

EPEX SPOT: A Power Exchange at the Heart of Europe

Our role in the wholesale market

Dr. Sandrine Wachon – Head of International Business Development
Paris, 17 July, 2014

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Agenda

1. The European power market: fundamentals
2. EPEX SPOT in a nutshell
3. Our Markets and Products
4. Our challenges: the European power market

The European power market: fundamentals

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The European power market

“The price in Germany and France actually is the reference price for the rest of Europe. It is of an utmost importance that this reference price comes from a transparent market with sufficient volumes traded and with a sufficient number of actors. I believe, strongly believe, that with proper supervision of the exchange the price will and should be trusted by all market participants and all political decision makers, myself included.”

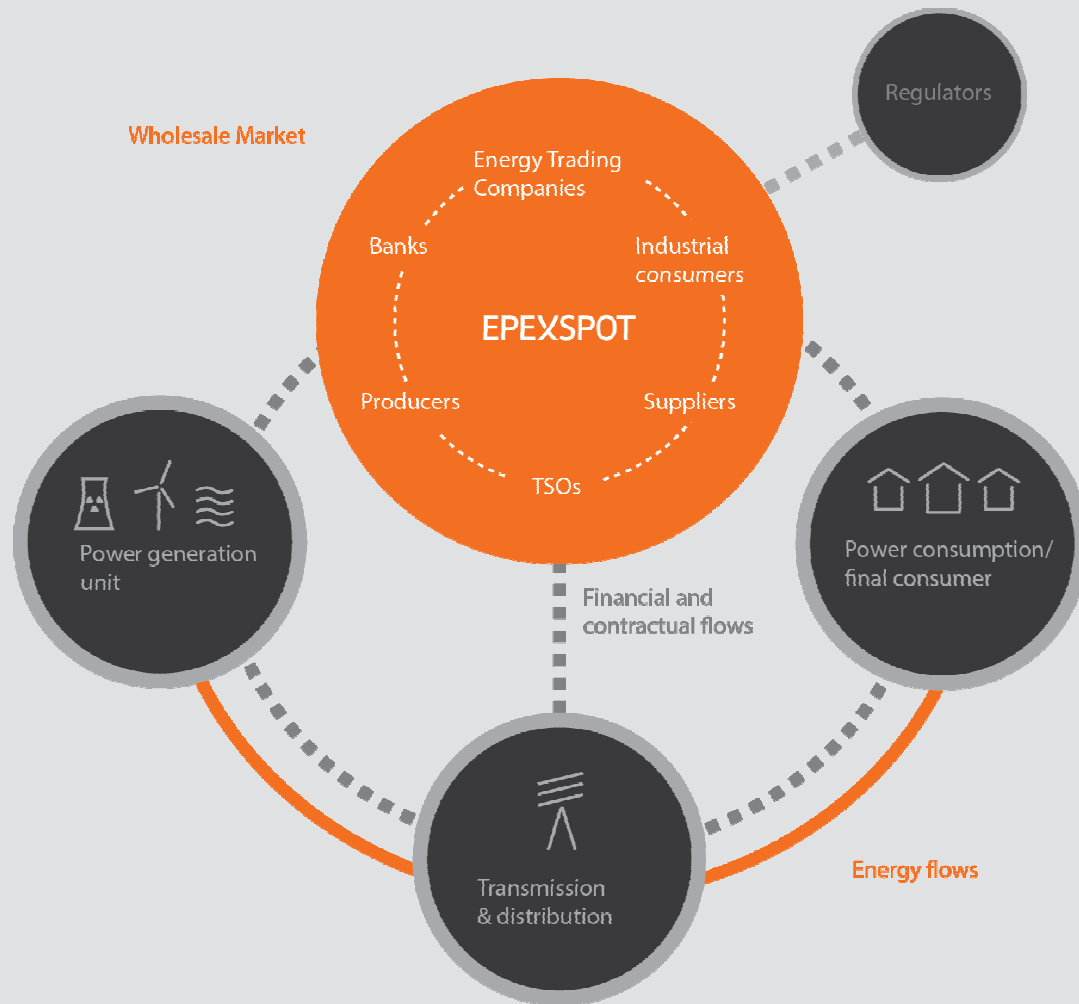
(Speech of the former EU Commissioner for Energy, Andris Piebalgs, during the press briefing on the Creation of EPEX SPOT 30 May 2008)

Liberalization of the European Power Market

- 1996: European Directive on energy market liberalization
- 1998: Implementation of the Directive in German and Austrian law
- 2000: Implementation of the Directive in French law
- 2001: Establishment of POWERNEXT SA
- 2002: Merger of the former Leipzig Power Exchange LPX and the EEX Frankfurt to EEX AG
- **17 September 2008: Creation of EPEX SPOT SE, owned 50/50 by POWERNEXT SA and EEX AG**
- **1 January 2009: Transfer of POWERNEXT Power Spot into EPEX SPOT SE**
- **1 September 2009: Transfer of EEX Power Spot into EPEX SPOT SE**

The creation of EPEX SPOT and the development of power trading is one of the most visible results of the liberalization of the European Power Market.

The organized market: principles



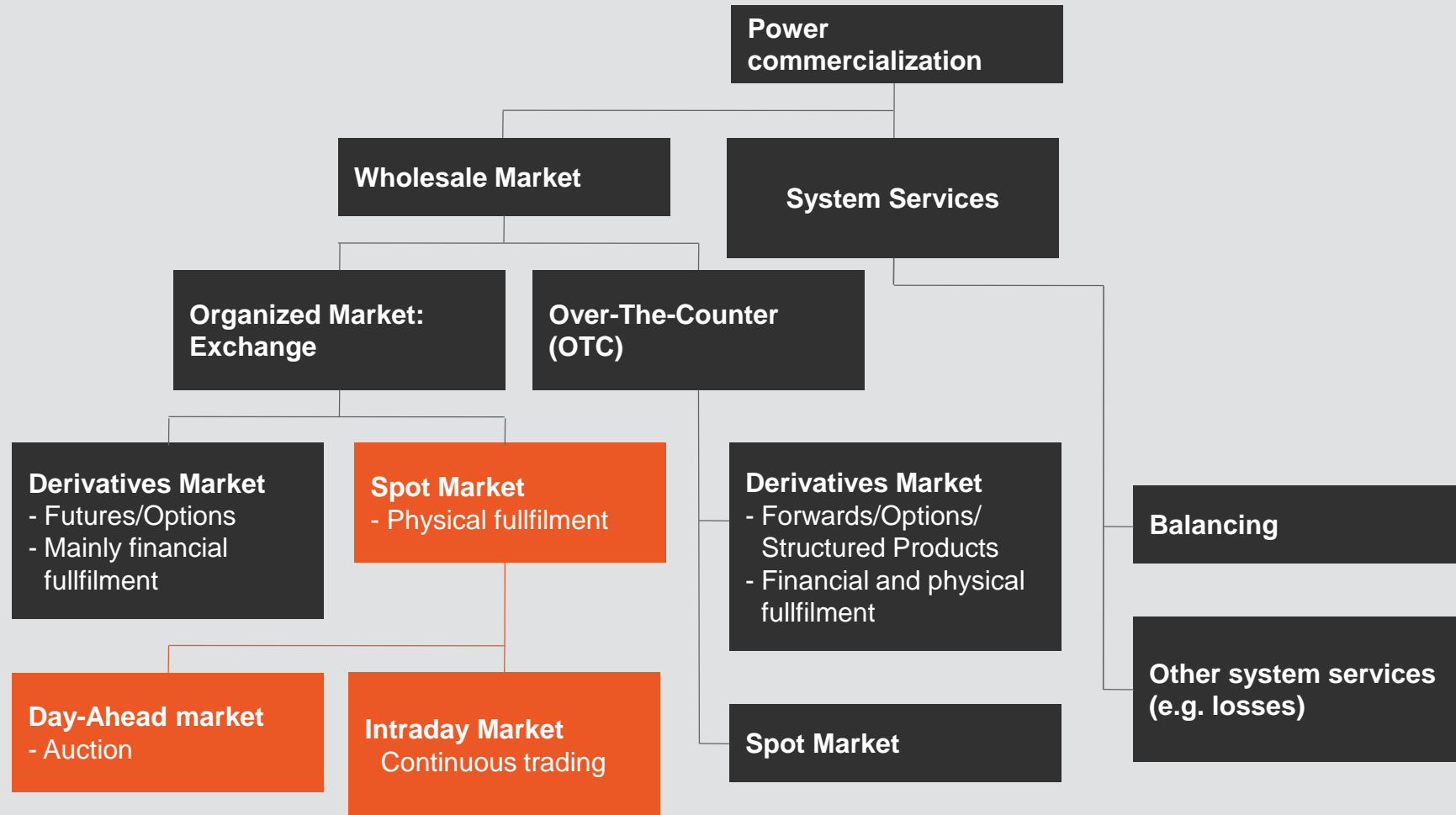
- Access to an anonymous market
- Level playing field between members
- Financial guarantees through the Clearing House
- Calculation and publication of transparent and fair price references

