



Clearing Services by European Commodity Clearing AG

Clearing & Settlement

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Agenda

Introduction

Clearing

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Risk Management

Legal Framework

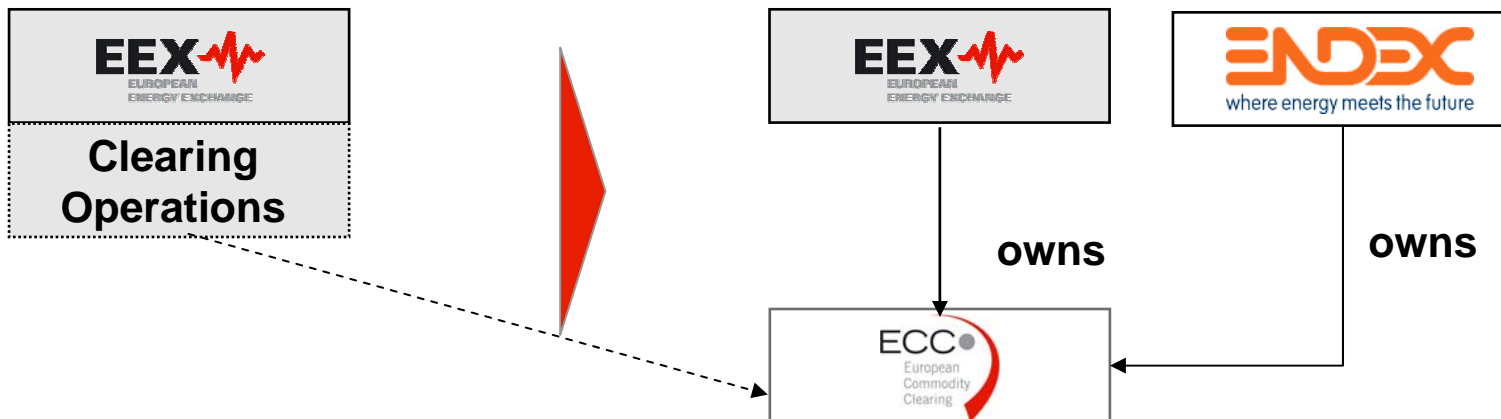
IT-System Environment

Further Information's

Introduction

History

- European Commodity Clearing AG (ECC) was founded in 2006 as a spin-off of the EEX clearing department
- ECC becomes operational on September 1st, 2006 after granting the bank license from the German regulator BAFin
- ECC is currently owned by European Energy Exchange AG and ENDEX



Introduction

Regulatory and Legal Status

- ECC holds a bank license from the German regulator BAFin covering the role of a central counterparty according to German bank act.
- ECC is recognized as a designated payment system according Article 10 of Settlement Finality Directive 98/26/EC (Ancillary System).
- The legal framework of the ECC Central Counterparty is modeled according to the internationally established standard of EUREX Clearing AG.
- ECC Clearing Rules under German Law define licensing of Clearing Members, risk management, margining and settlement procedures.

Introduction

Supervision

- ECC/ECC processes will be supervised by:
 - Internal control system
 - Internal audit
 - External audit
 - German regulator “BaFin”
 - German Central Bank “Deutsche Bundesbank”
- Exchange supervision can request information

Introduction

Organisation

- **Clearing/Settlement is responsible for:**
 - Risk management (credit and price risk)
 - Daily financial and physical settlement processes
 - Admission and support of Clearing- and Non-Clearing-Members
 - Business development
- **Billing/Treasury is responsible for:**
 - Risk management (liquidity and operational risks)
 - Billing and Accounting
 - Treasury
- **Risk controlling/Compliance**
 - Risk controlling (all risks)
 - Regulatory Affairs (e.g. Reporting to BaFin and Deutsche Bundesbank)
 - Compliance (e.g. internal audit)

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Clearing Definition

- The clearing organisation is placed between the “trading parties“ as an independent counterparty and It acts as a sort of guarantor ensuring that all payments, the margins and the deliveries take place in due time
- It ensures anonymity
- Netting-out of the payment transactions, of the provision of margins and the delivery volume
- Maximum technical and financial synergetic effects

Clearing

Products and Services

Key clearing services

covering the counterparty risk of transactions
settlement of transactions – payment and delivery
Invoicing and reporting

Integrated clearing

transactions in power, CO₂, coal and natural gas and ...
spot, futures and options transactions
exchange and off-exchange (OTC) transactions
financial and physical transactions
transactions in €, US-\$ and £ and ...

Clearing Product range

Derivatives

Power	D/A, F, B, <i>NL</i> ¹	Month-Futures
Emissions		Quarter-Futures
Coal	ARA, RB	Year-Futures
Natural Gas	NL, <i>D</i> ¹ , <i>B-UK</i> ¹	Options on Futures

