EPEX SPOT: European power market facilitator and beyond…

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GCCIA 2nd Regional Power Trade Forum - “Towards Regional Prosperity: Activating the GCC Power Market through the Interconnector”

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Agenda

1. The role of power exchanges

2. EPEX SPOT, a model to create trust and liquidity

3. And then…
Efficient and liquid wholesale markets are a prerequisite for competitive retail markets.
A Power Exchange: what for?

A Power Exchange organises in a way ...
- centralised,
- multilateral,
- transparent,
- anonymous and
- secured

... transactions which fix a price and a quantity, ...
-- All other parameters are predetermined --

... for products that are:
- standardised and
- fungible.

Power Exchanges bundle supply and demand of its members (producers, utilities, banks, industrial consumers, system operators) and allow to create a neutral market price in a transparent, instant and fair manner.

EPEX SPOT is a short-term (“spot”) Exchange, the delay between trading and delivery ranges from 24 hours (Day-Ahead market) to 45 minutes (Intraday market).
Power exchanges: advantages for market participants

- **Transparency** with established reference prices, publication of market data
- **Direct anonymous** access to a broad base of trading participants
- **Liquidity** through successful market development
- **Market price determination** through active trading at exchange
- **Efficiency** through a high degree of automation and state-of-the-art margin calculation
- **Risk handling** through arbitrage between different market areas
- **Compliance** in the eyes of the public, of the customers, of authorities
- **Reduction of counterparty risk** through clearing and settlement via the clearing house
Advantages of the organized market

• manages a market
  • centralized and transparent ensuring **liquidity** and **non-discriminatory access**
  • supervised by a structuring **regulation** relying on market rules and a strong presence of regulation authorities (AMF, CRE, SMWA, BNETzA, ElCom, E-Control)
• and guarantees the **security of transactions**

  • guarantees **financial commitments** & systematic risks
    ➤ zero credit risk
  • guarantee **physical commitments**
    ➤ zero industrial risk
Power Exchanges in the timeline of the market

- **Derivative market**
  - Long and mid term (years/months)
  - Anticipated covering of needs of supply, optimization of production means

- **Day-Ahead Market**
  - Short term (Day+1)
  - Balance between production and consumption

- **Intraday Market**
  - Very short term (hours)

- **Balancing market**
  - Real time (minutes)
  - Security of the system
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Exchanges functions in the market: What? What for?

- TRADING
- BROADCAST
- CLEARING
- DELIVERY
- PAYMENT

LIQUIDITY

Anonymous Multilateral
Easy access
Standard Products
Reliability
Security

Price References

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Corporate facts

205 members

Based in Paris

60 employees
with 14 nationalities

339 TWh traded in 2012

Created in 2008

Branch in Leipzig

A European success so far…
Shareholder structure: federate interests

- **Eurex Zürih AG**: 56.14%
- **LVV**: 7.38%
- **Free State of Saxony**: 4.51%
- **City of Leipzig**: 0.01%
- **Others**: 0.33%

**3GRT 6.15%**
- **GRT Gaz 5.25%**
- **TRIF 1.65%**

**HGR 52.83%**
- **RTE 51%**
- **Elia 24.5%**
- **TenneT 24.5%**

Chairman of the Board of EEX:
Dr Jürgen KRONEBERG

Chairman of the Board of Powernext:
Pierre BORNARD, RTE
EPEX Spot operates mature markets places, producing undisputed reference prices

Share of national consumption:

- **261 TWh**
  - + 9 %
  - Intraday: 15,8 TWh (± 0 %)

- **17 TWh**
  - + 38 %

- **61 TWh**
  - ± 0 %
  - Intraday: 2,2 TWh (+ 28 %)

- **339 TWh** in 2012
  - on all EPEX markets
  - 8 % increase of volume in 2012

Delivery zones:

- **50hertz**
- **amprion**
- **TRANSNET BW**
- **Tennet**
- **APG**
- **swissgrid**
- **Rte**

On all these hubs, nominations for the physical delivery are carried out by a single clearing house:
Who are buyers and sellers on EPEX SPOT?

In total, EPEX SPOT holds **207 Members** (Day-Ahead & Intraday) as of 21 May 2013.