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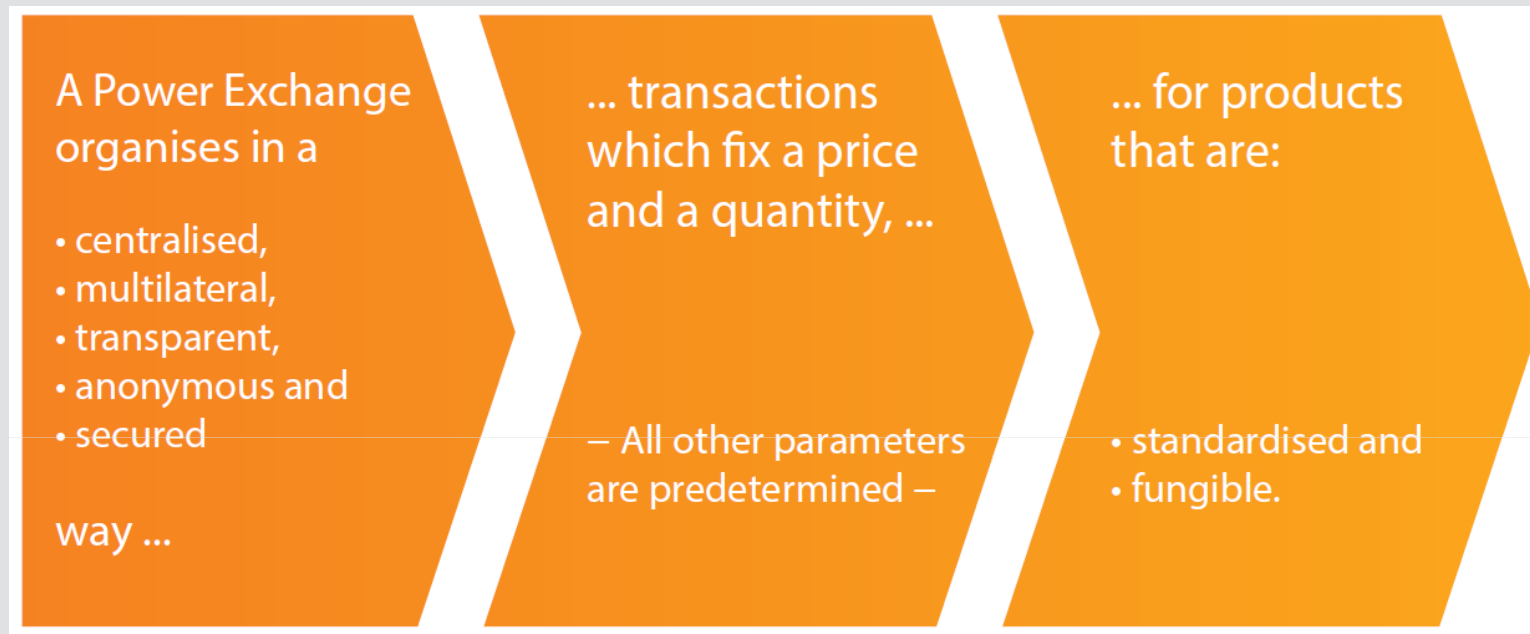
FIVE
YEARS

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Ways of commercializing power



Definition of a Power Exchange



Power Exchanges bundle supply and demand of companies and professionals of the power business (producers, utilities, banks, industrial consumers) and allow the creation of a **neutral market price** in a transparent, instant and fair manner.

EPEX SPOT in a nutshell

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Corporate facts

EPEXSPOT

222 members

346 TWh traded in 2013

Based in Paris

Created in 2008

80 employees
with 14 nationalities

Branch in Leipzig

A European and international success story

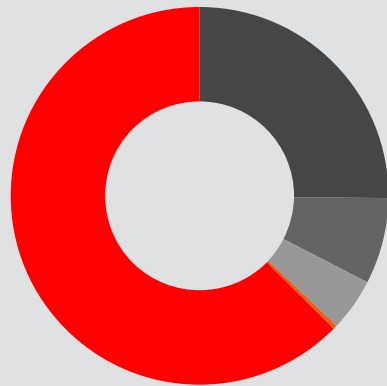
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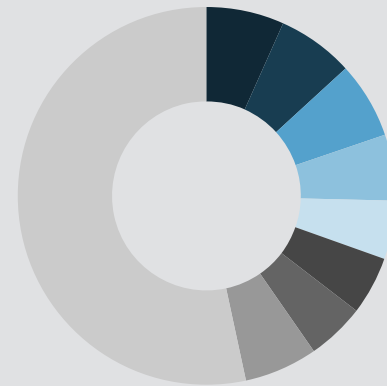
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Shareholder structure

- Pool 25,19%
- LVV 7,38%
- Freistaat Sachsen 4,51%
- Stadt Leipzig 0,01%
- Others 0,33%
- Eurex Zürich AG 62,57%



- EDF 6,66%
- Electrabel 6,54%
- GDF Suez 6,54%
- Total 5,57%
- E.ON 5%
- Alpiq 4,99%
- Enel 4,96%
- 3GRT 6,29%
- HGRT 53,34%



50 / 50



Chairman of the Supervisory Board of EEX:
Dr. Jürgen Kroneberg

EPEX SPOT



powernext
Powering the next markets

Chairman of the Board of Powernext:
Pierre Bornard

The markets of EPEX SPOT

EPEX SPOT'S market areas cover an area of **1,200 TWh** of yearly power consumption, which represents **40%** of the EU's Integrated Electricity Market.