Spot

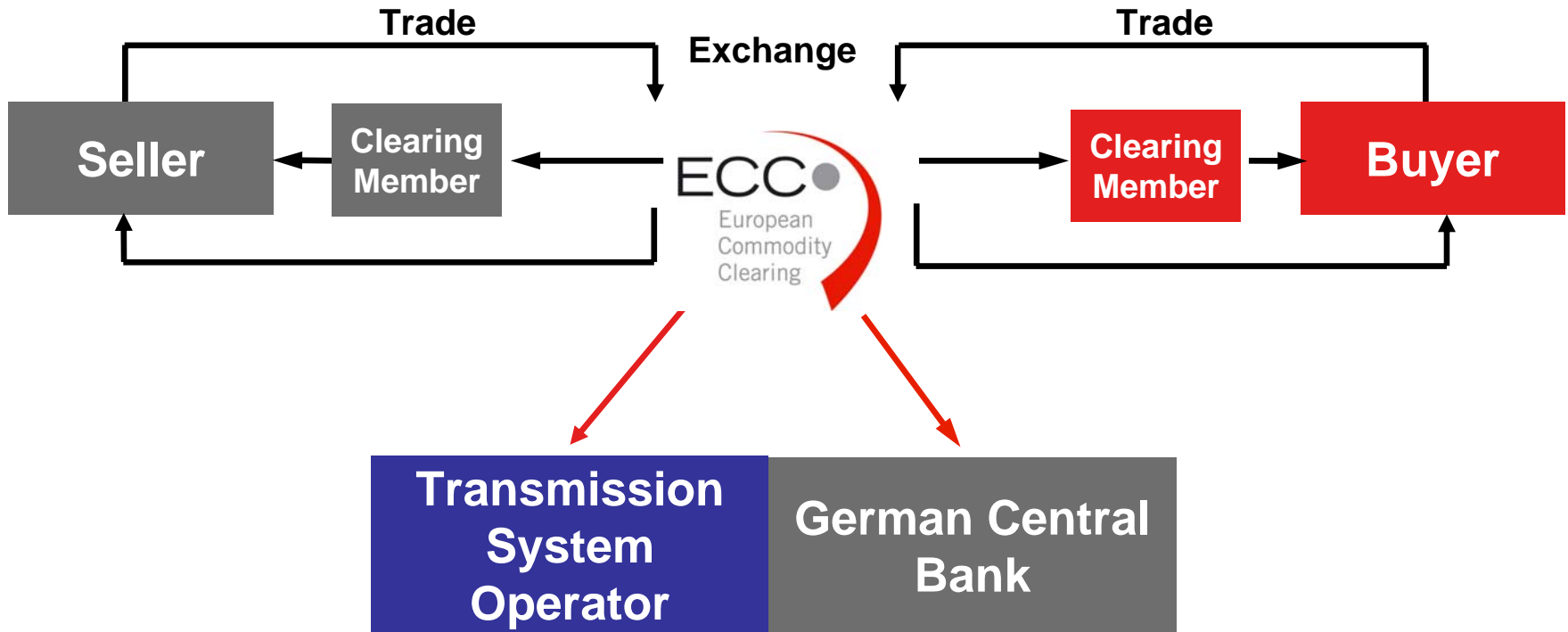
Power	D/A, CH	<i>2-Days-Ahead</i> ¹
Emissions		Day-Ahead
Natural Gas	<i>D</i> ¹	Intra-Day

