

EPEXSPOT

Annual Report 2013

FIVE
YEARS

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Photo by
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FINANCIAL REPORT



The European Power Exchange *the power price provider*

We need power. Every hour of every day of our life – and we need to know its value.

For five years now, the European Power Exchange EPEX SPOT has been operating the power markets in Germany, France, Austria and Switzerland. And in this capacity we provide the price of power.

Companies from all over Europe join our markets to buy and sell wholesale quantities of power. They operate power plants or power grids, they supply hundreds of households with electricity or they are industrial consumers. And they use our markets to balance their needs per day or per hour or per 15 minutes 45 minutes upfront.

For all of them, the value of power is a key indicator for the efficient operation of the power system. The price signal of our markets is one of the pillars of today's energy value chain.

The needs of market members are mirrored in the price. Their supply and their demand are the main ingredients in the price of power. A power price we produce by fair confrontation – every hour of every day of every year.

FIVE
YEARS

Five years already

EPEX SPOT is a young and energetic company. The company was only created **five years ago**. Discover the roots and the history of the European Power Exchange

2009



Creation of the European Power Exchange EPEX SPOT by the merger of the short-term power markets of EEX and Powernext. German, French, Austrian and Swiss power markets are now operated under one roof. EPEX SPOT becomes one of the three co-founders of the Price Coupling of Regions (PCR) initiative, which today is composed of seven European Power Exchanges.

1996

European Directive on energy market liberalization – implementation in national law followed a few years later. In the aftermath, Power Exchanges operating Day-Ahead markets started to emerge.

2000

Creation of two Power Exchanges in Germany; two years later, they merge into EEX based in Leipzig.

2001

Creation of the Power Exchange in France, Powernext, based in Paris.

2004

Start of the Austrian Day-Ahead market, which today forms, together with Germany, the only bi-nationally integrated price zone in Europe.

2006

Start of the Swiss Day-Ahead market. Germany Intraday market is launched.

2007

Start of the French Intraday market.

2010

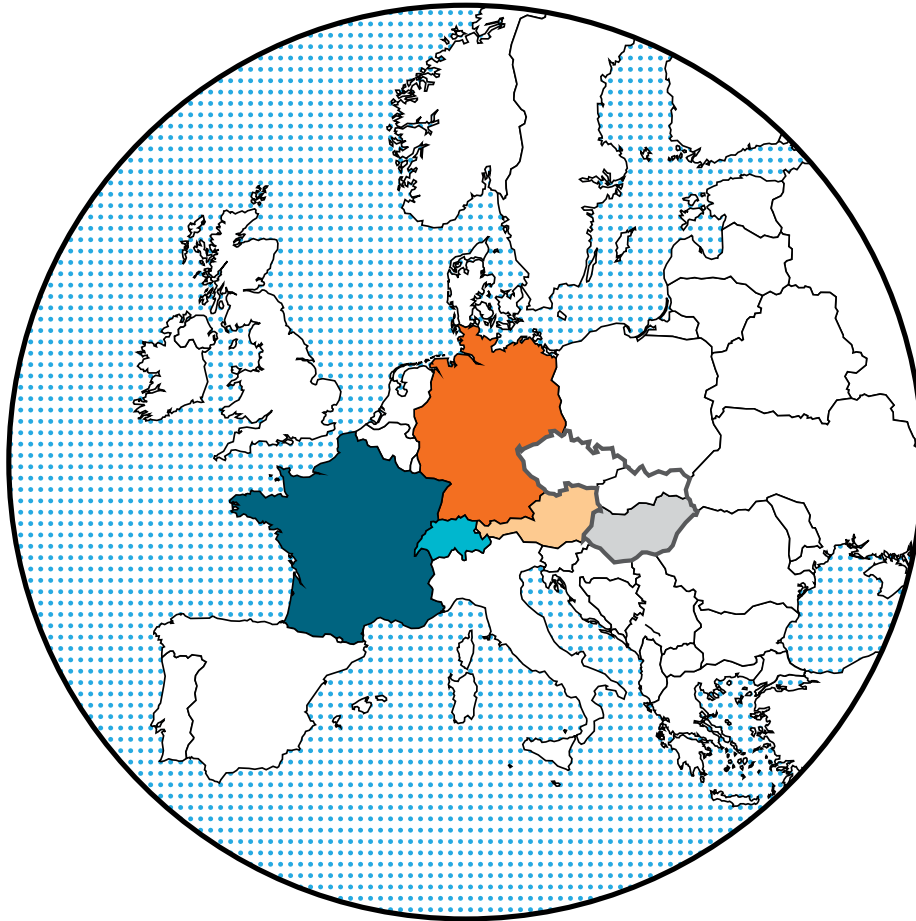


Day-Ahead Market Coupling in Central Western Europe (CWE), encompassing France, Germany and Benelux, goes live. German and French Intraday markets get interconnected via ComXerv. EPEX SPOT supports the launch of Hungarian Power Exchange HUPX with a Day-Ahead operation based on the EPEX Trading System.

2011



The European Commission announces 2014 as target date for the completion of the Internal Energy Market. EPEX SPOT introduces 15-minute contracts on the German Intraday market.



**EPEX SPOT
MARKETS**

- **Germany**
Day-Ahead & Intraday
- **France**
Day-Ahead & Intraday
- **Austria**
Day-Ahead & Intraday
- **Switzerland**
Day-Ahead & Intraday

**SERVICING OTHER
EXCHANGES**

- Market operation services for the Hungarian Power Exchange HUPX
- Market Coupling services for the Czech Power Exchange OTE, Slovakian OKTE and HUPX

2012



EPEX SPOT launches Austrian Intraday market. Go-live of the trilateral Market Coupling between Czech Power Exchange OTE, Slovakian OKTE and HUPX based on the system used by EPEX SPOT in the CWE Market Coupling.

2013



EPEX SPOT launches Swiss Intraday market. 15-minute contracts are extended to the Swiss Intraday market and can be traded across borders. The system used by EPEX SPOT wins the EU tender for system of the European Intraday Target Model in July.

2014



Launch of price coupling in North-Western Europe - the first time the PCR solution is implemented. The PCR solution is comprised of the PCR Matcher and Broker data transfer system and the EUPHEMIA algorithm, and can calculate prices, volumes and electricity flows for different markets in one step. In May, PCR has been extended to cover South-Western Europe. Extensions of PCR to other European regions are foreseen in the months to come.



Pacemaker of the power market

Preface by

Jean-François Conil-Lacoste,

Chairman of the Management
Board of EPEX SPOT

Five years ago EPEX SPOT was created. At a time when Power Exchanges were usually designed as entities with national capacities, we thought ahead and united the short-term power markets of Germany, France, Austria and Switzerland under one truly European umbrella. EPEX SPOT took shape due to the conviction of people who strongly believed that the right scope for energy and power markets was Europe. The idea quickly gained ground amongst market actors and stakeholders.

Today, so much has changed. EPEX SPOT has grown and undertaken new responsibilities. As a Power Exchange, our core mission lies in organizing the largest possible scope for confrontation of supply and demand every day of the year in a fair and orderly manner to create a reliable, transparent price signal for wholesale power markets. This is our primary mission and responsibility. By publishing aggregate

Do you speak power?

DAY-AHEAD

The historical core of the short-term power market. Trading takes place one day before the delivery of power. Organized as an auction, market participants send their orders until noon. EPEX SPOT then closes the market and aggregates all bids into supply and demand curves. Price and volume are determined at the intersection for each hour of the following day. Results are published at 12:55.

“Five years from now, we will find ourselves in a different place”

prices and volumes on a daily basis, EPEX SPOT effectively becomes the market pacemaker.

When we created EPEX SPOT, however, it was not only for the purpose of operating different markets within one company. Our vision was also about connecting these markets in the most efficient way possible. The creation of a European-wide power market – or rather the united power markets of Europe, the

fragmented and trading across borders regularly becomes complicated. Power Exchanges have worked hard to remove these economical barriers. In 2009, we founded the Price Coupling of Regions initiative. Some call it Europe’s most important software solution for day-ahead markets, but it’s more than that. The concept is simple: Use the available transmission capacity on borders in an optimised way to enlarge the spectrum of buyers and sellers and facilitate the emergence of the most competitive price. This regularly results in higher liquidity and significant gains in social welfare to the benefit of the European economy.

power markets since the very beginning: from the pioneering trilateral price coupling between France, Belgium and the Netherlands to the entire Central Western Europe in 2010 and now North- and South-West Europe. EPEX SPOT is also preparing the next wave of Market Coupling, providing daily market operations and coupling services in several Central Eastern European countries. EPEX SPOT again is one of the pacemakers in the creation of the pan-European power market.

Five years from now, we will find ourselves in a different place. The European single market for power will be an historic achievement, and price coupling will be a standard in Europe and beyond. We look forward to this moment and continue to work on being a reliable pacemaker in both price signal and creation of the European power market, working closely with our customers in order to better match their needs in a fast changing and highly challenging environment.



