade in DAM over the weekend:
  - Saturday and Sunday trades will only appear in Monday booking cut
  - Saturday trades in Saturday trade report
  - Sunday trades in Sunday trade report
  - Saturday and Sunday trades will appear in Monday payment report
  - Funds transferred for weekend trades on Tuesday

Trade and Payment Reports

- More details available in ECC report specification

Payment Reports

PAYMENT REPORT SUMMARY – SIMU_C_ABCEX_PRS_EUR_1600_2014-10-16

Report frequency: DAILY   Report from: 2014-10-16 to 2014-10-16   Report generated on: 2014-10-15   Page 1/1

Clearing Member	Trading Participant	Debit/ Credit	Payment Amount	Payment Date	Payment Group	ECC Payment ID	External Payment ID
ABCEX	ABCEX	Debit	80,381.16 €	2014-10-16	EUR_1600	57173	—
	Totals:	Debit	80,381.16 €	2014-10-16	EUR_1600	57173	

- The ECC payment report contains as summary version the net credit or debit amount

PAYMENT REPORT DETAIL – SIMU_C_ABCEX_PRD_EUR_1600_2014-10-16

Report frequency: DAILY   Report from: 2014-10-16 to 2014-10-16   Report generated on: 2014-10-15   Page 1/7

Exchange Trade ID / Sub-ID	Transaction Timestamp	ECC Product ID	Exchange Product ID	Exchange/OTC	Buy/Sell	Total Quantity	Delivery Start	Delivery End	Price
Exchange	Trading Participant	Clearing Member	Payment Amount Commodity	Payment Amount Domestic VAT	Payment Amount Foreign VAT	Payment Date	ECC Fee	ECC Fee Domestic VAT	ECC Fee Foreign VAT
Exchange Fee	Exchange Fee Domestic VAT	Exchange Fee Foreign VAT	Exchange Trader ID	Exchange Trading Account	Exchange Text Field	Delivery Account	ECC Transaction ID	ECC Payment ID	ECC Delivery ID
I_141015_123_T / 1	2014-10-15 13:17	CEGH_IT_NATGAS_CEGH	NATGAS	X	B	65.0 MWh	2014-10-15 17:00	2014-10-16 06:00	23.45 €
CEGH	ABCEX	ABCEX	1,524.25 €	289.61 €	0.00 €	2014-10-16	0.65 €	0.12 €	0.00 €
0.00 €	0.00 €	0.00 €		M	—	No physical delivery	120197835	57173	—

- The detailed version of the payment report shows the settlement amounts per trade

Trade Report Detail Example

› ecc

PAYMENT REPORT DETAIL – TEST_C_ET1EX_PRD_GBP_1600_2017-07-13

Report frequency: DAILY | Report from: 2017-07-13 to 2017-07-13 | Report generated on: 2017-09-05 | Page 1/2