Completely integrated clearing with net margining

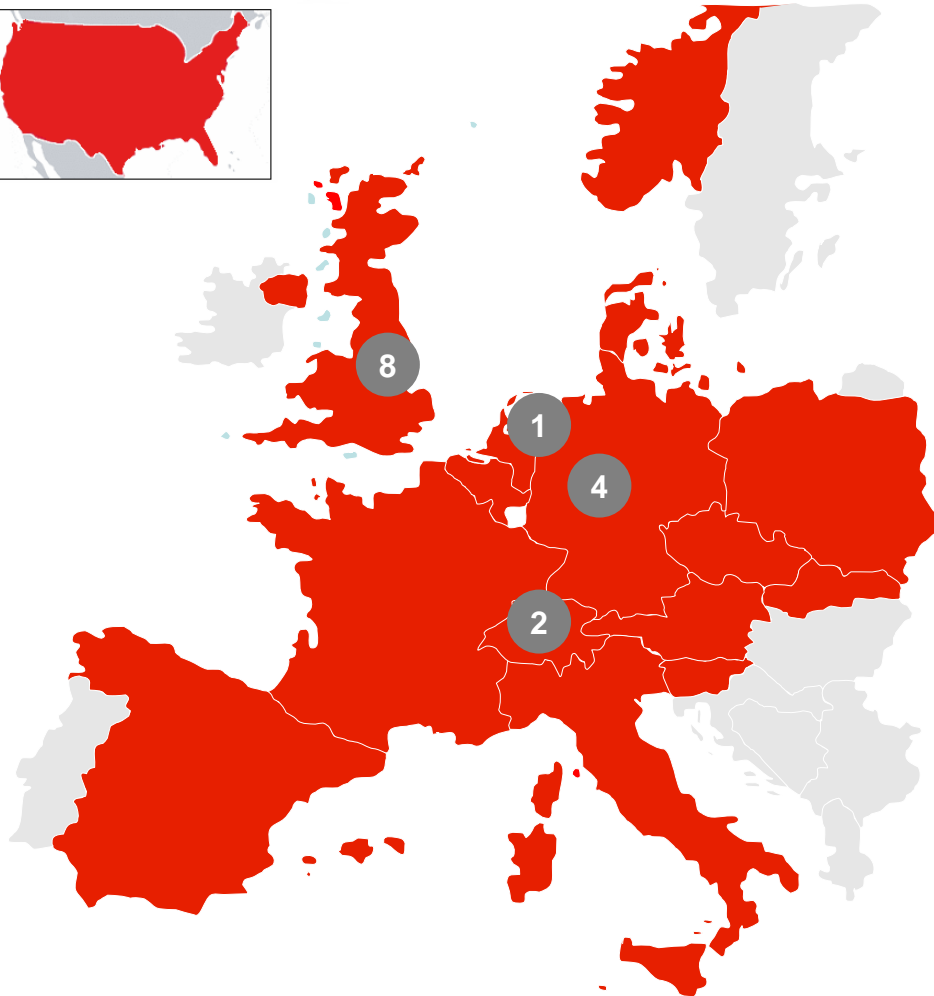
¹ planned
for 2007

Clearing

Single Structure for all markets



Clearing Members

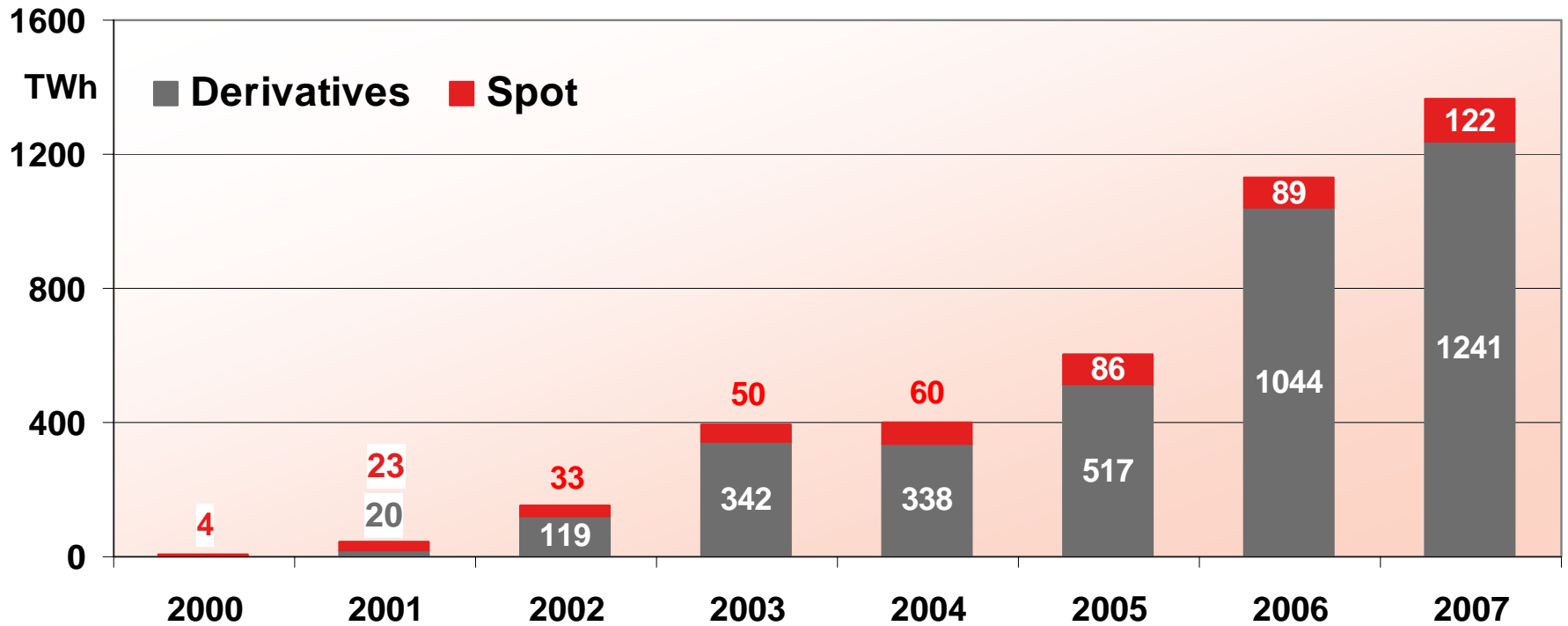


Barclays Bank Plc.
Bayerische Landesbank
BHF-Bank AG
BNP Paribas Commodity Futures Ltd.
Calyon Financial SNC
Credit Suisse
Deutsche Bank AG
Fortis Global Clearing N.V.
Goldman Sachs International
J.P. Morgan Securities Limited
Lehman Brothers International (Europe)
MAN Financial Ltd.
Nordea Bank Finland PLC
UBS AG
UBS Clearing and Execution Services Ltd