1/3 of European consumption is covered by EPEX SPOT

Schengen area of electricity – is what drives us. “European-wide” also to us means being closer to our customers and public stakeholders. This is why we created, besides our headquarters in Paris and our Leipzig branch, two branches in Switzerland and Austria. Both countries are at the core of Central Europe. Our new offices, located in Bern and Vienna, show that our commitment to Europe is tangible and visible. The European power market is still

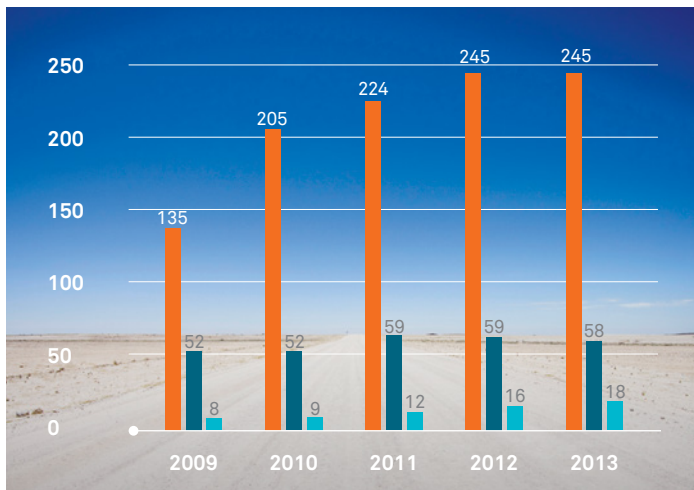
It is a silent revolution affecting the lives of hundreds of millions of European citizens – even though they can’t see it. We are delighted that the Price Coupling of Regions solution – which is compatible with all national power markets in Europe – was successfully implemented for the first time across North-Western Europe on 4 February 2014, paving the way for a quick extension to South-West Europe. It stretches from Finland to Portugal, covering some 75% of the European consumption. With it comes a set of contracts, regulatory approvals, procedures, cooperation agreements between Power Exchanges and Transmission System Operators, our close partners, and yes, software solutions.

EPEX SPOTs teams have taken part in the integration process of European

Key data

Power markets are changing quickly, and so are EPEX SPOT's markets: let's look at the evolution over the past five years

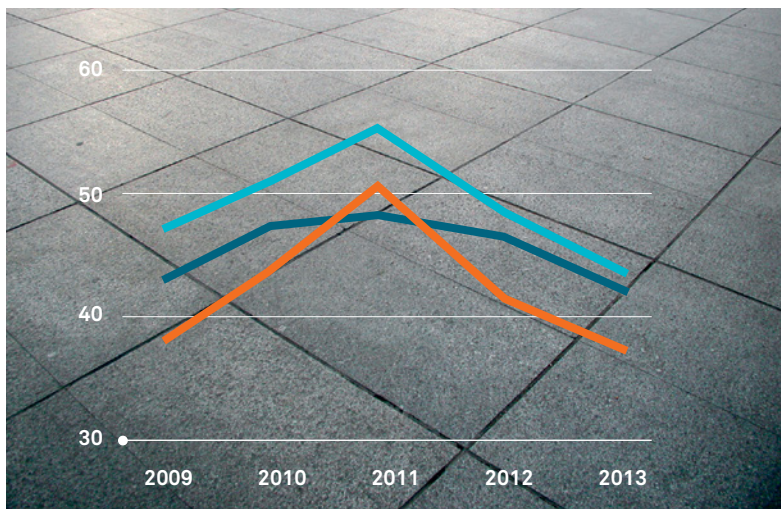
● Germany/Austria ● France ● Switzerland



“EPEX SPOT is a European success story. Within its five years of existence, the company has exceeded the initial intentions of its creation. The company is well equipped for the next steps. We are eager to accompany its crucial future contribution to European market integration.”

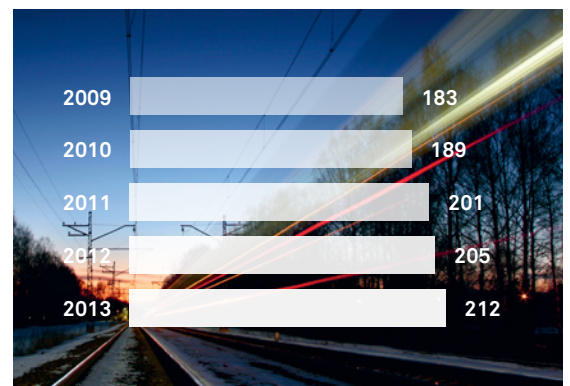
Pierre Bornard,
Vice President of RTE,
Vice Chairman of the Supervisory
Board of EPEX SPOT

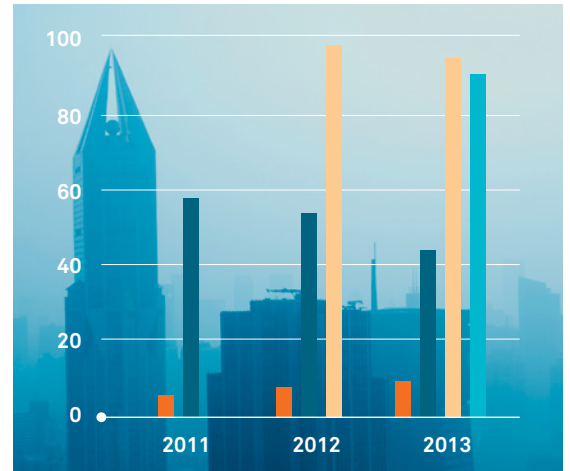
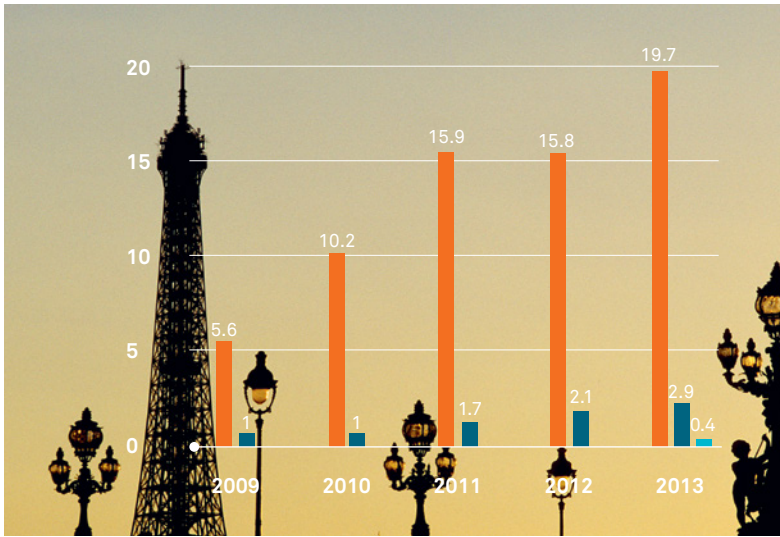
← 1. Trading volumes on all three Day-Ahead markets (in TWh)



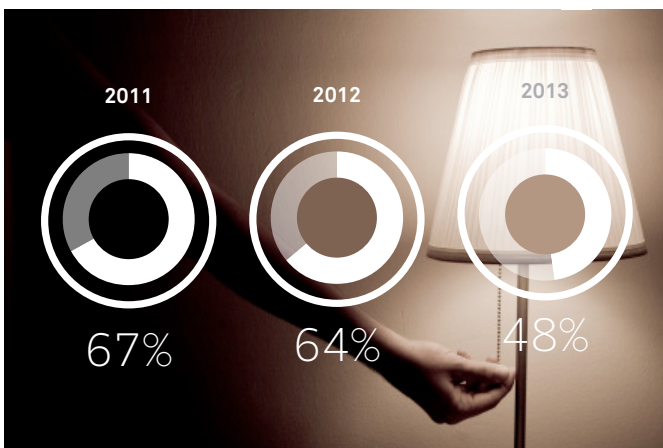
← 2. Yearly average base price of the Day-Ahead market (in €/MWh)

↓ 3. Exchange members





5. Share of cross-border volumes on the Intraday market (in %; Austrian market in pale orange)



4. Volumes on the Intraday market (in TWh)

6. Price convergence between the German and French Day-Ahead market

1. Trading volumes on all three Day-Ahead markets (Germany/Austria, France & Switzerland) have grown significantly, from 196 TWh in 2009 to 323 TWh in 2013.

2. Thanks to growing underlying liquidity, prices on EPEX SPOTs Day-Ahead markets have been a reliable indicator for the European energy sector.

3. A growing number of companies has joined EPEX SPOT – more and more are active on multiple market segments.

4. Flexibility is one of the buzzwords in power trading. The continuous Intraday markets are proof of the strong interest in very short term flexible trading.

5. Getting markets closer by automatic cross-border trading where it makes economic sense is a key goal for EPEX SPOT. On the Intraday, cross-border transactions have become a vital part of the trading experience.

6. Since 2010, the Day-Ahead markets of Germany and France have been price coupled. One of the most visible results is price convergence – when there is sufficient cross-border capacity. A figure that has been around 0 before Market Coupling.

“EPEX SPOT is not any average company. Not only is it one of the few multinationals in today’s European Power Exchanges, it has also held its ground in a constantly changing European power market. Congratulations for the achievements of the first five years!”

Dr. Jürgen Kroneberg,
Of Counsel at Clifford Chance,
Chairman of the Supervisory
Board of EPEX SPOT





TOPIC

European market integration

INGREDIENTS FOR A EUROPEAN POWER MARKET

By **Walter Boltz**, CEER Vice President and Vice Chair of the ACER Board of Regulators



avancer
go forward
fortschreiten



At the end of the last millennium Europe decided to abandon the previously applied public service approach and instead moved towards wholesale and retail markets in electricity and gas. Since then a massive paradigm shift has influenced the entire European electricity industry. The shift has been caused by the establishment of markets, and the changes in environmental policy towards low-carbon objectives and renewables targets have also exerted significant influence.