Day-Ahead

Intraday
Overall governance and supervision

**Supervisory Board**
12 members

elects and controls

reports to

**Management Board**
4 members

manages the Exchange

reports to

**EPEX SPOT**
EUROPEAN POWER EXCHANGE

- Organizes Trading
- Admits new Members
- Elaborates Market Rules
- Defines Products

**Supervisory Authorities**
- Regular reports
- On-demand reports
- Data transmission
- Alerts

**Market Surveillance Office**
monitors the markets

reports to

**Exchange Council**
(elected by Exchange Members)

approves rules & systems
The Exchange Council

- Official body of the Exchange
- 16 members from various sectors
- Adopts the Rules & Regulations and trading systems of the Exchange
- Approves products and activities
- Takes position to European power market development
EPEX SPOT Market Surveillance: A single point of contact for supervisory authorities

EPEX SPOT Market Surveillance reports regularly or upon request to all supervisory authorities

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Exchange structure: clear attribution of roles in the spot power market
1. The role of power exchanges

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EPEX SPOT’s market areas are covering an area of **1,200 TWh** of yearly power consumption which is **40%** of the European Integrated Electricity Market.

**EPEX SPOT Markets**
- France
- Germany/Austria
- Switzerland
  + Hungarian Day-Ahead Market on behalf of the Hungarian Power Exchange HUPX
  + CZ-SK-HU Market Coupling operations on behalf of OTE, OKTE and HUPX

**19 interconnectors** with own and neighbouring markets

- A natural incentive to integrate the European power markets, facilitated by harmonised trading systems
EPEX Spot’s road towards the Pan-European power spot market

- **2006**
  - POWERNEXT co-initiator of TLC
  - 3 PXs, 3 TSOs involved
  - EMCC agreed (start 2008)

- **2009**
  - Trilateral coupling and EMCC

- **2010**
  - Founding of EPEX Spot

- **2012**
  - CWE / FITS / PCR
  - Service CZ-SK-HU market coupling

- **2013**
  - CWE Market Coupling
  - Coordinated with Nordic (ITVC)
  - Cooperation EPEX- HUPX
  - Flexible intra-day trading scheme in continental Europe
  - PCR concept
  - ELIX

- **2014**
  - European Price Coupling
  - Implementation of PCR

Next step?

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As a conclusion: key success factors for GCCIA to create a trusty market place

- Go-live preparation
  - Commercial development → support from key players to guarantee the liquidity
  - Design of the products
  - Members’ readiness (Trading & Clearing)

- Operational success -> customer-oriented
  - Market operations
  - Trading system adopted by the participants
  - Operational relation with the TSO

- Win trust of the market & authorities
  - Liquidity, transparency, regulation, surveillance,
  - Efficient risk management policy

- Regional cooperation to guarantee the sustainability of national PXs → liquidity

- Choose the right clearing house

- … and women & men!
  - Scarce skills & competences
The market results are available on EPEX SPOT’s Website

www.epexspot.com

For any further information:

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Back-up
Day-ahead Auction

Market Areas
- France
- Germany/Austria
- Switzerland

- Blind auction, 7/7 days
- 24 hours of the next day
- Hours and blocks of hours
- Trading via EPEX Trading System – ETS
  Web based electronic system

- Purchase and sell orders are aggregated in demand and sell curves.
- The market price and the total volume are determined by the intersection of the aggregated demand and sell curves.

Gate closure time
- 11:00 Switzerland
- 12:00 DE/AT & France

Publication of results
- 11:10 Switzerland
- 12:40 DE/AT & France

MCP : Market Clearing Price
MCV : Market Clearing Volume

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Day-Ahead volumes on all 3 hubs since 2000

- **2001**: Establishment of Powernext SA
- **9/2006**: 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
Continuous Intraday

The intraday market can be used:

- Purchase/sale of quantities that have not been executed during the auction
- Unplanned maintenance after the auction
- Flexible tool to trade closer to real-time
- Arbitrage with neighbouring countries

Continuous trading 24h/24
24 hours of each day are traded since 3:00 pm the previous day until 45 minutes before delivery
Hours and blocks of hours
15-minutes contracts in Germany
• Intraday markets are still very active both locally and cross-border
• Cross-border trades represented on average 13% of total traded volume