As of May 1st, 2007

Clearing

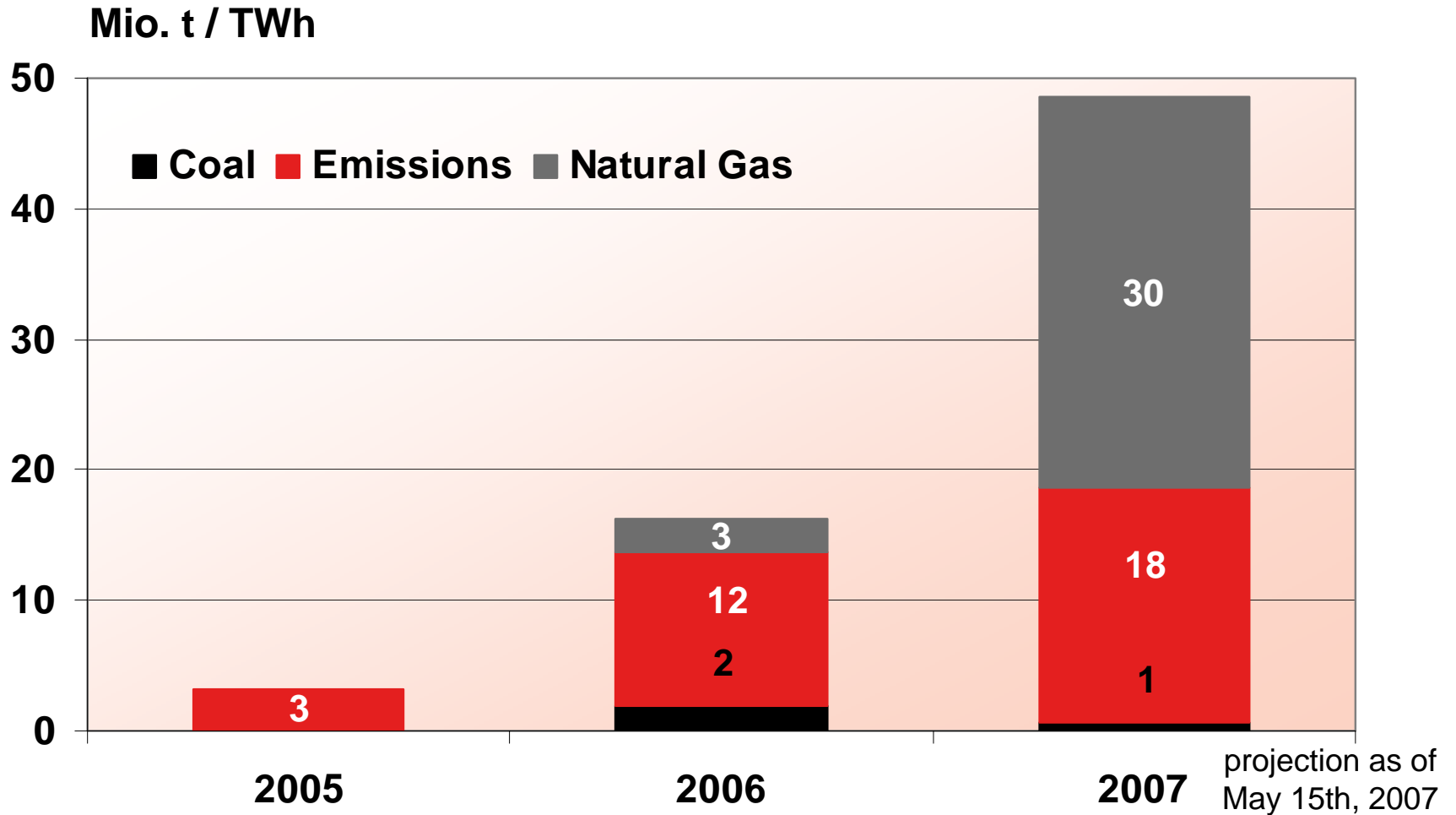
Clearing volume power



projection as of
May 15th, 2007

Clearing

Clearing volume other commodities



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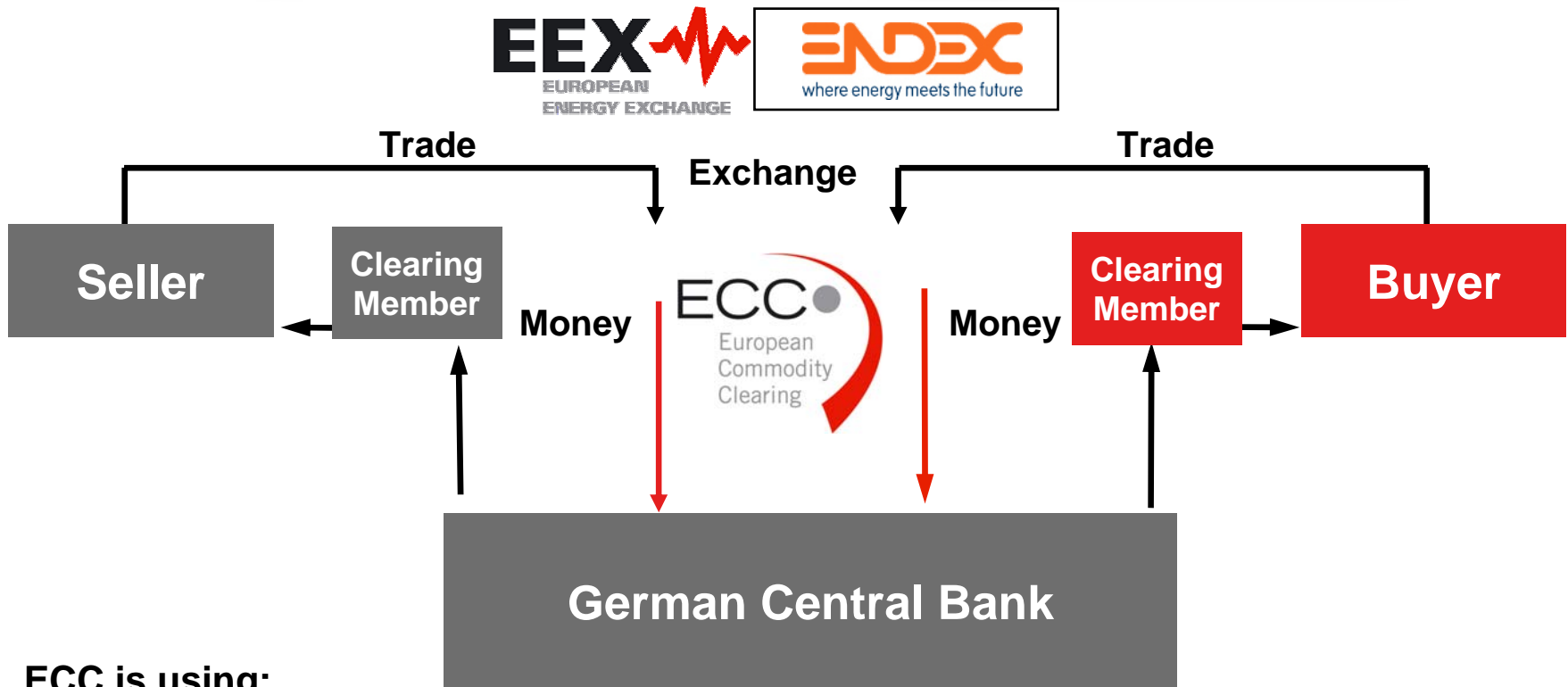
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Settlement Financial