Walter Boltz,
CEER Vice President and Vice Chair
of the ACER Board of Regulators

- Worked on issues related to the liberalization of energy markets in Austria and Western Europe
- Since 2001 Managing Director of E-Control
- From 2004 to 2005 chairman of the Working Group on the Single Energy Market of the Council of European Energy Regulators
- Since 2006 Vice President of CEER
- Vice Chair of the ACER Board of Regulators

and it requires more coordination and harmonization in relation to network tariffs for example, wherever it influences the competitive situation of generators.

European Transmission System Operators (TSOs) should act using a coordinated interface towards market participants. Ideally, market parties should not notice that different TSOs are operating in different areas. This could mean that services from generators for network purposes (e.g. redispatching, balancing) are procured under a standardized framework, or that grid capacities are calculated in full coordination. As the share of RES production increases, the electricity system will also need to shift towards more short-term trading. The IEM will have to provide a robust and efficient framework for transactions shorter than day-ahead. Trading venues will have to play an important role in setting up efficient trading facilities for these time horizons.

Considering that the ultimate beneficiaries of the IEM ought to be the European consumers, emphasis needs to be put on the retail level. To truly achieve the target of an IEM, retail markets must not remain national, as national markets are only rarely sufficient for working competition. Instead, they must attract more cross-border activity from market players to give consumers a real choice.

Status Quo – markets are developing and integrating, but slower than expected

Liberalization started from national monopolies with integrated companies – very often national champions – covering the entire value chain. The fact that these market structures have not been improved sufficiently is a key influencing factor on the development of the market. Thus significant efforts have been put into market development and cross-border market integration, with the objective to enhance competition across borders. This resulted in increasing volumes on wholesale level at trading venues. Power Exchanges have played a crucial role in facilitating these developments and enabling competitive price formation.

Market integration e.g. via properly coordinated Market Coupling started gradually and needs to be further expanded. Only since being implemented in the North-Western-European Region in February 2014, did it begin to cover a large part of Europe.

A similar deployment is also required for the intraday timeframe. The current plan is for this to become a mainly continuous market, but given that the auction model has proven its feasibility for the day-ahead market this might also be an interesting blueprint for intraday markets.

What should we expect from the Integrated Electricity Market?

Coordinated and efficient day-ahead and intraday cross-border trade is certainly a key pillar for the Internal Energy Market (IEM). But beyond that, expectations for what the IEM should look like can take quite different forms. Overall, several additional elements seem to be needed to fulfill the IEM vision. First, market participants should be able to act in a so-called “level playing field” – this means that no significant differences in economic frameworks (e.g. subsidies for generation) should exist across borders. It also refers to the generation of renewables as the share of renewable technologies increases,



Which steps are still needed to achieve the IEM?

So far European policy has mainly focused on a cross-border wholesale trading target model. This has been quite successful, but will probably not be sufficient for achieving a proper IEM, since key elements remain on the national level without proper coordination.

The way that objectives for renewables are envisaged is incompatible with the wholesale market approach. A policy shift from subsidy mechanisms towards market orientation is needed for the generation of renewables. At the same time this will increase the efficiency of investments.

The strong increase in the generation of renewables has, as expected, negatively impacted the economic situation of (necessarily) conventional energy generation. A part of the conventional generation fleet is at the edge of profitability. Because of the changing fundamentals in gas and coal production (low coal, high gas and low CO₂ prices) it is mainly the production of coal power which is still profitable. This means sufficient generation might not be (commercially) available to the extent needed by TSOs for grid security purposes, resulting in two types of shortfall: firstly, the level of reliable generation might not be sufficient in the long term; secondly, flexible generation for balancing quick fluctuations for the feed-in of



renewables is uncertain. These risks have prompted discussions about the implementation of “capacity remuneration mechanisms” (CRMs) or “flexibility markets”. Both mechanisms attach value to the mere existence of available capacity as opposed to present markets, where remuneration predominantly targets production. Uncoordinated national approaches in this area endanger the proper functioning of the IEM and will result in significant market distortions.

Also, looking at the whole of Europe, there is neither a problem in the level of generation nor a shortage in flexible generation capacities. It is just not yet possible to bridge the distances between demand and supply because market rules are not yet up to this new task and grid infrastructure is not sufficient. Thus proper grid investments are urgently needed to achieve the IEM.

Successfully changing the production fleet from conventional to renewable is a challenge in itself. However, the task is even harder if national energy policies stay uncoordinated. National policies in this area have ramifications

“Successfully changing the production fleet from conventional to renewable is a challenge in itself”

on the ability of other countries to achieve their respective goals. This was acknowledged when the Third Package came into existence; the creation of ACER and ENTSO-E respectively show the institutional improvements made. Strengthening these coordination roles further is crucial to overcoming the final obstacles to an IEM in technical terms. A more coordinated energy policy is however still to be conceived.

How to build the united power markets of Europe

Energy is the next big thing in European integration. The numerous go-lives of Market Coupling projects in 2014 are the result of intense pan-European cooperation. **But how does Market Coupling work?**



There is a silent revolution going on in Europe. Its name: Market Coupling. Its goal: to use the tight capacity for power transmission between countries in an optimal way. Market Coupling optimizes the usage of existing interconnections by calculating the direction and the quantity of power flows between national markets in the best economical way, taking into account the order books sent every day by market participants to their Power Exchange. Before discussing the installation of new lines, let us look at how intelligent cooperation could be deployed to better use what is already there.

The average European citizen has barely felt this shift, as it is something happening in the background of European integration. However, the milestones reached during 2014 will fundamentally change how power is produced and traded across Europe.

Power Exchanges are the key drivers of Market Coupling. In 2009, three of them launched the Price Coupling of Regions (PCR) initiative. Today seven Power Exchanges from across Europe contribute to the design of a set of instruments to couple all European power markets.

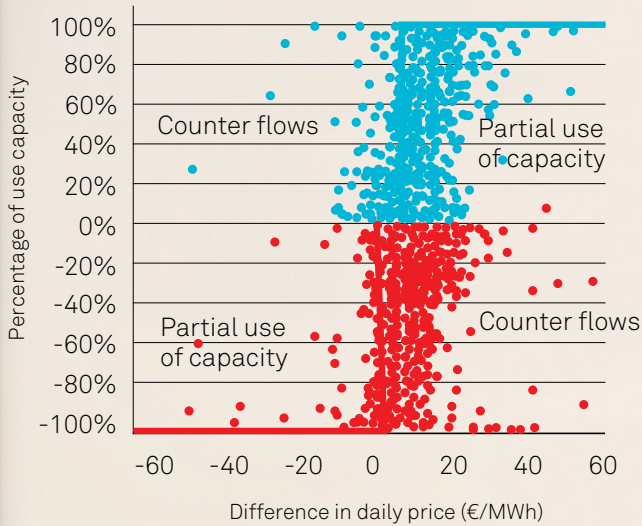
PCR was implemented for the first time in North-Western Europe. It went live on 4 February 2014 and provides a high level of operational security. Operation is decentralized and rotates amongst the Power Exchanges. All of them use one common set of software to exchange data – via the PCR Matcher and Broker, the PMB – and to calculate flows and prices, via an algorithm called EUPHEMIA.

Other regions – South-Western Europe, the borders of Italy, Central Eastern Europe – will be coupled in the near future. All of them will rely on the PCR solution. Eventually the regions will couple altogether to form some sort of federation of power markets, and the united power markets of Europe will become a reality.



Before

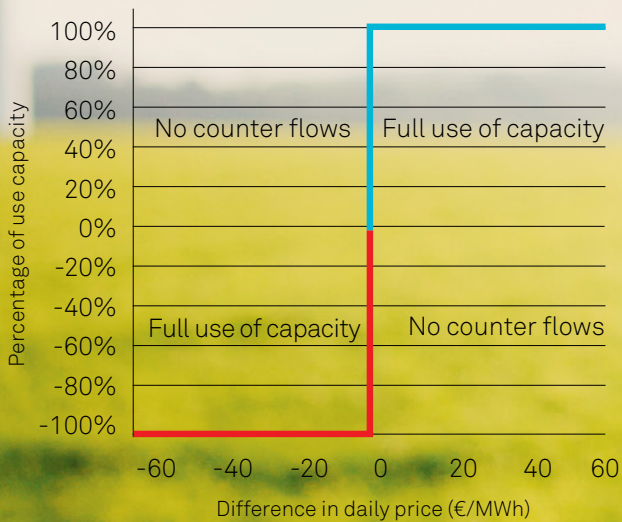
Interconnector use without Market Coupling



Before Market Coupling, power traders had to anticipate price differences between markets. Based on their assumptions, they reserved cross-border capacity on the interconnector. This often resulted in cases where capacity was not fully used (dots in upper right or lower left quarter) or used in the wrong direction (dots in upper left or lower right quarter).