Exchange Trade ID / Sub-ID	Transaction Timestamp	ECC Product ID	Exchange Product ID	Exchange/OTC	Buy/Sell	Total Quantity	Delivery Start	Delivery End	Price
Exchange	**Trading Participant**	**Clearing Member**	**Payment Amount Commodity**	**Payment Amount Domestic VAT**	**Payment Amount Foreign VAT**	**Payment Date**	**ECC Fee**	**ECC Fee Domestic VAT**	**ECC Fee Foreign VAT**
Exchange Fee	**Exchange Fee Domestic VAT**	**Exchange Fee Foreign VAT**	**Exchange Trader ID**	**Exchange Trading Account**	**Exchange Text Field**	**Delivery Account**	**ECC Transaction ID**	**ECC Payment ID**	**ECC Delivery ID**
Test17 / 0	2017-07-12 11:02	SEMOPX_IT1_POWER_S ONI	POWER	X	B	1,008.0 MWh	2017-07-12 00:00	2017-07-13 00:00	30.00 £
SEMOPX	ET1EX	ABNEX	30,240.00 £	0.00 £	0.00 £	2017-07-13	10.08 £	0.00 £	0.00 £
25.20 £	5.04 £	0.00 £	ET1EXTrader	TS123456789012345678 901234567890_&_P	—	SONI	556739915	119527	—
Test15 / 0	2017-07-12 11:02	SEMOPX_IT2_POWER_S ONI	POWER	X	B	1,512.0 MWh	2017-07-12 00:00	2017-07-13 00:00	30.00 £
SEMOPX	ET1EX	ABNEX	45,360.00 £	0.00 £	0.00 £	2017-07-13	15.12 £	0.00 £	0.00 £
30.24 £	6.05 £	0.00 £	ET1EXTrader	TS123456789012345678 901234567890_&_P	—	SONI	556739921	119527	—
Test16 / 0	2017-07-12 11:02	SEMOPX_IT3_POWER_S ONI	POWER	X	B	1,560.0 MWh	2017-07-12 00:00	2017-07-13 00:00	30.00 £
SEMOPX	ET1EX	ABNEX	46,800.00 £	0.00 £	0.00 £	2017-07-13	15.60 £	0.00 £	0.00 £
31.20 £	6.24 £	0.00 £	ET1EXTrader	TS123456789012345678 901234567890_&_P	—	SONI	556739903	119527	—
Test11 / 0	2017-07-12 11:02	SEMOPX_ST_POWER_SO NI	POWER	X	B	600.0 MWh	2017-07-12 00:00	2017-07-13 00:00	30.00 £
SEMOPX	ET1EX	ABNEX	18,000.00 £	0.00 £	0.00 £	2017-07-13	6.00 £	0.00 £	0.00 £
9.00 £	1.80 £	0.00 £	ET1EXTrader	TS123456789012345678 901234567890_&_P	—	SONI	556739939	119527	—
Test12 / 0	2017-07-12 11:02	SEMOPX_ST_POWER_SO NI	POWER	X	B	1,440.0 MWh	2017-07-12 00:00	2017-07-13 00:00	30.00 £
SEMOPX	ET1EX	ABNEX	43,200.00 £	0.00 £	0.00 £	2017-07-13	14.40 £	0.00 £	0.00 £
21.60 £	4.32 £	0.00 £	ET1EXTrader	TS123456789012345678 901234567890_&_P	—	SONI	556739935	119527	—
Test13 / 0	2017-07-12 11:02	SEMOPX_ST_POWER_SO NI	POWER	X	B	1,704.0 MWh	2017-07-12 00:00	2017-07-13 00:00	30.00 £
SEMOPX	ET1EX	ABNEX	51,120.00 £	0.00 £	0.00 £	2017-07-13	17.04 £	0.00 £	0.00 £
25.56 £	5.11 £	0.00 £	ET1EXTrader	TS123456789012345678 901234567890_&_P	—	SONI	556739931	119527	—
Test14 / 0	2017-07-12 11:02	SEMOPX_ST_POWER_SO NI	POWER	X	S	2,040.0 MWh	2017-07-12 00:00	2017-07-13 00:00	30.00 £
SEMOPX	ET1EX	ABNEX	-61,200.00 £	0.00 £	0.00 £	2017-07-13	20.40 £	0.00 £	0.00 £
30.60 £	6.12 £	0.00 £	ET1EXTrader	TS123456789012345678 901234567890_&_P	—	SONI	556739917	119527	—

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Daily Payments

- Payments made each working day based on payment reports:
  - Data in each report determined by most recent booking cut

- Payments between ECC and banks:
  - No direct transfers between ECC and participants
  - Transfer of funds between participants and banks

- Payment occurs for EUR and GBP on same day:
  - EUR payments are made at 07:00
  - GBP payments are made at 08:00
  - Buy and sell contracts settled on the same day

Payment Reports and Invoicing

- Payment reports create obligation to pay:
  - Issued on each working day by ECC
  - Used for energy payments/charges
  - Instruction to banks to transfer funds
  - Allow for working day settlement
  - Apply obligation before official invoice is issued