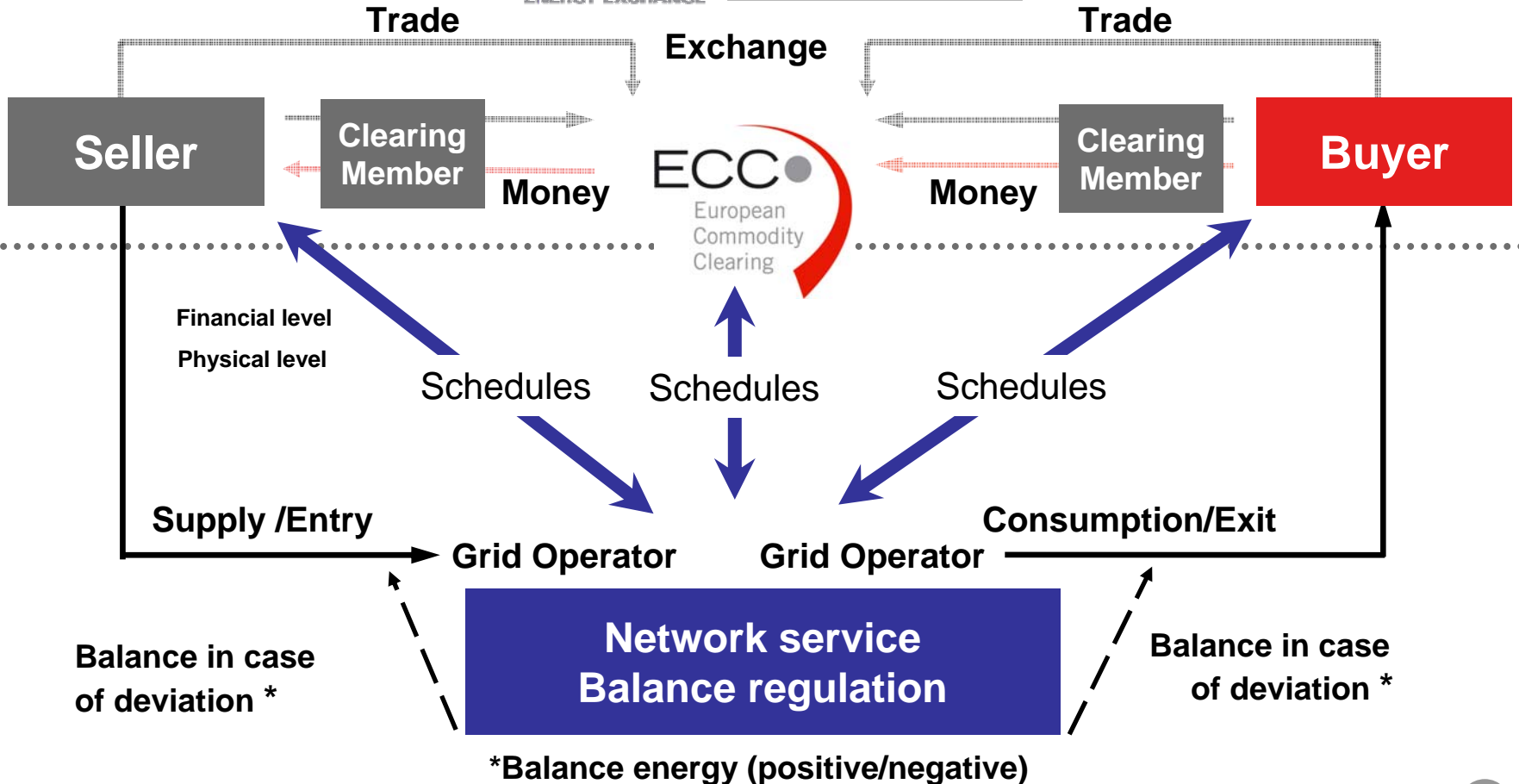


ECC is using:

- **Service agreement with German Central Bank**
- **German Central Bank rules for financial payments**
- **STP Interface with direct access to Clearing Members Central Bank account**
- **Payments flow is done in the morning**

Settlement

Physical delivery



Settlement

Connection to TSO

ECC operates physical delivery systems in the following TSO areas and products:

Product	TSO	Country
German Power Intraday	RWE, EnBW, E.ON, Vattenfall	D
German Power Day-Ahead	RWE, EnBW, E.ON, Vattenfall	D
Austrian Power Day-Ahead	APG	A
Swiss Power Day-Ahead	SwissGrid	CH
German Power Futures	RWE	D
French Power Futures	RTE	F
Belgian Power Futures	ELIA	B
Dutch Power Futures	TenneT	NL
TTF Gas Futures	GTS	NL
German Gas Day-Ahead / Futures ¹	EGT / BEB	D

¹ form July 1st onwards / system already in place

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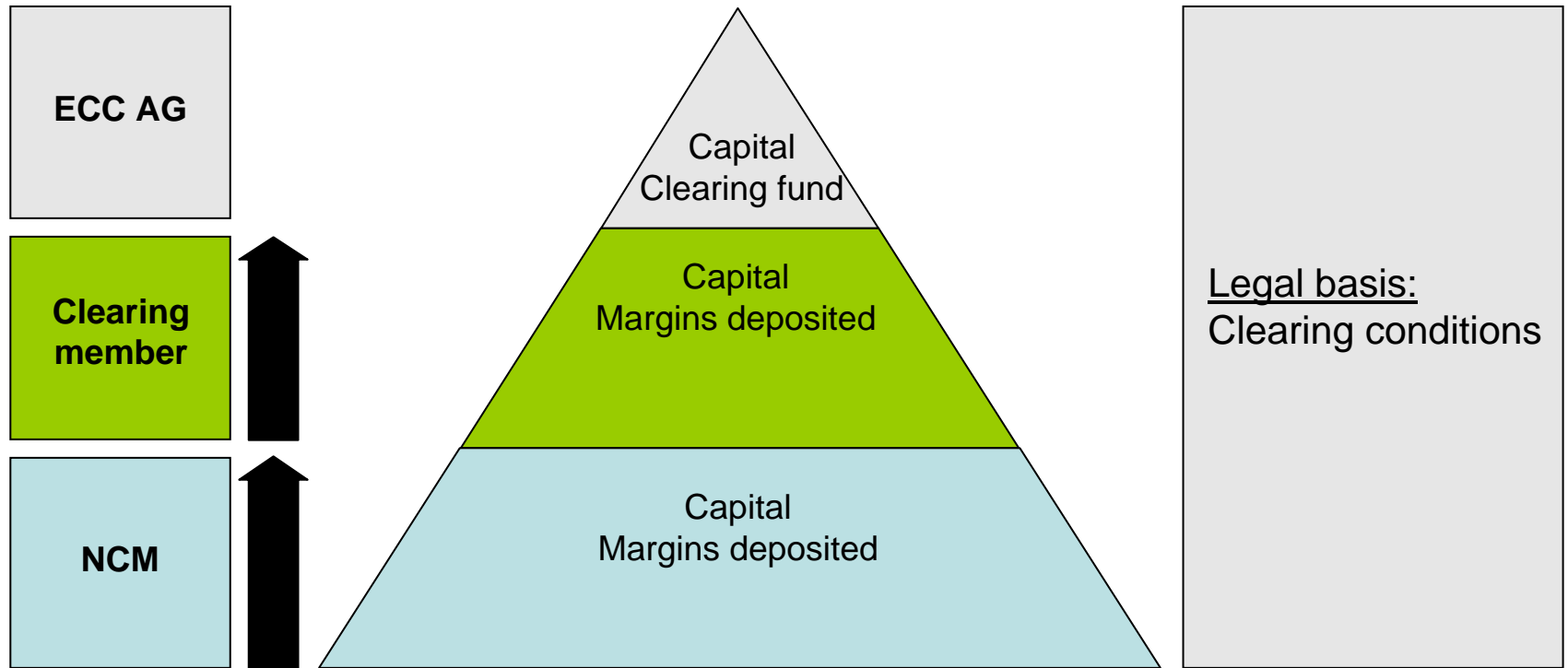
Risk Management