After

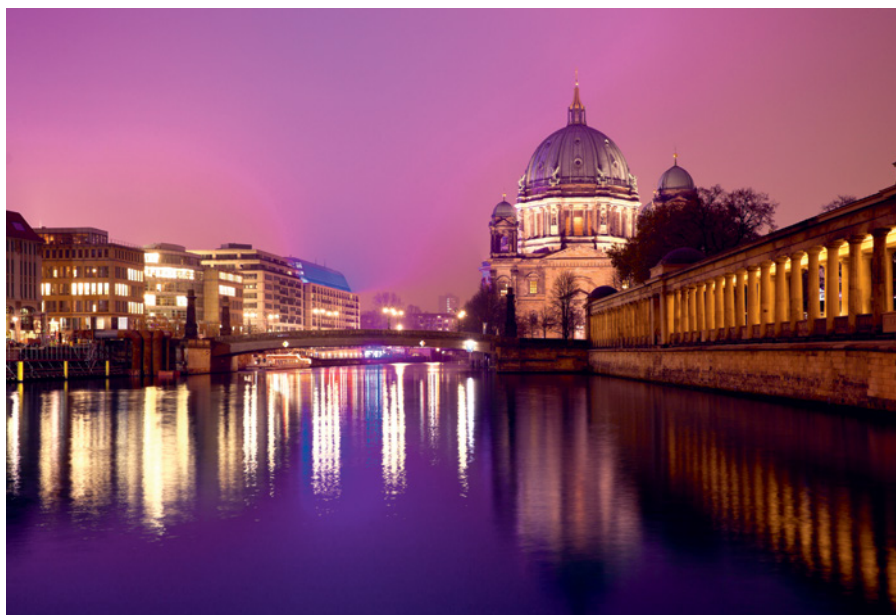
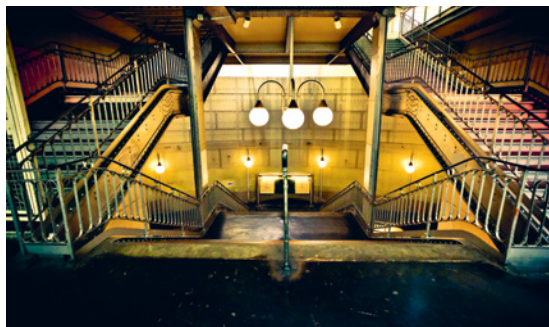
Interconnector use with Market Coupling



With Market Coupling implemented, cross-border capacity is used according to Power Exchanges' order books. Flows then automatically follow the price signal. Not only the direction, but also the quantity of flows is economically optimal. Increased price convergence is one of the most visible results, even though not the main goal of Market Coupling.

True, false, not that simple

What do you know about power markets? Or rather: **what do you think you know about them?** Here we look at some of the commonplaces of power trading and check their validity



The market price is not part of the final consumer's bill.

False

The daily publication of a price based on the European-wide confrontation of supply and demand really is a substantial component of the final consumer price. It is the most fair and transparent manner to determine the right value of electricity at a specific point of time – which is critical as power can't be stored unlike other commodities, and has to be consumed the moment it is produced. There is a downside, however. Depending on the national framework, the price for the final consumer may be determined more by taxes and charges than by the market price. In some countries, the market price has dramatically little impact, as its share in the consumer's final price accounts for only a quarter. Furthermore, some European countries still apply pre-determined tariffs instead of prices for final consumers.

●●● [see more on page 18](#)





Europe is the right dimension for energy.

True

In the last two decades, Power Exchanges have emerged in Europe. They organize the markets, but are often designed to operate on the national level. However, in order to increase security of supply and overall efficiency, it is vital to connect these markets. The magic word for this is price coupling.

Price coupling is a method to use existing interconnections between countries in the best way possible. In so doing, liquidity across all markets rises and extreme low and high prices can be buffered or avoided. Energy independence becomes energy interdependence. The European Power Exchange takes part in this process since the very beginning; this is why the company was founded in the first place. The creation of a pan-European market by coupling national power markets benefits all Europeans – the right dimension for energy truly is Europe.

●●● [see more on page 8](#)



Negative prices are bad news.

Not that simple

First of all, negative prices are an integral part of the market – a pure and simple signal like every other price. They reflect an oversupply in the current balance of supply and demand. Negative prices occur as soon as a lot of inflexible power generation meets low demand, something that may happen during night, on weekends or on holidays.

Negative prices may harm some market participants at first glance: They produce electricity and have to pay someone to get rid of it. But behind every action, there is economic reasoning: In some cases, it is financially more interesting to keep a power plant up and running instead of shutting it down and booting it up again, as this process can be costly. In the end, negative prices are an indicator for market participants on which economic decisions can be taken. And in the long term, they will incite producers to more flexibility.

●●● [see more on page 20](#)

INTRADAY

The second pillar of the short-term power market. Trading happens continuously until 45 minutes before delivery. Trading participants send orders which can be matched and executed at any moment. All four EPEX SPOT's Intraday markets are connected through cross-border trading.

The power market lacks transparency.

False

The power market may be complex. But once you understand its basic functioning, it is one of the most transparent markets imaginable.

Market participants send their orders for supply and demand of electricity for every hour of the following day to EPEX SPOT. The Exchange then aggregates them which results in two curves. The market outcome – price and volume – is at the intersection of these two curves.

This market data is published every day on EPEX SPOT's website, providing a clear insight into the market's situation and development. Of course the data is accumulated and anonymised so that single transactions stay invisible. It's the sum of all offers and transactions that paint the picture of the market and tell a story to traders and market participants – the price signal shows them where to best invest.

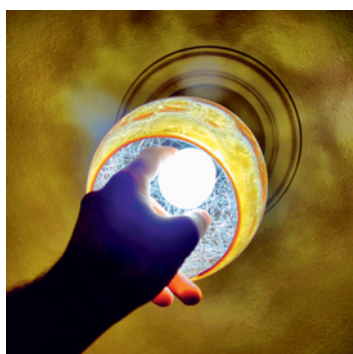
To prevent abuse, an independent Market Surveillance office monitors the orderly trading on the Exchange and the orderly settlement of transactions. This team of specialists is also in permanent contact with regulatory authorities across national markets and all over Europe.

●●● [see more on page 6](#)

Journey of a Megawatt

I am power.
 I am your light.
 I am your warmth.
 I am with you when you watch TV, cook your meal, surf the web, make a call. You take me with you on your journeys.

I am electric power.



For you, I'm just something that flows out of a plug or a battery. You don't think about the system behind it. You don't think about the effort taken to bring me to your home, to your office, to you.

I have traveled the lands, sometimes across Europe. I may be born on a wind farm in Norway, a hydro station in Switzerland or a coal-fired power station in Germany. I may come from a nuclear reactor in France or a gas-fired power plant in Great Britain.

It doesn't matter.

There is no certainty, as European power markets are interconnected. I am part of the huge physical power pool flowing through the grids. Sure, production and consumption have to be balanced at any time. The instant I am produced, I have to be consumed.

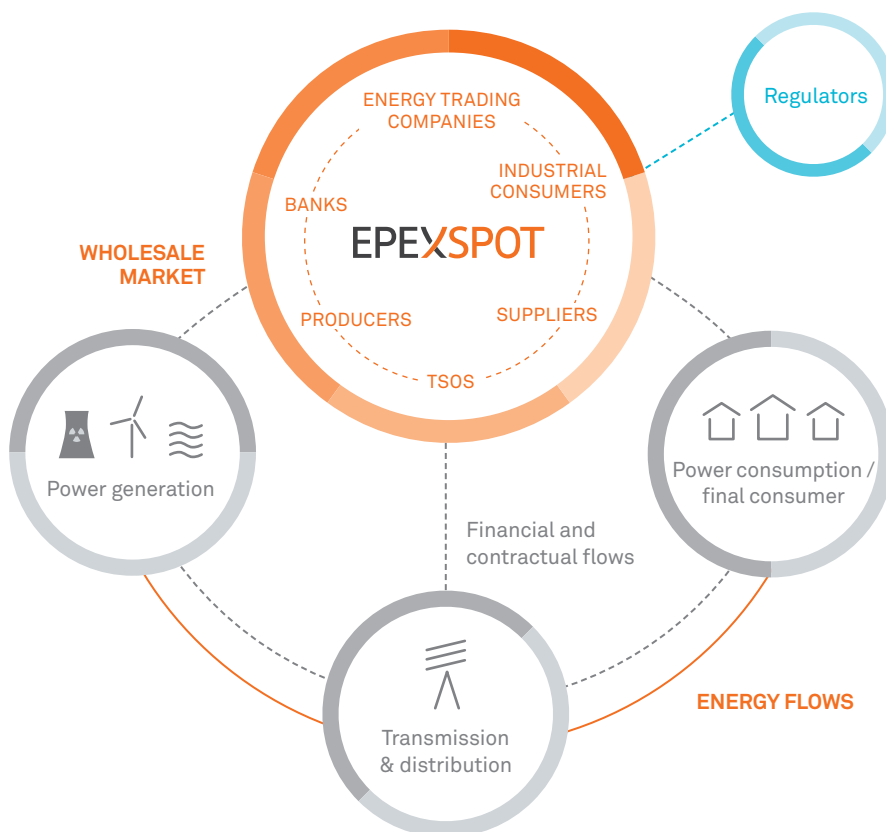
Power markets help to fulfill this task. They are the platform to balance production and consumption between companies. However, physical and contractual flows do not necessarily match. I respect the laws of physics, and they tell me to flow wherever resistance is the lowest.

I am both produced and consumed within instants, and thousands of kilometers can stretch between these two events. You will store me in batteries, but not a lot. It is very difficult to catch and hold me. That is why the supply and demand of electricity have to be matched instantly and precisely. And my value differs from hour to hour and from day to day.

My value is determined on these power markets. I don't pass through them physically, but they are like a barometer for me and my availability. The companies declare their needs and from these bids comes my fair value in a democratic manner.

The companies trade anonymously on EPEX SPOT's markets, as the settlement is organized via a clearing house which reclaims the money pertaining to the trade and the delivery of, well, myself. I am so important, so crucial for society that security of trading and supply is of highest priority. That's the story behind the plug.