3 EPEX SPOT Markets

- **Germany/Austria**
- **France**
- **Switzerland**

+ Hungarian Day-Ahead Market on behalf of the Hungarian Power Exchange HUPX

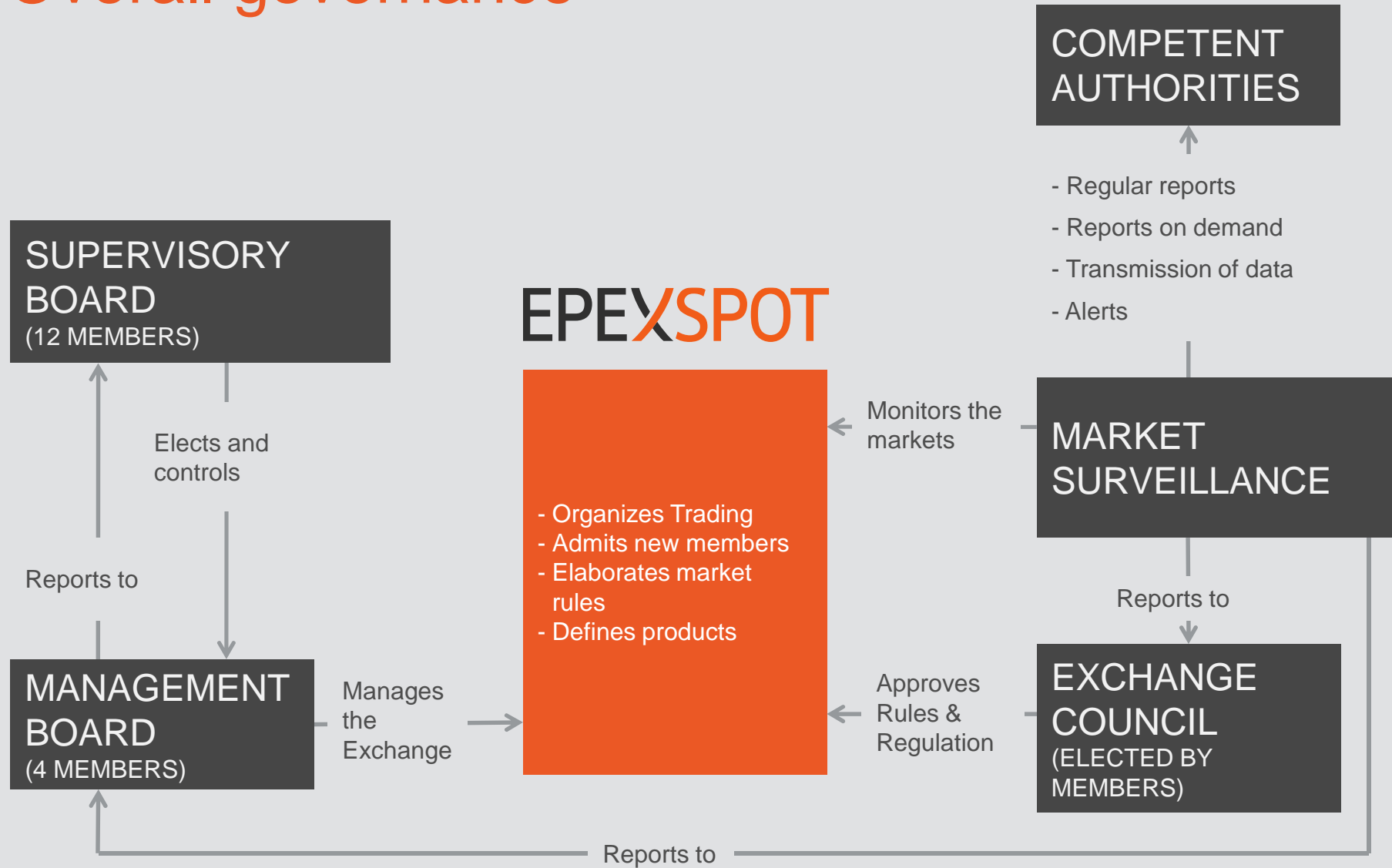
+ Coupling services for Slovakian OKTE, Czech OTE and HUPX

19 interconnectors with own and neighbouring markets

EPEX SPOT has an inherent incentive to integrate European power markets.

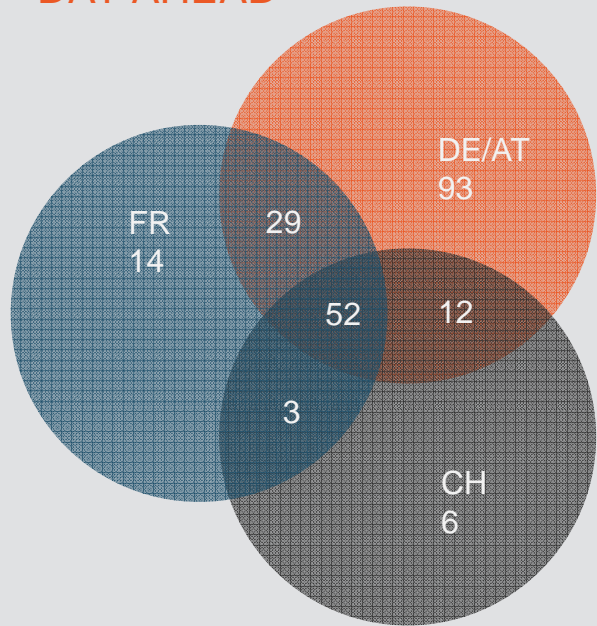
We support this process by our harmonised cross-border trading systems.