Overview

- ECC acts as Central Counterparty for trades concluded or registered at ENDEX and EEX
- ECC uses a margin system to cover the default risk of a Non-Clearing-Member or of a Clearing-Member
- Margins have to be deposited either in bonds or cash by the ECC Clearing Members
- ECC Clearing Member are obliged to collect the same margins from the Non-Clearing members
- Daily settlement of profit and losses to reduce the default risk (Mark-to-Market)

Risk Management

Available Collateral's



Documentation:

Risk Management

Risk Capital

Margins	1.250,0 Mio. €
Clearing Fund Contribution's	97,5 Mio. €
Clearing Fund Contribution's of ECC	1,0 Mio. €
Equity Capital	<u>13,0 Mio. €</u>
	<u>1.361,5 Mio. €</u>
Eqity Capital of Clearing Member's	<u>207.305 Mio. €</u>

Risk Management

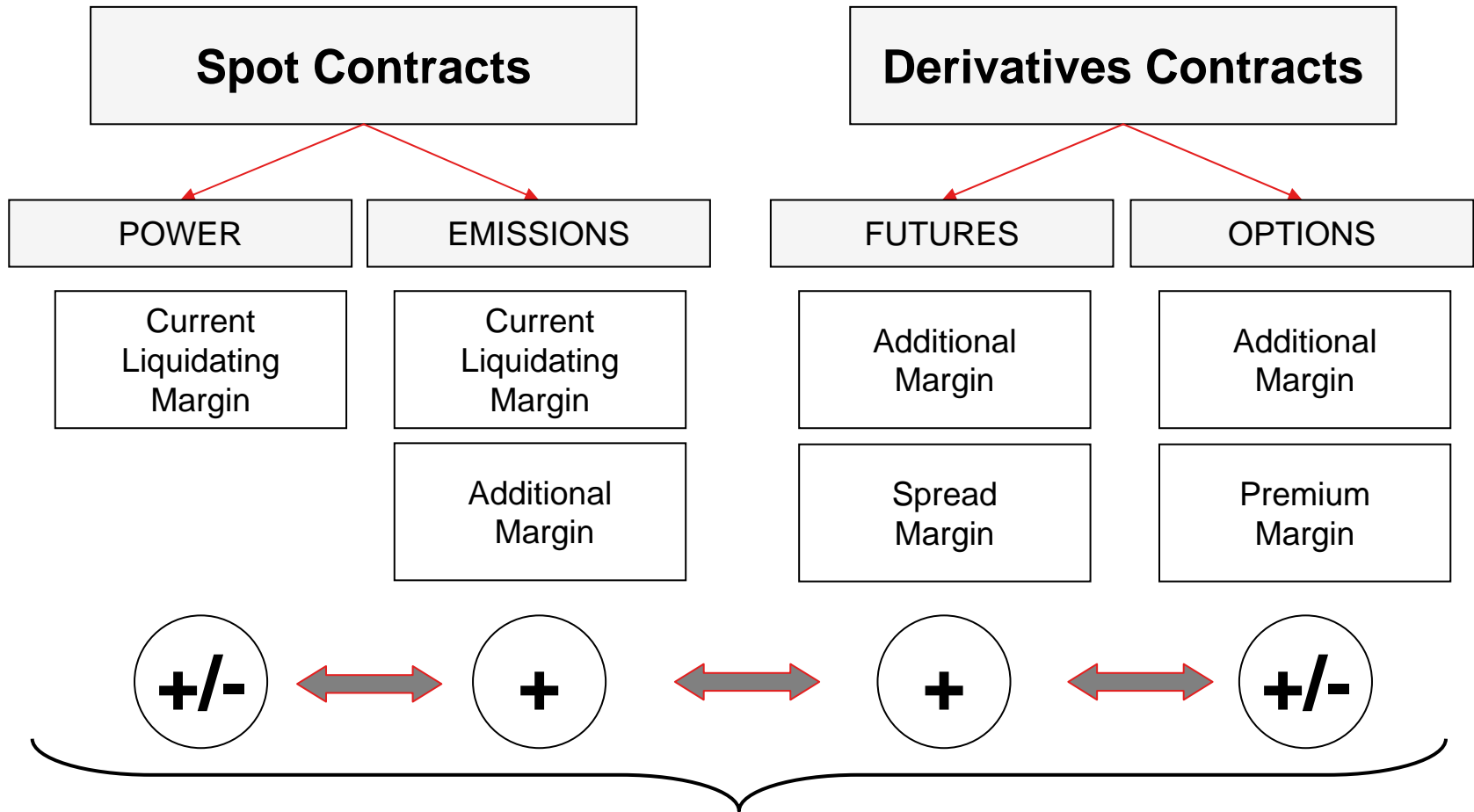
Type of Margins Processes

	Regular Default Scenario¹	Stress Default Scenario¹
Intraday processing	Intraday Margin call	-
End-of-day processing	Initial Margin requirements	Clearing Fund contribution

¹defined in ECC risk strategy

Risk Management

Integrated margin system



100% off-setting between all markets and products

Risk Management

Typ's of Margin

Variation Margin:

- The futures positions are evaluated on a daily basis with the help of the daily settlement price and profits/losses are realized on a daily basis through cash settlement (Mark-to-Market).

Additional Margin:

- Covering the price risk resulting from open futures positions up to the close out of the position on the next trading day (to be furnished by the buyer and the seller).
- Fixed until the position is closed, i.e. until the last day of trading, closing out or cascading.