I am power, and I am part of your life.



WITH 1 kWh, YOU CAN...



make **70 mugs of coffee**



do **your laundry**



move or **lift 1 t of mass** by 367 m



accelerate **1 t of mass** to 85 m/s
(= 305 km/h)



cook a meal
for 4 people



take a **shower**



listen to **40 hours of music**



copy **1000 pages**



lighten a **60W bulb**
for **17 hours**



wash **140 dishes**
with a dishwasher



use your **computer**
for **5 hours**



if you are a man,
shave yourself daily
for **3 years**

1 kWh IS STORED IN...



between **50 and 100 standard batteries**



roughly **1 fully charged car battery**



roughly **0.1 l of fuel**

The Fair Value of Electricity

The evolution of electricity prices has been under severe scrutiny these past months and years, as they increasingly burden both households and industry

Alarmed by a potential deterioration of national or even European competitiveness, rising electricity prices have climbed to the top of the political agenda. Recent discussions on renewable energy support schemes or surcharge exemptions for energy-intensive companies reveal the extent of discomfort. In this context, the European Commission recently published a report on energy prices and costs, mainly focusing on electricity and gas prices.

Public discussions on rising electricity bills are necessary and useful, especially when they contribute to a greater understanding of fundamental notions: what makes up an electricity bill? And what is the difference between consumer and wholesale prices? What is the role of a Power Exchange? And why are electricity prices on consumer bills increasing when wholesale prices on the Exchange are actually in decline?

What are the components of an electricity bill?

The number of components that make up a consumer bill can be overwhelming, as can the complexity of the markets on which electricity is actually traded. Essentially, the consumer bill is driven by the quantity of electricity which is consumed (measured in kWh), and by the actual price consumers pay for this electricity (measured in €/kWh).

A closer look at consumer electricity prices reveals they are composed of three main elements:

- The cost of energy, comprising costs incurred by power plant operations or activities on the wholesale markets, as well as retail costs incurred by the sale to the consumer;
- Network costs, comprising costs related to the use of transmission and distribution infrastructure;
- And finally public charges, such as taxes, contributions, etc.

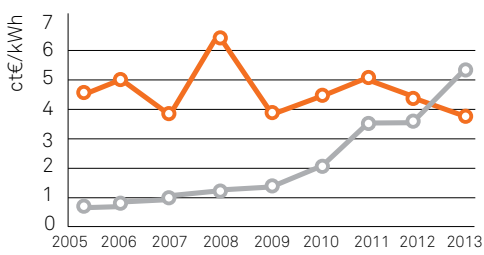
The consumer electricity price thus reflects a sum of sub-costs. Each of those sub-costs can show a different dynamic: while some might decrease (e.g. lower prices on electricity wholesale markets), others might increase at an even bigger rate (e.g. surging taxes or contributions).

Power Exchanges play a fundamental role in determining wholesale electricity prices

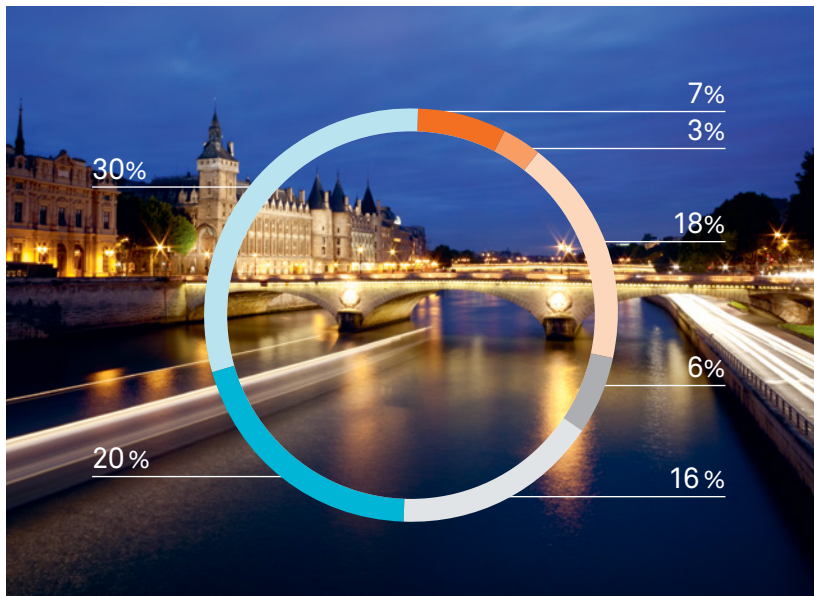
Consumer electricity prices are not homogenous all over Europe: for example, in some countries such as Spain, France or Denmark, they are mostly regulated by the State. And in other countries such as the Nordics, the UK or Germany, electricity prices are partly deregulated: while network costs and public charges remain mostly regulated, the “cost of energy” element of electricity bills is increasingly determined in a competitive way on wholesale markets. As a matter of fact – besides production and distribution – trading on wholesale markets has become the third pillar of the energy value chain since the liberalization of the energy sector in the mid-90s.

While wholesale electricity markets cover several needs – trading of long (derivatives) or short term (spot) contracts, bilateral or multilateral negotiations, transactions over-the-counter (OTC) or on organized markets (Power Exchanges) – they all have a common objective: bringing together supply and demand, in order to define a competitive wholesale price for electricity.

This is where Power Exchanges – such as EPEX SPOT – play a fundamental role: they offer access to liquid, secured, non-discriminating and European-wide markets for energy professionals such as utilities, retailers, network operators,



Legend: EEG-Levy in Germany (ct€/kWh), EPEX SPOT Phelix Base (ct€/kWh)
Analysis: EPEX SPOT, Sources: BDEW, EPEX SPOT



municipalities, large industrial or financial players. In return, the encounter of the largest possible supply and demand results in a representative and transparent wholesale price used as a European-wide reference. EPEX SPOTs hourly electricity prices are available anywhere at any time via our website or by text message.

Rising electricity bills and decreasing wholesale electricity prices

As shown before, consumer prices are the sum of several components – the wholesale price is one of them and has dropped over the past months and years. This decrease can be attributed to changing market fundamentals: declining consumption in the aftermath of the economic crisis, regional overcapacities, transformation of national energy mixes with increasing share of renewables, dropping coal prices in Europe following the US shale gas development, low prices for carbon emission certificates, etc. Also, regulatory interventions such as promotion of renewable energies combined with insufficient market integration, price regulation and the like contribute to dropping wholesale prices.

However, decreasing wholesale prices don't necessarily stop consumer prices from rising. Wholesale prices only represent a small share of consumer

prices. In Germany, the market-based wholesale price represents less than 30% of the actual consumer price – the remaining 70% are regulated or public charges, such as network costs or taxes and contributions. In 2013, solely the contribution for renewable energies amounted to 5,3ct/kWh and exceeded the EPEX SPOT wholesale price of 3,8ct/kWh. And this paradoxical dynamic perseveres: 15 years after the liberalization of the European energy market, the market-based component of electricity prices is as low as never before – and continues to decline.

Another driver behind rising electricity bills is the fact that inadequate consumer prices can lead to unreasonable consumption levels. In France, regulated prices are lower than in Germany – however, household electricity bills are comparable: As low electricity prices don't incentivize energy efficiency, per capita consumption in France is over two times superior to Germany.

What is the fair value of electricity?

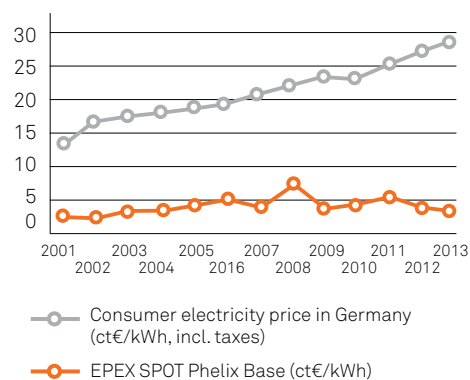
It is wishful thinking to expect "cheap" energy in times when electricity markets are facing a profound transformation and global growth in population and industrialization are increasing energy-dependency. In fact, "fair" electricity prices can only be achieved by the large-scale, democratic encounter of supply and demand on transparent markets.

CONSUMER ELECTRICITY PRICE (GERMANY)

- Electricity tax
- Offshore and cogeneration levy
- EEG levy
- Concession levy
- Value-added tax
- Grid costs
- Supply costs

Public charges make up the majority of the power price: the production costs of power which is reflected in wholesale market prices on EPEX SPOTs markets represents only a small part – about 30% – of the price final consumers pay in Germany. This does more or less apply to other European countries such as France.

Analysis: EPEX SPOT, Sources: BDEW, BMWi, Fraunhofer Institute, EPEX SPOT



Analysis: EPEX SPOT, Sources: BDEW, BMWi, EPEX SPOT

In this respect, the existing Energy Only Market needs to be strengthened, European electricity markets should be connected through Market Coupling, renewable energy sources have to be integrated efficiently into the market and system, and Demand Side Management and storage technologies need to be developed.

However, electricity bills will continue to surge as long as regulated charges, taxes and contributions represent the overwhelming share of consumer prices, as long as wholesale prices continue to play a marginal and progressively diminishing role, and as long as electricity prices don't serve as signal to incentivize energy efficiency.



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TOPIC

**Energiewende,
Transition Energétique,
Energy Transition and
Transformacja Energetyczna**

THE CHALLENGE
OF FLEXIBILITY
TO EUROPEAN
POWER MARKETS

By Dr. Patrick Graichen,
Executive Director of Agora Energiewende

T

he transformation of European power sectors towards a low carbon, competitive and secure system is probably the most ambitious and challenging industrial project of our time. Photovoltaic and wind energies will play a key role in this context, in Germany as well as in several other energy transition strategies. Their development implies an ambitious new market design towards more system flexibility at European level.