Overall governance

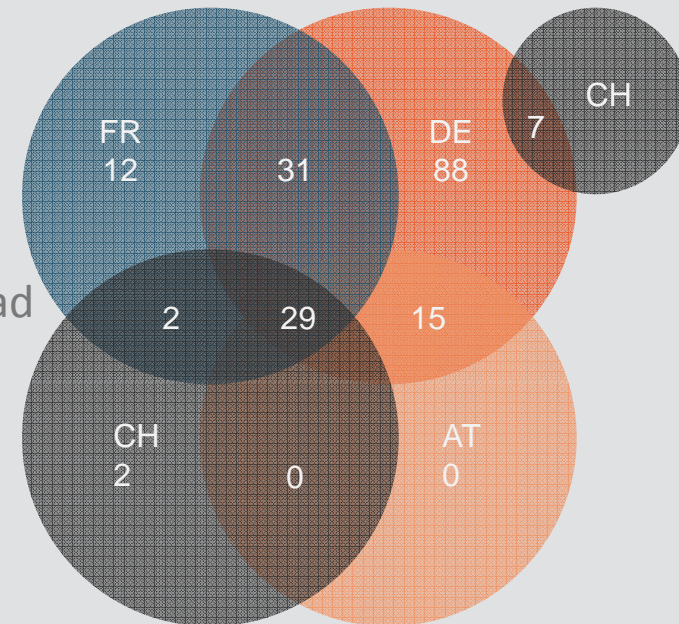


Distribution of Exchange Members on the market segments

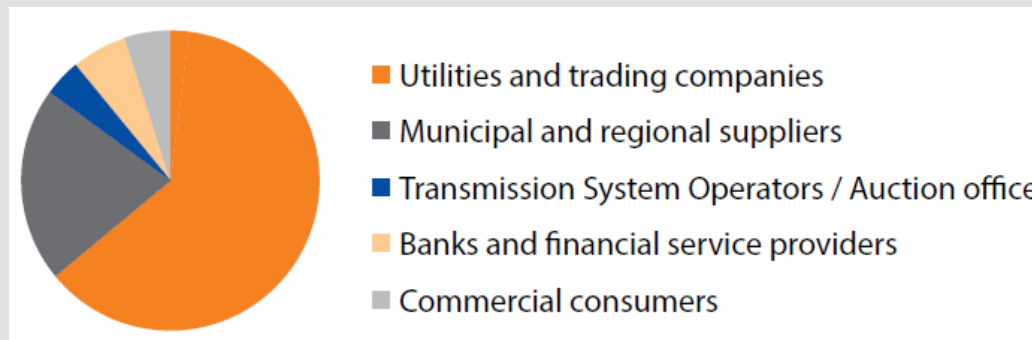
DAY-AHEAD



INTRADAY



222 Exchange Members (Day-Ahead & Intraday) as of 18 July 2014.



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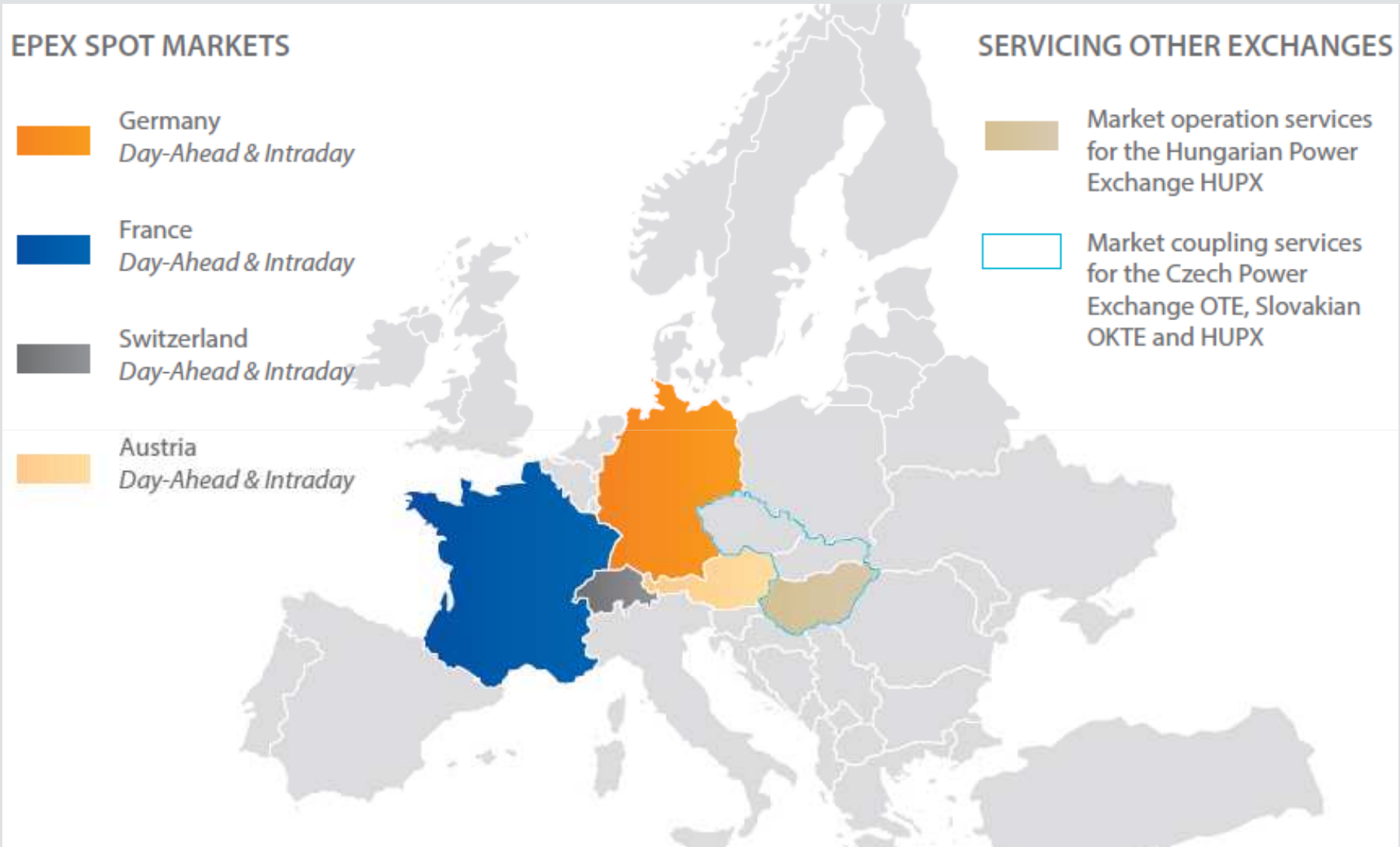
Our Markets and Products

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Markets and services



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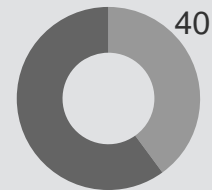
Market review 2013: Markets, volumes and delivery zones

265,5 TWH

+ 2%
Intraday: 19,7 TWh (+25%)



Share of national
consumption

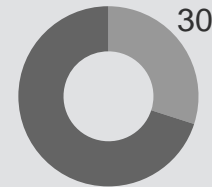


Delivery zones



19,2 TWH

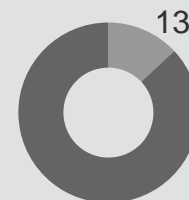
+ 12%
Intraday: 0,7 TWh (Start: 6/2013)



swissgrid

61,3 TWH

± 0%
Intraday: 2,9 TWh (+ 27%)