Premium Margin:

- The margin which covers the losses arising from closing out of a short position at the current market price is referred to as Premium margin. It corresponds to the current contract value of the position ("option premium in €").
- Margin credits resulting from a long position could be credited on other margin requirements.

Spread Margin:

- Covering the price risk of spread positions in EU-A futures.

Risk Management

Netting

Netting

- Margins do not have to be deposited for each individual open position of a futures contract but for their net position in the proprietary position accounts or in the client position account.

Example: Positions in F1BY JAN08

Position account	Long	Short	Net
P1	10 L	20 S	10 S
P2	0	0	0
M1	20 L	0	20 L
M2	0	0	0

Net position in PP: 10 L

Position account	Long	Short	Net
A1	10 L	20 S	10 S

Net position in A1: 10 S

Risk Management

Margin class

Margin Class

- 100 % correlation between products
- E.g. option and its underlying
- Overall margin for margin class
= max (upside/downside of portfolio)

Underlying	Futures contracts in the margin class
First-Period-Carbon-Futures	F1PE DEC06; F1PE DEC07
Base Year 2007	F0BY JAN07; F1BY JAN07; C O1BY JAN07 40.00; P O1BY JAN07 40.00; C O1BY JAN07 41.00; P O1BY JAN07 41.00; C O1BY JAN07 42.00; P O1BY JAN07 42.00;
Coal Futures	FT2Y JAN 07

Risk Management

Margin groups

Margin group

- high correlation between products
- E.g. Year Futures
- Calculate upside/downside risks of a portfolio
- Overall margin for margin group
= max (total upside/ total downside)
– offset factor x min (total upside/ total downside)

Risk Management

Intraday-Margin

ECC monitors the intraday risk based on:

- new transactions
- intraday price movement

ECC calculates the Intraday-Risk every 15 minutes
(from November 2006 / currently in cooperation with EUREX
Clearing AG)

An Intraday-Margins will be requested if the deposited margins and
the contribution to the Clearing Fund will not cover the Intraday-
Risks

Clearing-Member are obliged to provide the Intraday-Margin
immediately

Risk Management

Clearing Fund

Each ECC Clearing Member has to contribute to the ECC Clearing fund (admission requirement)

Minimum contribution:

- GCM = 3 million €
- DCM = 0.5 million €

ECC determines the contribution based on the specific risk for each Clearing Member