In recent years, the European Union adopted ambitious goals to move towards a low carbon economy and fully integrated energy markets

Although European countries pursue different strategies to achieve these goals, they are facing similar challenges in terms of cost-efficiency, security of supply and sustainability.

Germany is playing a prominent role in this transformation process, having adopted one of the most ambitious energy transition programs – the so called *Energiewende* – of all industrial nations. With this strategy – adopted more than a decade ago and reinforced after the Fukushima nuclear accident – the country plans to fundamentally transform its power sector from nuclear and coal to renewable energies within the next four decades.

Other Member States have also seized the economic and industrial opportunities of energy transition strategies and the development of renewables. In France, President Hollande's commitment to reducing the share of nuclear energy in the power mix to 50%, together with ambitious goals for the development of renewables and energy efficiency, have created a new French energy transition paradigm (*transition énergétique*), serving as a common ground for stronger energy cooperation with Germany.



Solar and wind will be the backbone of most international energy transition policies

After two decades of technological developments, the total costs of wind and photovoltaic energy generation (the “levelized cost of energy”) are closing in on equal to those of new thermal power plants: between 70 and 100 €/MWh in 2015. They will therefore play a central role not only in the German *Energiewende* but also in most other international energy transition strategies. However, the characteristics of photovoltaic and wind energy are radically different from those of fossil fuel power plants: weather dependency and rapid fluctuations, high capital costs and virtually no operating costs. These features will fundamentally alter our power systems and power markets.

The deployment of solar and wind energy in Europe therefore requires an ambitious strategy for enhancing power system flexibility: incentives for demand-side management and new flexible back-up power plants, extension of grid infrastructures and storage. In relatively inflexible European power systems, which are based on old thermal power assets (coal or nuclear), managing this transformation will be challenging. Several studies have nonetheless shown that it is technically feasible. Furthermore, costs would not necessarily be higher than in ‘old systems’, if one is prepared to rethink power systems in a more fundamental way.



Needless to say, the cost allocation of this transformation is a key factor for preserving the competitiveness of industrial nations, like Germany. In this context, the German government decided to amend the renewable energy support scheme, aiming at better controlling the costs. However, the real challenges of integrating wind and photovoltaic energy into the power system call for a much more fundamental reform.

Current market conditions do not provide sufficient incentives for transforming the European power sector

Energy markets play an important role in balancing supply and demand in a cost-effective way and in integrating the various actors in the power



Dr. Patrick Graichen,

Executive Director of the Berlin-based think tank Agora Energiewende

- From 2001 to 2012 Federal Ministry of Environment, from 2007 as Head of the Unit for Energy and Climate Change Policy. In charge of negotiating the design for the economic instruments used in the Kyoto Protocol, the Integrated Energy and Climate Programme (2007) and the EU's Climate and Energy Package (2008)
- Joined Agora Energiewende in 2012 as Deputy Director
- In January 2014 successor of Rainer Baake as Director of Agora Energiewende

sector. They optimize the use of the interconnections and stabilize price fluctuations. Today, nevertheless, existing European energy and CO₂ markets provide insufficient incentives for a secure, cost-effective and sustainable transformation of the power sector.

The market deficiencies are threefold:

Firstly, wind and photovoltaic energy will not be able to refinance themselves on current wholesale electricity markets, as the price mechanism on these markets is based on marginal costs – and the marginal costs of wind and solar are zero. This remains true even if their overall costs become lower than those of coal and gas. The development of these two technologies (reaching already respectively 32 and 35 GW in Germany in 2013) will therefore continue to reduce the wholesale power price when the wind blows and the sun shines; wind and solar are in a way “destroying” their own market prices. Abolishing priority access of renewables in the grid will

not change this effect. This situation is already leading to historically low, and sometimes even negative prices on the German spot market.

Secondly, with an increasing share of renewables, the operating hours of fossil-fuel power plants is decreasing. Under current market conditions, some of these power plants – which are essential to cover peak-load any time – are not able to recover their fixed costs. In the medium term, it is doubtful whether new flexible power plants will be built and existing ones will be kept operating. The consequence would be a lower level of system adequacy.

Thirdly, the historically low CO₂ prices on the European emissions market (ETS) provide no incentives to switch from coal to (less carbon intensive) gas power plants. As a result, since 2011 the CO₂ emissions of the German power sector have been increasing, even though the share of renewable energy augmented. This “Energiewende paradox” is explained by low coal, low CO₂ and high gas prices.



This situation is leading German coal power plants to push gas power plants out of the market – in Germany and its neighbouring countries – causing strong growth in electricity exports, associated with an equivalent increase of German CO₂ emissions.





The current market deficiency requires an ambitious new market design response at EU level

In order to encourage investment in new capacity, European countries have to rethink the design of the electricity market. Much can be done within the current framework, e.g. enhancing intra-day markets, closer cooperation in balancing markets, shorter gate closure times. Besides that, new market-based mechanisms should be set up for enhancing system flexibility (demand response, flexible generation or storage).

These solutions may however not be sufficient. An additional capacity mechanism may have to be introduced in order to guarantee system adequacy. Designing such a mechanism requires great care, in order to avoid windfall profits and distortions on the energy-only market. While some European countries – including France, Spain and the UK – have already decided to introduce these mechanisms, Germany is still considering the best solution to implement. In any case, enhanced cooperation, starting at the regional level, will be particularly important for optimizing the interactions between national systems.

New market instruments must also be designed for attracting investments in renewables, so that their development targets can be reached at the lowest cost. Here again the current national support mechanisms should be gradually thought in a broader European context. Many studies have shown tremendous efficiency gains from closer cooperation in the renewable sector. A stepwise convergence on regional and – at a later stage – European levels should therefore be envisaged.



Stronger European integration of power sectors will create positive welfare effects for all

During the last two decades, several steps have been successfully implemented for integrating European electricity markets: liberalisation of the electricity sector, development of cross-border interconnection, wholesale market-coupling. EPEX SPOT has played an active role in this process. According to the current schedule, the Third EU Energy Package will be fully implemented by 2015. No doubt that a deeper integration of electricity markets, in favour of the energy transition, will become possible.

The ongoing integration process yields considerable benefits in comparison with isolated national solutions. For example, sharing generation resources can help to achieve system adequacy at lower costs; cross-border interconnection gives access to the most cost effective flexibility option across Europe; solar and wind fluctuations are compensated over larger geographic areas.

Despite the obvious advantages of close cooperation, many governments

still view energy policy first and foremost as a domestic domain. Furthermore, an increasing number of stakeholders – especially among Germany's neighbours – have been increasingly blaming the *Energiewende* for bringing instability to the power systems. However, since new wind and photovoltaic installations are now competitive low-carbon technologies, what we are experiencing today in the German power system is – according to studies done by the European Commission for the EU Energy roadmap 2050 – a snapshot of the future situation in most, if not all European power markets.

The current challenges – which reflect the lack of flexibility of current power systems – have to be addressed through intense regional and European cooperation. A fourth EU Energy package enhancing power system flexibility should be the key instrument for energy transition strategies in the European context. Isolated national solutions can no longer exist, in a market where cross-border power transactions take place on a daily basis.

These energy transitions are probably the most ambitious and challenging industrial projects of our times. They can and will succeed only if they are engaged jointly and beyond national borders!



STRENGTH- THENING EUROPE'S POWER MARKET

EPEX SPOT's mission is to build and to operate the European power market. While the operation of spot Power Exchanges, by guaranteeing the reliable formation of spot prices, necessitates skills that EPEX SPOT has gathered over the years, building the European power market raises the bar with every new project. During the past year, huge steps towards achieving the Internal Energy Market have been made, from the first implementation of PCR in North-Western Europe to the launch of the Swiss Intraday market.

Discover more on the pages to come.

bauen
construire
build

The story has only just begun

Five years are not a long time. Not a long time to build up a reputation. Not a long time to build a company. The European Power Exchange has succeeded in building up both – it is today a strong company with state-of-the-art governance, known and accepted throughout the European power sector

Report of the Supervisory Board
**By Dr. Jürgen Kroneberg
and Pierre Bornard**

Three factors have been the key to success. Firstly, EPEX SPOT is guided by the importance of involving all major European stakeholders. The two-tier governance established in 2012 was the starting point for a transparent evolution within the company. Together with the Exchange Council, an elected board of representatives composed of Exchange Members, it provides the necessary channels of input and feedback an international market operator such as EPEX SPOT needs.

Secondly, EPEX SPOT can build upon a solid financial foundation. The construction of the European power market necessitates tremendous efforts, and the company is facing significant entrepreneurial challenges. However, with the cost-effective operation of its power markets, it is well armed for current and upcoming evolutions of the European power sector.

Thirdly, EPEX SPOT benefits from its strategy in human resources. The European Power Exchange has recruited a team of young and skilled professionals who are devoted to European integration. This is a key asset in which the company continues to invest. On 31 December 2013, EPEX SPOT had 77 employees - an increase of 23 compared to a year earlier. This increase benefits market operations, service quality and European power market integration projects.