Rte
Réseau de transport d'électricité

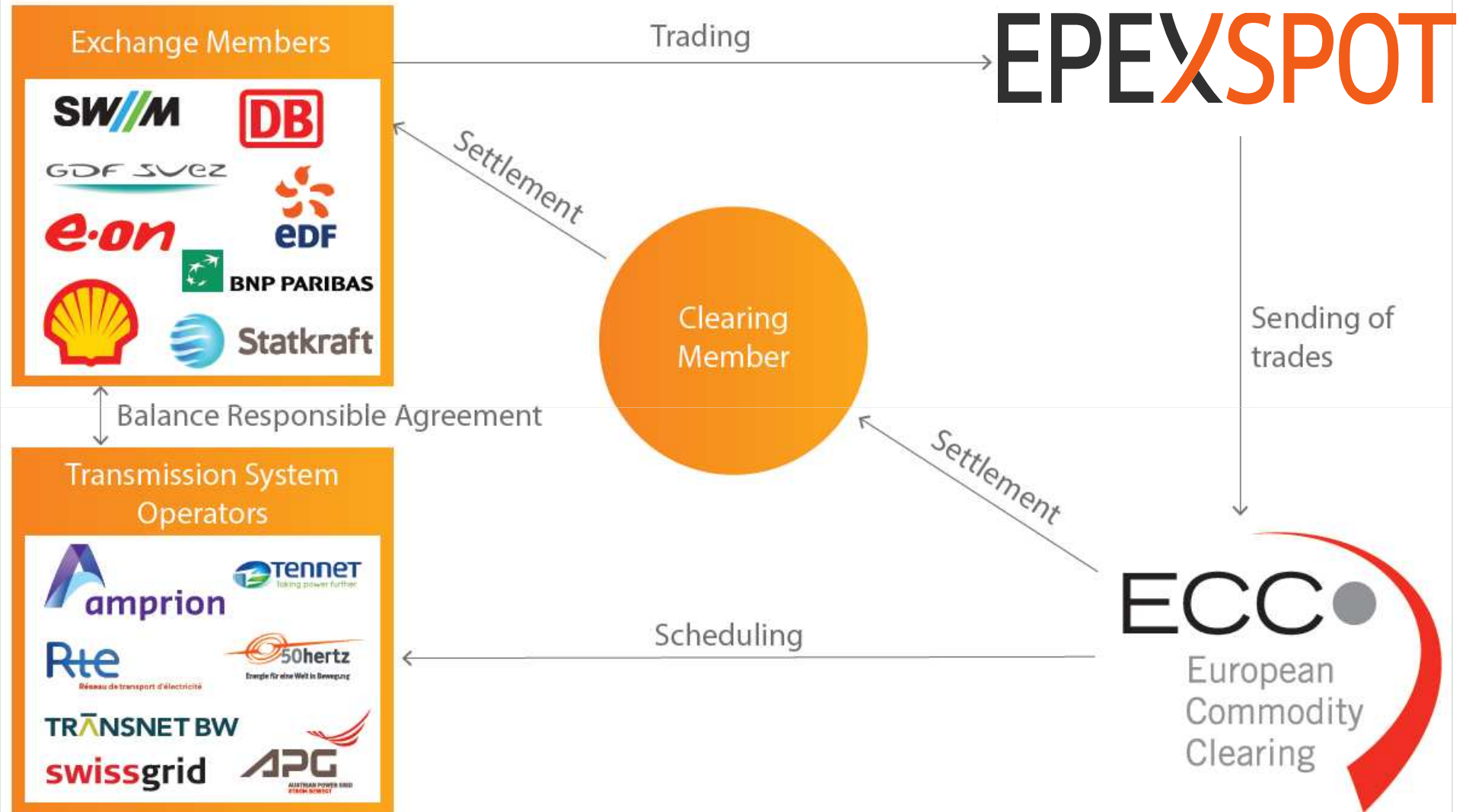
346 TWH

in 2013 on all
EPEX SPOT markets



2 % of overall increase of volume in 2013
Strong growth on all Intraday markets

Trading on the Exchange

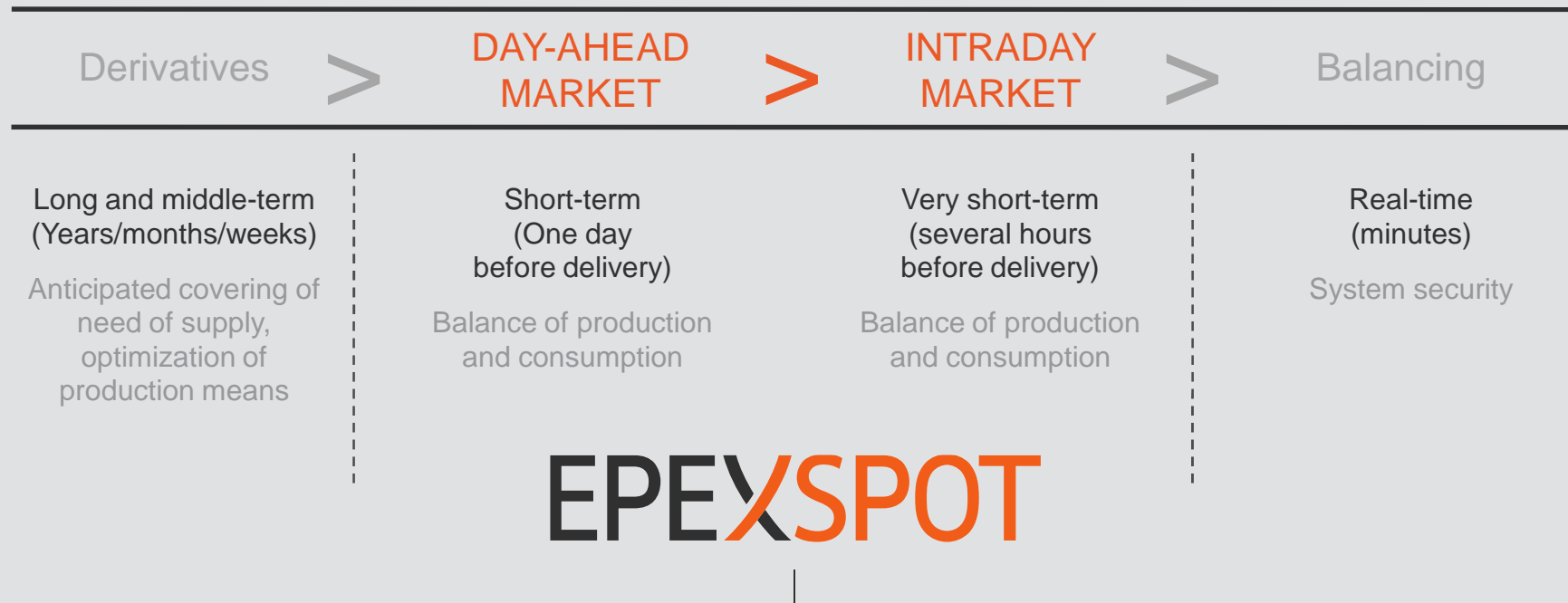


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The role of the Exchange in the timeline of the market



DAY-AHEAD AUCTION

- Optimization of liquidity via an auction
- Market areas: Germany/Austria, France, Switzerland

CONTINUOUS INTRADAY

- Flexibility through continuous trading
- Market areas: Germany/Austria, France, Switzerland

Two Main Products at EPEX SPOT

Day-Ahead

Overview – Day Ahead Auctions

Market Areas

France

Germany / Austria

Switzerland

- Blind auction procedure, takes place on 7 days a week, year-round
- 24 hours of the respective next day are traded
- Hourly and block contracts available for trading
- Integrated in CWE Market Coupling
- Trading is conducted via the EPEX trading system (ETS)

Intraday

Overview – Intraday Continuous Trading

Market Areas

Germany

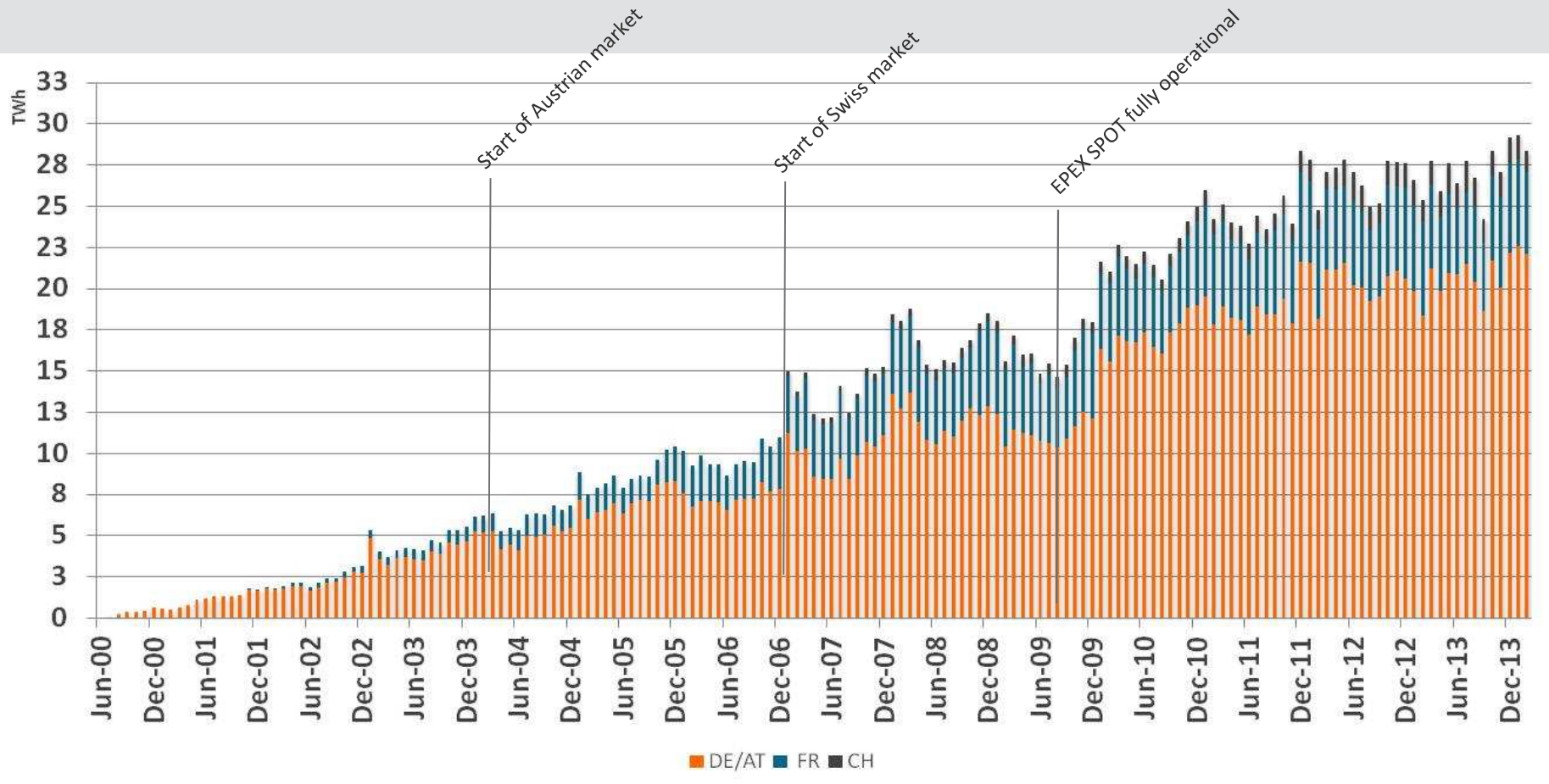
France

Austria

Switzerland

- Continuous trading and price formation, 24 hours a day, 7 days a week, year-round
- Contracts can be traded until 45 minutes before the beginning of delivery (Austria and Switzerland: 75 minutes)
- Hourly and block contracts available for trading
- 15-minute contracts on German and Swiss markets allow flexible balancing of portfolio
- Cross-border trading between Germany, France, Austria and Switzerland

Day-Ahead Market



2001: Establishment of Powernext SA
7/2002: Merger of Energy Exchanges Frankfurt-Leipzig
12/2006: Switzerland becomes a new market