ECC will monitor the contribution on a daily basis

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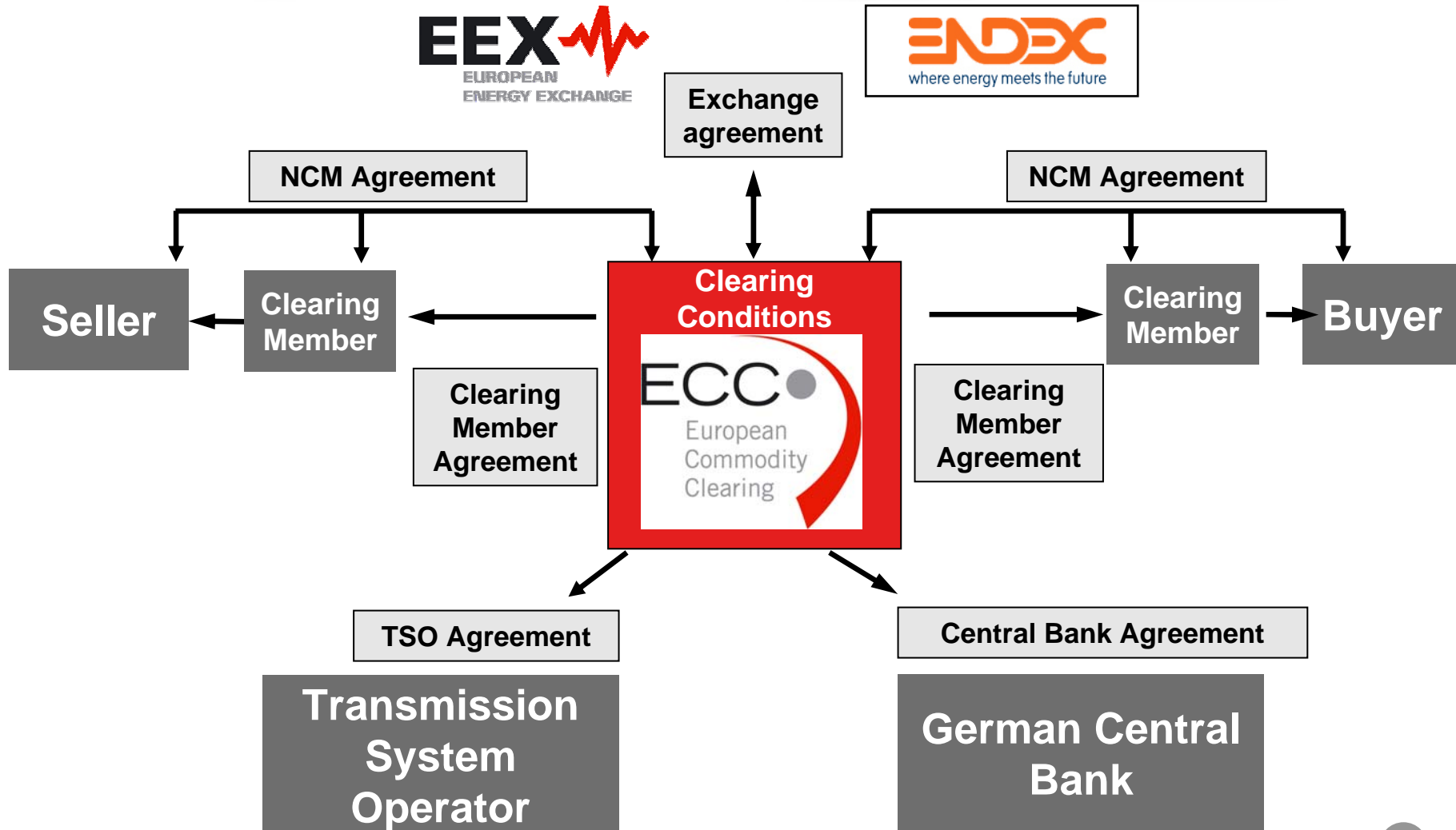
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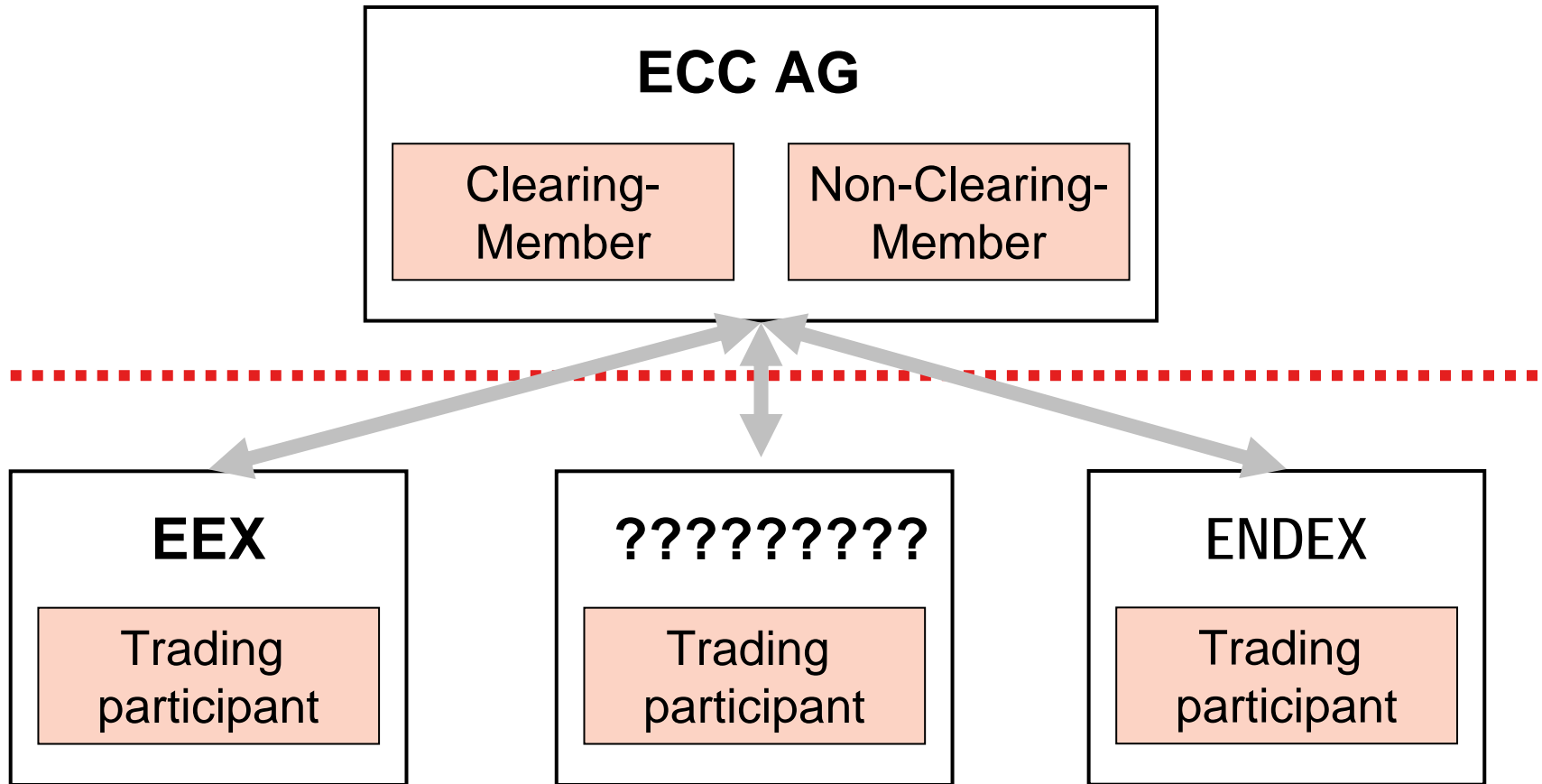
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Legal Framework Overview



Legal Framework

Membership types



**Netting of the margin and payment requirements
among all exchanges/marketplaces**

Legal Framework

Admission Requirement for Clearing Member

- Bank license
- Cash account EURO at “German Central Bank”
- Cash account US\$ at Clearstream Banking AG
- Liable equity > 20 Million €
- Contribution to the Clearing Fund
- Back office facilities with technical connections to the following clearing and settlement systems:
 - EUREX (required)
 - XETRA (optional)
 - CCP (optional)
 - CASCADE (optional)
- Qualified back office staff

General information / Fees

At ECC AG	For NCMs	For clearing members
<p>Licensing fee:</p> <ul style="list-style-type: none"> - Spot Market - Derivatives Market - Clearing license Spot - Clearing license Derivatives <p>Annual fee:</p> <ul style="list-style-type: none"> - Spot Market - Derivatives Market - Clearing license Spot+ Derivaties <p>Technical fees:</p> <p>Transaction fees*:</p>	<p>X</p> <p>X</p>	<p>X</p> <p>X</p> <p>X</p> <p>X</p>
<p>At the clearing member</p>		
<p>Clearing fees:</p>	<p>X</p>	

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Cooperation with EUREX

- ECC uses the systems of Gruppe Deutsche Börse:
 - EUREX (derivatives contracts / margins)
 - XETRA (spot contracts)
 - CCP etc.
- Systems will be provided and maintained by Deutsche Börse Systems
- EUREX Clearing AG and Clearstream Banking act as service provider

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Further Information

Available via Download Center at ECC AG homepage

<http://www.ecc.de>

Download Center:

Clearing Conditions and specifications

Price List

Technical regulations

Margin Concept and parameter

Contract specifications

IT System manuals (Reports, Frontend, API's)