The company flourishes due to strong interaction with actors across Europe. The challenges we face, however, have changed over the past five years. The company initially managed the early days of Market Coupling during its implementation in Central Western Europe, at the root of today's imminent European Internal Electricity Market. Nowadays, EPEX SPOT's responsibilities are much bigger: Operating four markets and servicing several other markets through market operations and coupling, it is involved in every regional price coupling initiative in existence – with these figures likely to increase. The story has only just begun.

Five years may not be a lot of time to build a company and a reputation. Yet, five years can still seem long, especially in a fast moving sector such as power trading.

MARKET COUPLING / PRICE COUPLING

What if your ideal counterparty was sitting right across the border in the next country? You would have to trade in two countries, plus you would need to reserve transfer capacity on the interconnector – in the right direction. With Price Coupling, also known as Market Coupling, Power Exchanges integrate the available cross-border capacity directly into the calculation of market prices – and determine optimal flows and prices in one single step.

The Supervisory Board of EPEX SPOT (from left to right)

Olivier Bloeyaert

Deputy Director Portfolio and Risk Management at GDF SUEZ

Jonas Törnquist

Head of Economics and Regulation at EDF

Pierre Bornard

Vice President of RTE and Chairman of the Board of Directors of Powernext, Deputy Chairman

Daniel Dobbeni

Chairman of the Board of 50Hertz GmbH

Dr. Jürgen Kroneberg

Lawyer and Chairman of the Supervisory Board of EEX, Chairman

Dr. Hans-Jürgen Brick

Managing Director, Chief Commercial Officer and Chief Financial Officer at Amprion

Dr. Egbert Laege

Chief Commercial Officer Asset Optimization at E.ON Global Commodities and Member of the Board of Management of E.ON Ruhrgas

Jean Verseille

Director of European Affairs at RTE

Peter Reitz

CEO of EEX and ECC

Hans E. Schweickardt

Chairman of the Board of Directors of Alpiq Holding AG

Not on photo

Ulf Heitmüller

Executive Director EnBW Trading GmbH (Spokesperson) - Area Energy Industry

Mel Kroon

President and CEO of TenneT



Being European – and how we communicate it

How to be European? For us, it means being close to the people in our markets. Close to clients, close to stakeholders, close to the media: that's why EPEX SPOT recently opened offices in Bern and Vienna

Once upon a time, there was a Greek girl called Europe. Zeus, the god of sky and thunder and ruler of Mount Olympus, fell in love with her. In order to be able to speak to her he transformed into a bull and won her heart. Quite a hassle just to get in contact with someone...

Greek mythology may be far removed from 21st century life. Nowadays, Europe is a continent rather than a woman and Mount Olympus has morphed, metaphorically speaking, into an eclectic place called Brussels. Still, "European" communication has remained one of the key issues of today.

How should we communicate with our European public? Founded on Franco-German cooperation, this is one question the European Power Exchange is constantly confronted with. And there is no simple answer – more a set of features to bear in mind.

Most importantly, you need to have national roots. Being European implies being diverse – in terms of mother tongue, traditions, and national background. It is not, as in the ancient myth, about transforming or disguising. In order to become European and to communicate authentically with local stakeholders, a local voice with European conviction is the basis of good and successful communication.

EPEX SPOT is based in Paris with an office in Leipzig, a structure that has proven efficient for the first years of its existence. Yet, institutional and customer relations in Austria and Switzerland needed to be strengthened in the light of the creation of a pan-European power market. On 1st December 2013, we opened our office in Vienna. In April 2014, a subsidiary of EPEX SPOT in the center of Bern, Switzerland, followed.

INTERNAL MARKET

The overarching goal behind Market Coupling – an almost-borderless power market for all Europe. By connecting all national markets, economical gains of millions of Euros per year can be made.

More fundamentally, communication to a larger public has to be underpinned, and frequently preceded, by institutional communication towards the public stakeholders: government, regulatory authorities and professional energy associations. It is the mission of the Public Affairs & Communications Department to regularly interact with the respective ministries in Berlin, Paris, Bern and Vienna as well as the relevant Directorates-General in Brussels. Both dimensions of the Department belong together: Public Affairs without Communication is rootless; Communication without Public Affairs is fruitless.

So, in the Austrian and Swiss cases the offices serve as an interface for the various stakeholders in government, or in energy associations. Legislation on energy topics can more easily be followed when locally rooted. For example, Switzerland and the EU negotiate the terms of how Switzerland participates in the EU Internal Energy Market. An essential means to achieve this is Market Coupling, and subsequently a spot Power Exchange



**The Public Affairs
& Communications Department
of EPEX SPOT
(from left to right)**

Arnold Weiß
Head of Vienna Office

Caroline Antoine
Communications & Market Data

Dr. Wolfram Vogel
Director Public Affairs
& Communications

Patrick Adigbli
Head of Public Affairs

Davide Orifici
Head of Bern Office

Jonathan Fasel
Communications & Press

is needed. As EPEX SPOT has been operating the Swiss market since its creation, we naturally felt the responsibility to give the organized market in Switzerland a face. The same applies for Austria in different contexts such as close relations to our local customers.

Zeus, by the way, finally revealed his true nature to Europe; only then did she fall in love with the god. It's the same old story: good communication is all about authenticity.

Activities 2013: Strengthening Europe's power market

As the hour draws near for the completion of the EU Internal Energy Market, the activities of EPEX SPOT are fully focused on its achievement



Price Coupling optimizes the allocation of cross-border capacities and increases the Day-Ahead social welfare

Integration of power markets

On the Day-Ahead market, the integration process is driven by the Price Coupling of Regions – PCR – which is the Initiative of six European Power Exchanges (APX/Belpex, EPEX SPOT, GME, Nord Pool Spot, OMIE and OTE) for the development of a price coupling solution which ultimately will be used for European Price Coupling.

The initiative started in 2009. The PCR parties signed the PCR Cooperation Agreement and PCR Co-ownership Agreement in June 2012. PCR is open to other European Power Exchanges wishing to join.

PCR is based on three main principles: a single algorithm, decentralized and robust operation and individual Power Exchange accountability. The common algorithm will give a fair and transparent determination of day-ahead electricity prices across Europe and has been developed by respecting the specific features of the various power markets in Europe. It will optimize the Day-Ahead social welfare and increase transparency.

The PCR Matcher & Broker service enables the exchange of anonymous orders and

area-to-area transmission capacities among the Power Exchanges to calculate area prices and reference prices and area-to-area transmission flows for all integrated bidding areas. Each Power Exchange will continue to use its own trading system. A governance structure is established based on agreements containing rules of cooperation among the Power Exchanges and on the joint ownership of the algorithm and the data exchange system. This is a vital pillar for cooperation between the Exchanges.

By jointly developing a pan-European Market Coupling algorithm and coordinating the governance between Power Exchanges, the Price Coupling of Regions initiative facilitates the way to the European Day-Ahead Target Model, due by 2014. The Target Model consists of a pan-European price coupling solution as described in the Capacity Allocation and Congestion Management Framework Guidelines published by the Agency for Cooperation of Energy Regulators, ACER.

The European Commission and ACER have confirmed the compliance of PCR with their targets. PCR is built involving all stakeholders and reports regularly to the AESAG¹ plenary meetings chaired by ACER. The European association of Transmission System Operators, ENTSO-E, and the association of

1. ACER Electricity Stakeholder Advisory Group



European Energy Exchanges, Europex, collaborate with PCR in the framework of the European Price Coupling. There are several coupling initiatives in progress in different regions in Europe that are using (North-Western and South-Western Europe) or are preparing to use (4M Market Coupling, Italian Borders Working Table etc.) the PCR solution.

The first of these regions is North-Western Europe (NWE), which went live on 4 February 2014. The project saw its final stages of development in 2013. NWE Price Coupling was initiated by the Power Exchanges and Transmission System Operators (TSOs) of the countries in North-Western Europe. NWE Price Coupling is the first implementation of the PCR solution which will be the engine for the upcoming pan-European power market.

NWE covers Belgium, Denmark, Estonia, Finland, France, Germany/Austria, Great Britain, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland (via the SwePol Link), and Sweden.

The NWE Price Coupling has been extended quickly to cover the Iberian

peninsula and the French-Spanish border, the so-called South-Western Europe (SWE). Based on the PCR solution, the region coupled to NWE on 13 May 2014. The quick and efficient implementation is proof for the robustness and reliability of the PCR solution.

Since 11 September 2012, trilateral Market Coupling has been in operation between the Czech Republic, Slovakia and Hungary. EPEX SPOT has been chosen by the participating Power Exchanges as the facilitator and provider of state-of-the-art price coupling services: These services consist of implementing and operating the coupling solution, relying on the Price Coupling System (PCS) with COSMOS as matching algorithm, the system developed and used by EPEX SPOT within the framework of Central Western Europe before the implementation of NWE. The cooperation, which was continued throughout 2013, is a pragmatic step for the further integration of spot markets. It is a prerequisite for getting to the pan-European power market, as supported by the European Commission. ●●●



The Price Coupling of Regions is based on three principles: one single algorithm, decentralized and robust operations, and individual accountability of each Power Exchange



●●● In May 2014, the three countries and Romania announced the launch of the 4M Market Coupling project. It will rely on the PCR solution and extend the Market Coupling to Romania. EPEX SPOT has been recently selected as PCR service provider by OKTE, HUPX and OPCOM with the goal to operate the 4M MC.

On the Intraday market, services were extended to Switzerland on 26 June 2013. The new market, running on ComXerv, was instantly connected to the existing Intraday markets in Germany, France and Austria and benefits from the spread of liquidity created by cross-border trading opportunities. It is also the second market offering 15-minute contracts, which can now be traded cross-border for the first time. The market quickly gained traction amongst market participants and has seen almost half a TWh of traded volume up to 31 December 2013.