9/2008: Creation of EPEX SPOT SE
1/2009: Transfer of Powernext Power Spot into EPEX SPOT SE
9/2009: Transfer of EEX Power Spot into EPEX SPOT SE

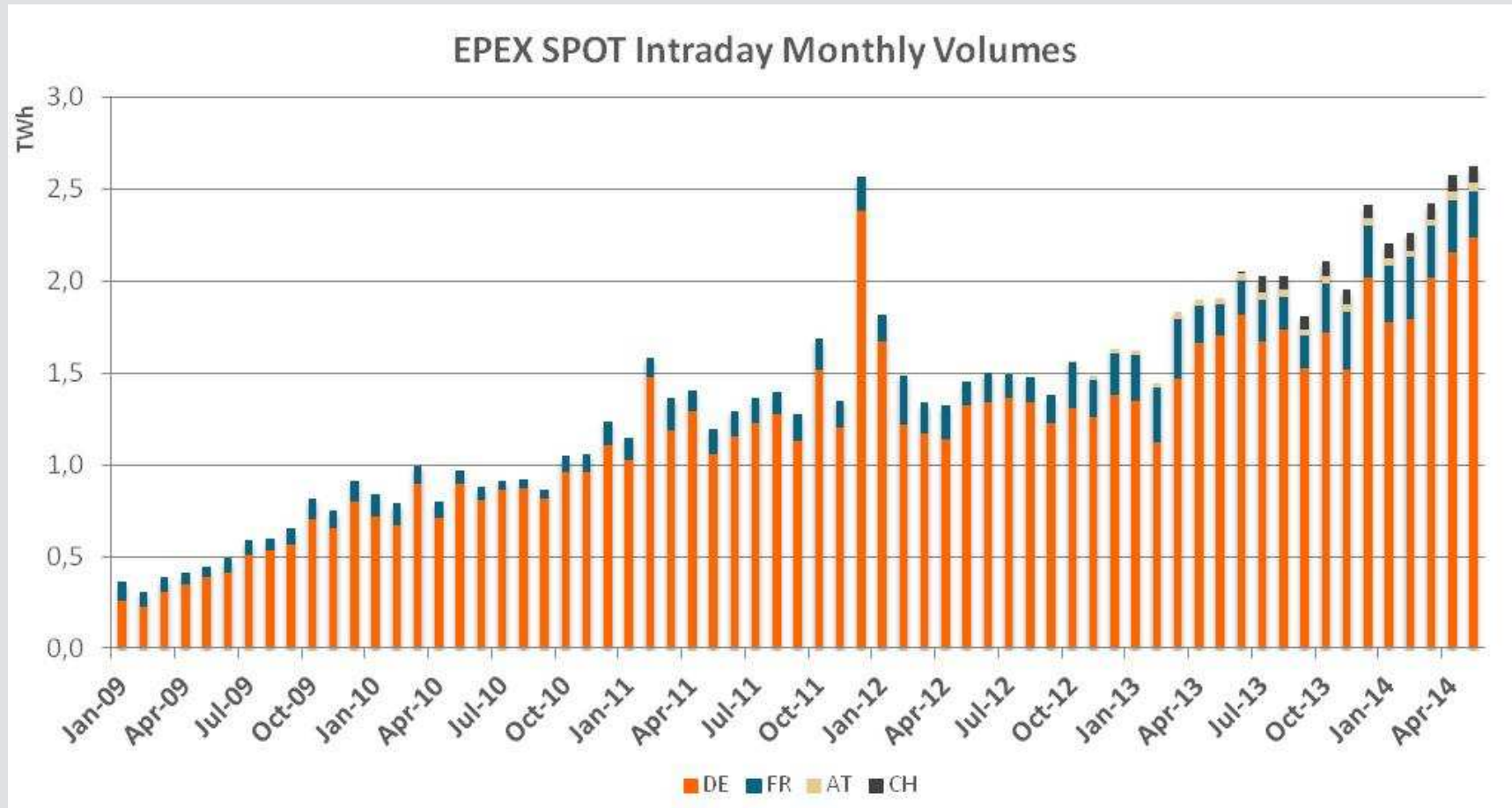
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Intraday Market

- Intraday markets are very active both locally and cross-border
- Cross-border trades represented on average 13% of total traded volume



Our challenges: the European power market

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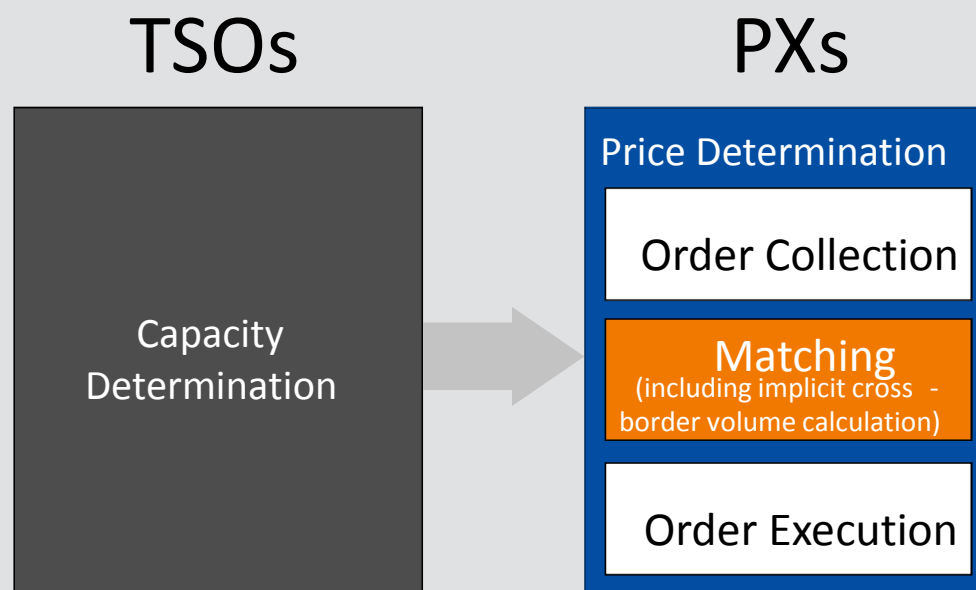
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Market Coupling: Overview

- Market Coupling or Price Coupling is a solution to couple markets operated by different Power Exchanges and covers the technical, organizational and legal aspects
- Price differences between market areas are minimized or eliminated by directly using the cross-border transfer capacity on interconnectors between countries on the Exchange
- Offer and demand are widened – from a national level to a European level
- Respects the features of local European markets
- Different Market Coupling initiatives already existed before NWE launch on 4/2/2014, e.g. in Central Western Europe (CWE) since 10 November 2010, covering Germany, France, Belgium, Netherlands and Luxemburg
- **Market Coupling is the most concrete implementation of the Internal Energy Market Europe has ever known so far**

Market Coupling: Governance requirements

- Tight interrelation of TSOs and PXs functions in implicit cross-border capacity allocation mechanisms:



- In a price coupling scheme, the cross-border volume is optimized through PXs matching process. The Cross-border volume calculation is performed and controlled by the PXs as it is integrated in the matching process
- TSOs - PXs relationship is established either by a national regulation, or through a direct customer / service provider.