- Invoices form record of payments/balances:
  - Invoices are issued monthly by ECC
  - Give record of energy payments/charges in for the month
  - Outline the fees outstanding for the participant
  - Creates obligation to pay fee amounts

Fee Settlement

- Energy payments are settled daily

- Fees additionally need to be settled:
  - ECC fees for clearing and settlement services
  - SEMOpx fees for exchange services

- ECC will invoice for both sets of fees:
  - Fees will be invoiced monthly
  - ECC providing service for SEMOpx fees only
  - SEMOpx fees are still an invoice from SEMOpx

ECC Fees & SEMOpx Fees

- ECC fees will be included in monthly ECC invoice:
  - Invoice will outline energy trades for the month and fees
  - Fees will be netted off payment where applicable
  - If a net seller, fees are netted off your payment
  - If a net buyer, fees are added to your payment
  - Single transfer of funds to cover energy and ECC fees
  - Fees in the currency of the trades

- SEMOpx fees are issued as a separate invoice:
  - Will be based on your trades during the month
  - May contain other information (e.g. if annual fee is recovered monthly)
  - No netting with energy payment; completely separate funds transfer
  - Fees in currency of unit jurisdiction

ECC Invoice Codes and SEMOpx Fee Currencies

ECC Invoice Code	Description	ECC Fee Curr.	SEMOpx Fee Curr.
SEMOPX_ST_POWER_EGRD	Day-ahead trades for IE unit	EUR	EUR
SEMOPX_ST_POWER_SONI	Day-ahead trades for NI unit	GBP	GBP
SEMOPX_IT1_POWER_EGRD	IDA1 trades for IE unit	EUR	EUR
SEMOPX_IT2_POWER_EGRD	IDA2 trades for IE unit	EUR	EUR
SEMOPX_IT3_POWER_EGRD	IDA3 trades for IE unit	EUR	EUR
SEMOPX_IT1_POWER_SONI	IDA1 trades for NI unit	GBP	GBP
SEMOPX_IT2_POWER_SONI	IDA2 trades for NI unit	GBP	GBP
SEMOPX_IT3_POWER_SONI	IDA3 trades for NI unit	GBP	GBP
SEMOPX_IT_POWER_EGRD	Intraday continuous trades for IE unit	EUR	EUR
SEMOPX_IT_POWER_SONI	Intraday continuous trades for NI unit	EUR	GBP

- Subject to amendment and approval by RAs
- Not the final set of products

Invoice Example

- VAT based on place of registration as in Current SEM.
- Monthly exchange fee invoicing (SEMOpx)
- Separate clearing fee invoicing (ECC)
- Trade and payment reports for daily clearing of trades and payments are aggregated on a monthly basis

Topic 4: Course Summary

Useful Links

For more information please visit the following links:

- ECC Clearing House Conditions:
    - https://www.ecc.de/ecc-en/about-ecc/rules/clearing-conditions

- SEMOpx rules and operating procedures:
    - https://www.semopx.com/rules-and-monitoring/market-rules/

- ECC webpage for invoicing:
    - https://www.ecc.de/ecc-en/operations/invoicing

Review of Learning Objectives

After completing self-learning and instructor-led training for this course, you should understand:

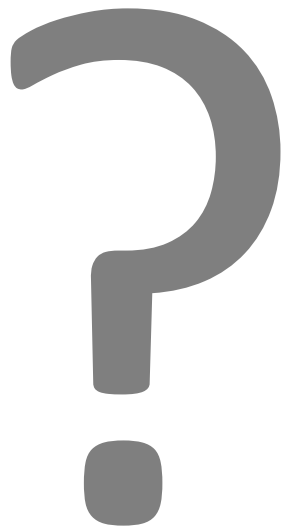the timings and processes involved in invoicing and funds transfer ✓

the timings and processes involved in limit management ✓

VAT treatment and the invoice content ✓

Questions

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Thank You!

Thank you for your time and engagement during this session.

Please take the time to share your feedback with us by completing the short feedback survey before you leave.