European Market Coupling Benefits

Optimal use of interconnectors facilitating congestion management

Reduction of price volatility

Smoothing effect on negative or positive price spikes

Propagation of extreme weather conditions (i.e. cold wave, storm front) on other market areas

Higher security of supply through market integration and no longer depending on the individual country



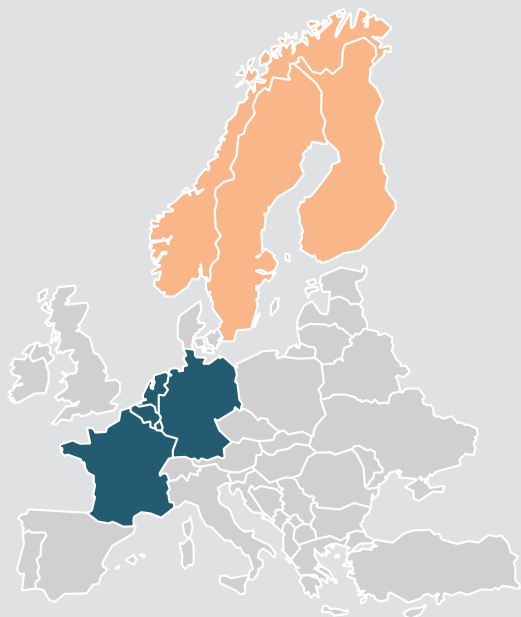
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Market Coupling: Timeline

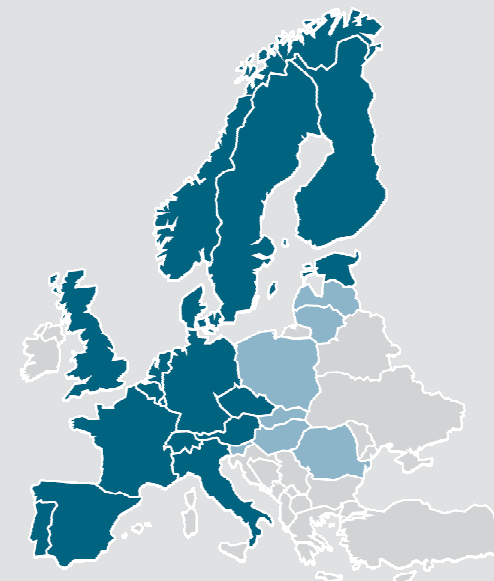
CWE MARKET COUPLING
+ INTERIM TIGHT VOLUME
2010



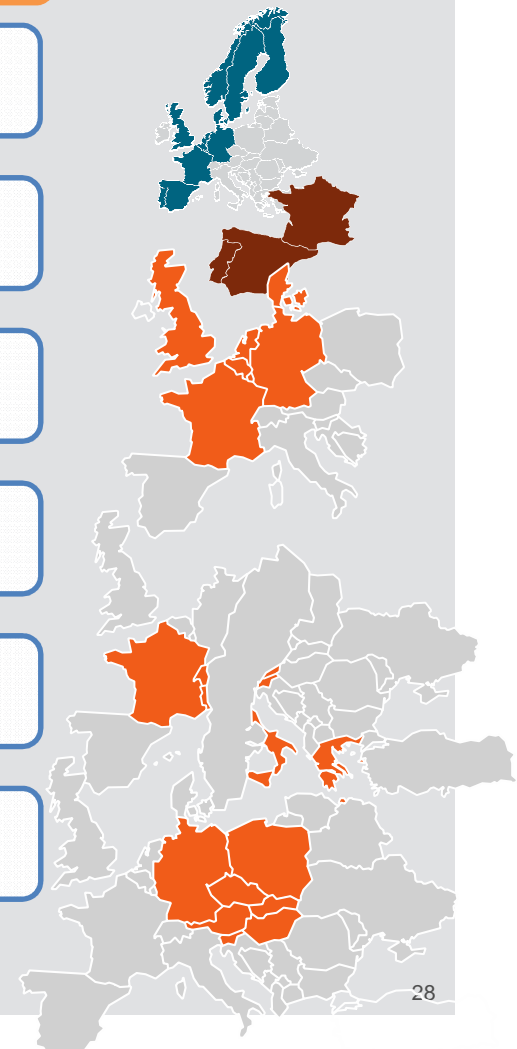
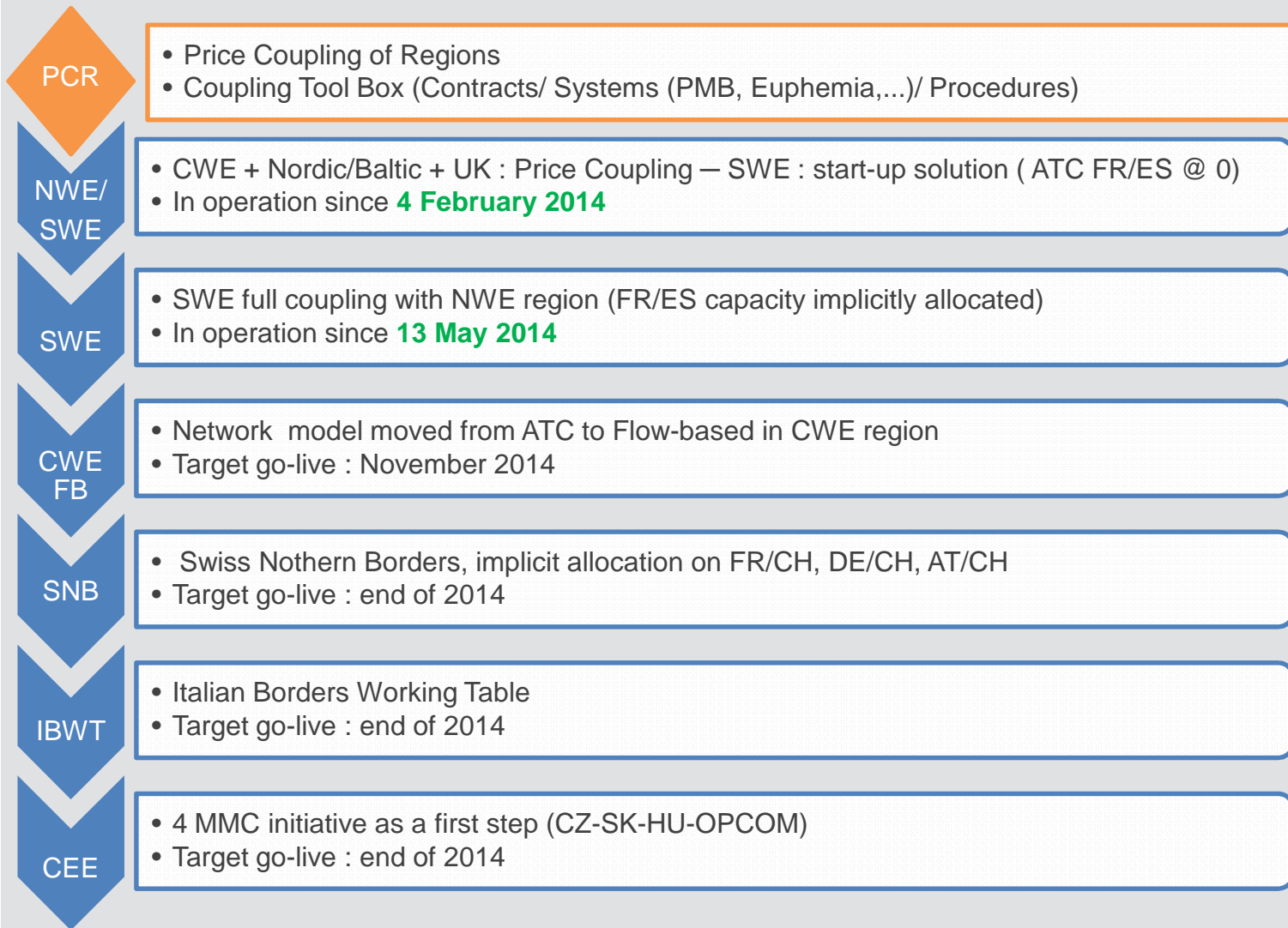
NWE + SWE PRICE
COUPLING
2014



SINGLE EUROPEAN
PRICE COUPLING
2014/15



Day-Ahead Market Coupling - Roadmap







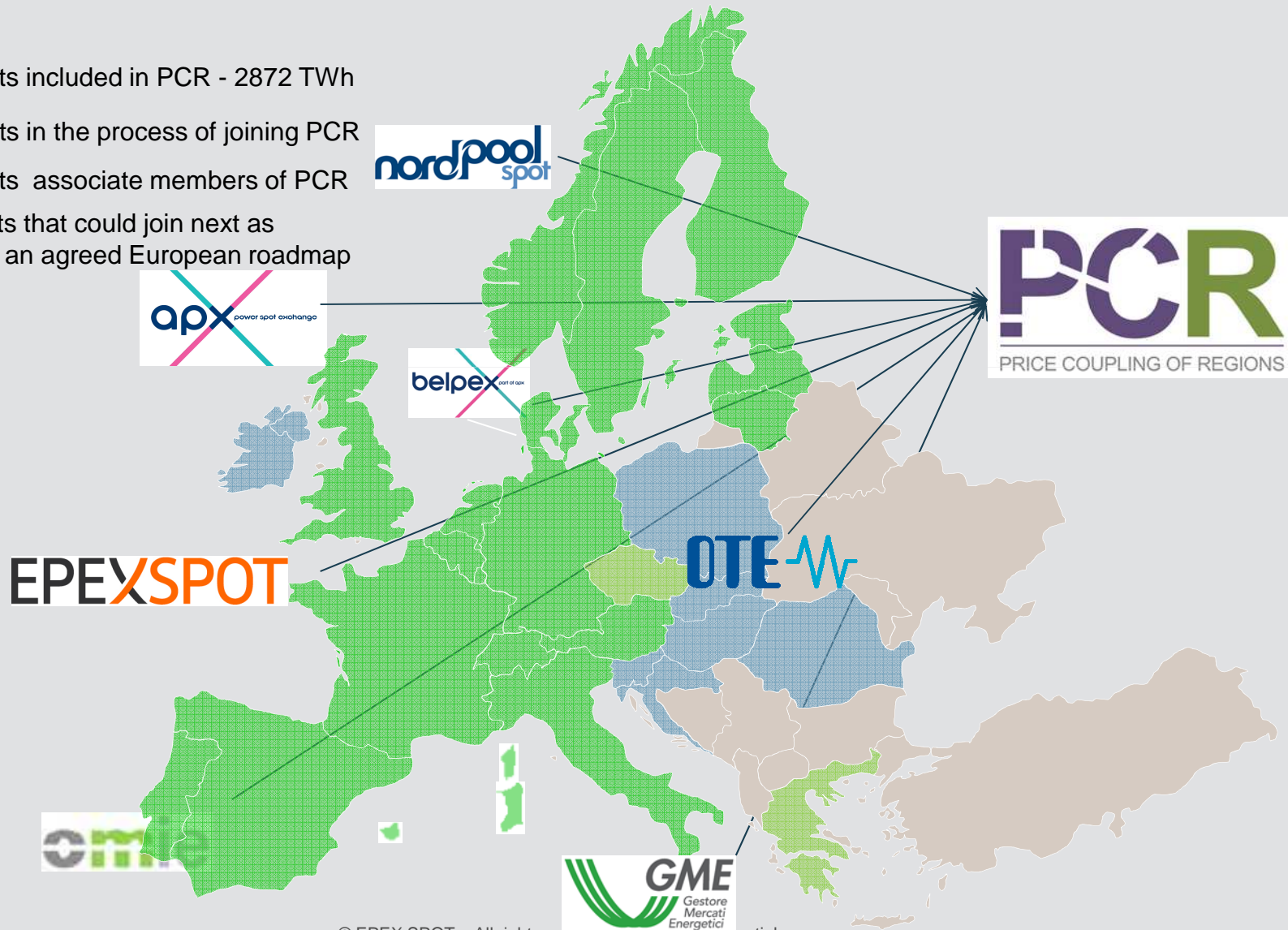
PCR: the engine of the Internal Energy Market



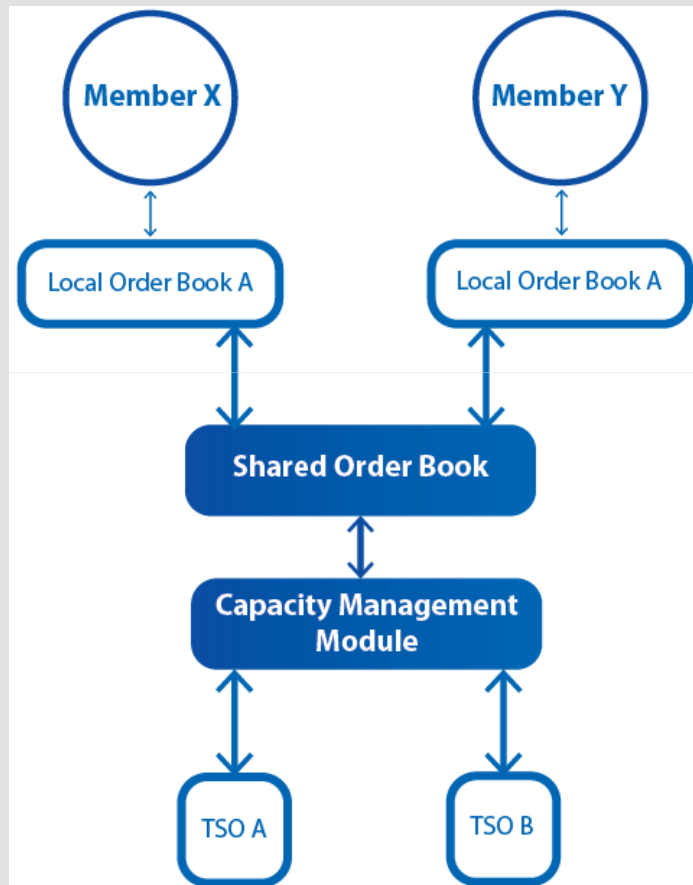
- Initiated by European Power Exchanges, confirmed by European authorities, Price Coupling of Regions (PCR) is a project dedicated to deliver the Pan-European Price Coupling solution
 - The aim is to develop a single price coupling algorithm to be used to calculate electricity prices across Europe
 - Based on three main principles:
 - One single algorithm
 - Decentralized operation
 - Individual accountability of each Power Exchange
 - It will facilitate the road to the overall EU target of a harmonized European electricity market
- **PCR is the “engine” of the “vehicle” Multilateral Regional Coupling**

Towards the Single European Power Market: Next steps

-  Markets included in PCR - 2872 TWh
-  Markets in the process of joining PCR
-  Markets associate members of PCR
-  Markets that could join next as part of an agreed European roadmap



The Intraday Target Model: What and why



- One European integrated solution, handling the trading and the capacity allocation functions
- PXs are in charge of both functions using a single IT provider
- **The model is made mandatory by law (defined in the CACM Network Codes and governed by the Day-Ahead / Intraday Governance Guidelines)**
- PXs outside of the cooperative agreement will not be able to offer cross-border trading to their members anymore, since all cross-border capacity will be allocated on the single SOB/CMM solution
- Explicit capacity allocation to enable OTC trading will be allowed on certain borders, for an interim period only

Objectives:

1. Allocate implicitly all the Intraday cross-border capacity on a single platform
2. Pool all the PXs' Intraday liquidity on a single trading screen

Benefits expected by the Authorities:

1. Facilitated cross-border access to Intraday markets
2. Improvement of the intraday liquidity and price-signal
3. Better short-term management of the power system, especially with regard to intermittent energy

Thank you for your attention!

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A POWER EXCHANGE AT THE HEART OF EUROPE.

POWER FOR TODAY.
POWER FOR TOMORROW.

EPEX DAY AHEAD [View detailed information](#)

	Price Base (€/MWh)	Price Peak (€/MWh)	Vol. Day Exc. (MWh)	Vol. Day OTC (MWh)	Vol. Month Exc. (MWh)	Vol. Month OTC (MWh)	Delivery Day
France	36.18	37.22	152,382	–	3,749,105	–	27/07/2013
Germany/Austria (Phelix)	33.23	32.64	648,244	–	18,672,705	–	27/07/2013
Switzerland (Swissx)	36.03	37.00	57,814	–	1,634,144	–	27/07/2013
ELIX	33.14	33.33	–	–	–	–	27/07/2013

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EPEXNEWS
24/07/2013
Our members - June 2013

For any further information, please contact:

Sandrine Wachon

s.wachon@epexspot.com

Arnaud de Veron

a.deveron@epexspot.com

www.epexspot.com

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