Meanwhile, the integration process was impacted by discussions on the choice of the pan-European Intraday solution. In 2012, the Power Exchanges of Europex were assigned by ACER to organize a tender to select the system provider of the Intraday Target Model. This tender did not lead to a consensus amongst Power Exchanges. This is why, in the course of 2013, ACER expressed its preference for one particular system featured in the tender. By the end of 2013 Europex Power Exchanges were in negotiations with the vendor of the preferred solution. The company, Deutsche Börse AG, has been providing the Intraday system to EPEX SPOT for many years. In parallel, they started working on the necessary contractual framework.

International business

The European power market is a blueprint for a well-functioning, yet diverse market; its integration process is a prototype for other countries and regions. EPEX SPOT is situated right in the center of this market and its integration process and is therefore a natural interlocutor for power trading companies and institutions outside of Europe. EPEX SPOT is keen on sharing its expertise and learning from partners from other world regions. In 2013, new relationships have been established and existing ones have been reinforced.

In response to increasing needs for a competitive, sustainable and secure electricity market, the Brazilian Chamber of Electric Energy Commercialization (CCEE) joined forces with EPEX SPOT and European Commodity Clearing (ECC). The partners started cooperating in 2012 in order to design state of the art trading and clearing solutions for the Brazilian power market. In April 2013, CCEE and EPEX SPOT signed a Cooperation Agreement to set up a Power Exchange for Brazil.

In March 2013, Indian Energy Exchange (IEX) and EPEX SPOT announced the signing of a Memorandum of Understanding. Both companies will cooperate in sharing knowledge on the development of electricity trading through competitive market platforms. IEX and EPEX SPOT will also share their experience of electricity market operations, explore market development opportunities and identify training opportunities for IEX personnel as well as for market participants.

Systems

The EPEX Trading System ETS, used for the Day-Ahead market, evolved to version 2.7 during 2013. Two key features were added: firstly, ETS was prepared to be compatible with the Price Coupling of Regions solution. Secondly, smart block orders were added, which enable the Exchange Members to link different orders via causal conditions. The updates also contain a new alert message during the second auction in case that orders are modified against market direction. Furthermore, it is now possible to track changes in block orders.

EPEX SPOT's Intraday markets have seen several refinements in 2013. The Intraday trading system ComXerv evolved into version 3.7. Two major steps have been taken. With the version 3.6.2, EPEX SPOT introduced a new setup to support the launch of a Swiss Intraday Market connected via cross-border trading possibilities with existing EPEX SPOT Intraday markets. With version 3.7, the system was updated to achieve higher performance in order to support the growth of Intraday market activities.



The Swiss Intraday market was launched on 26 June 2013 and was connected instantly to its neighboring markets

strengthen
renforcer
stärken

FINANCIAL REPORT

Balance sheet

The following balance sheet reflects the financial position of EPEX SPOT SE before distribution of the profits of the period.

The financial statements have been prepared in accordance with the standards, principles and methods of the Commercial Code and the Plan Comptable Général n°99-03 (standard French accounting procedure).

	31/12/2013 (12 months)	31/12/2012 (12 months)
ASSETS		
FIXED ASSETS		
Intangible fixed assets		
Concessions, patents and similar assets		
Concessions, patents and similar assets	8 448 352	7 873 109
Depreciation of concessions, patents and similar assets	-7 322 211	-5 554 530
Goodwill	1 544 079	1 544 079
Intangible fixed assets in progress	424 962	473 858
Total intangible fixed assets	3 095 182	4 336 516
TANGIBLE FIXED ASSETS		
Other tangible fixed assets	573 466	456 057
Depreciation of other tangible fixed assets	-261 308	-100 242
FINANCIAL FIXED ASSETS	140 617	106 500
Total fixed assets	3 547 957	4 798 831
CURRENT ASSETS		
Debts receivable		
Trade debtors and related accounts	7 281 539	6 701 021
Other debts receivable	1 142 493	550 475
Liquid assets	17 140 515	15 737 111
Prepayments	221 125	283 971
Total current assets	25 785 672	23 272 578
OVERALL TOTAL	29 333 629	28 071 409
STOCKHOLDER'S EQUITY AND LIABILITIES		
CAPITAL AND RESERVES		
Capital	4 973 094	4 973 094
Premiums on shares issued, mergers, contributions	2 473 138	2 473 138
Legal reserve	497 309	497 309
Profit for the financial year	10 500 269	12 576 967
Total capital and reserves	18 443 810	20 520 508
PROVISIONS FOR LIABILITIES AND CHARGES		
Provisions for liabilities	4 504 558	2 079 000
Provisions for charges	347 802	155 782
Total provisions	4 852 360	2 234 782





DEBTS PAYABLE		
Trade creditors and related accounts	2 286 006	3 214 255
Tax and social security debts payable	3 464 341	2 040 013
Other debts payable	283 364	61 851
Deferred income	3 748	0
Total provisions	6 037 459	5 316 119
OVERALL TOTAL	29 333 629	28 071 409

Comments to balance sheet items

Concessions, patents and similar assets

The net of this item amounts to 1.126 KEUR versus 2.319 KEUR in the previous year. The gross amount increased by 575 KEUR and is amortized according to the straight-line method over a period of 36 months. 2013 investments relate mainly to Market Coupling projects and Intraday Crossborder.

Goodwill

The goodwill results from the merger between the Exchange market of Frankfurt and Leipzig in 2002. It has been attributed to EPEX SPOT SE when EPS (the German spot markets) was merged into EPEX SPOT on January 1, 2009.

Intangible fixed assets in progress

On December 31, 2013 this position amounts to 425 KEUR and mainly contains investments for Price Coupling of Regions (PCR), especially for NWE.

Other tangible fixed assets

The gross amount (573 KEUR) increased slightly due to improvement of the office space and new material investments following the arrival of new employees.

Financial fixed assets

This position contains rent deposit (111 KEUR) and the 60% stake in the joint venture between EPEX and Soops BV (30 KEUR).

Trade debtors and related accounts

This item (7.282 KEUR) increased by 9% compared to the previous year (6.701 KEUR).

Other debts receivable

This position (1.142 KEUR) mainly represents the VAT receivable for an amount of 645 KEUR (balance on December 31, 2012: 372 KEUR).

Liquid assets

The total cash of EPEX SPOT SE of 17.141 KEUR is on current accounts (Paris & Leipzig).

Prepayments

The breakdown of this item is as follows (in KEUR) :

IT support	106
insurances	65
patronage/sponsoring	22
subscriptions	7
meal vouchers	16
others	5
	221

Capital and reserves

The share capital remains unchanged from 2012 and amounts to 4.973 KEUR. The legal reserve corresponds to 10% of the share capital (497 KEUR).

Provisions for liabilities

This item contains several provisions for business risks of 4.505 KEUR in total related to the investigation of the European Commission dated 4th February 2012.

Trade creditors and related accounts

This item decreased by 928 KEUR (-29 % compared to previous year).

Tax and social security debts payable

This item contains mainly social debts (variable salary, paid holidays and social security funds) of 3.464 KEUR compared to 2.040 KEUR on 31/12/2012.

Income statement

The following income statement covers a 12 month period (fiscal and financial year of EPEX SPOT SE) compared to 12 months of the prior year.

	31/12/2013 (12 mois)	31/12/2012 (12 mois)
OPERATING INCOME		
Sales of services	42 843 769	40 569 758
NET TURNOVER	42 843 769	40 569 758
Own work capitalised	508 714	899 851
Provisions and depreciation written back, charges transferred	375 442	1 053 468
Other income	10 364	114 588
OPERATING INCOME	43 738 289	42 637 665
OPERATING CHARGES		
Other purchases and external charges	-12 634 724	-13 345 525
Taxes, levies and similar payments	-357 883	-315 750
Wages and salaries	-4 594 062	-3 632 955
Social security costs	-2 539 782	-1 761 513
Fixed assets: Appropriations to depreciation	-1 928 747	-2 221 000
Liabilities and charges: appropriations to provisions	-2 993 020	-1 835 515
Other operating charges	-287 959	-443 317
Operating charges	-25 336 177	-23 555 575
OPERATING PROFIT OR LOSS	18 402 112	19 082 090
FINANCIAL INCOME		
Other interest and similar income	39 550	100 469
Financial income	39 550	100 469
Financial charges		
Interest and similar charges	-10	-112
Financial charges	-10	-112
FINANCIAL PROFIT OR LOSS	39 540	100 357
PROFIT OR LOSS ON ORDINARY ACTIVITIES	18 441 652	19 182 447
Extraordinary income	24 069	50 988
Extraordinary charges	-50 007	-143 962
EXTRAORDINARY PROFIT OR LOSS	-25 938	-92 974
Profit sharing	-710 344	
Income tax	-7 205 101	-6 512 506
PROFIT OR LOSS	10 500 269	12 576 967

Comments to items of the income statement

Net turnover

Turnover increased by 6% compared to the previous year.

Provisions and depreciation written back, charges transferred

In 2013 provision written back was performed in total of 375 KEUR.

Other purchases and external charges

This entry mainly contains services of external providers and fees of external consultants.

Taxes, levies and similar payments

This item corresponds to the business entity tax as well as taxes on wages.

Wages and salaries

This item (4.594 KEUR) increased by 27% compared to the previous year (3.633 KEUR) caused by the arrival of several new employees (see graphic on the right).

Social security costs:

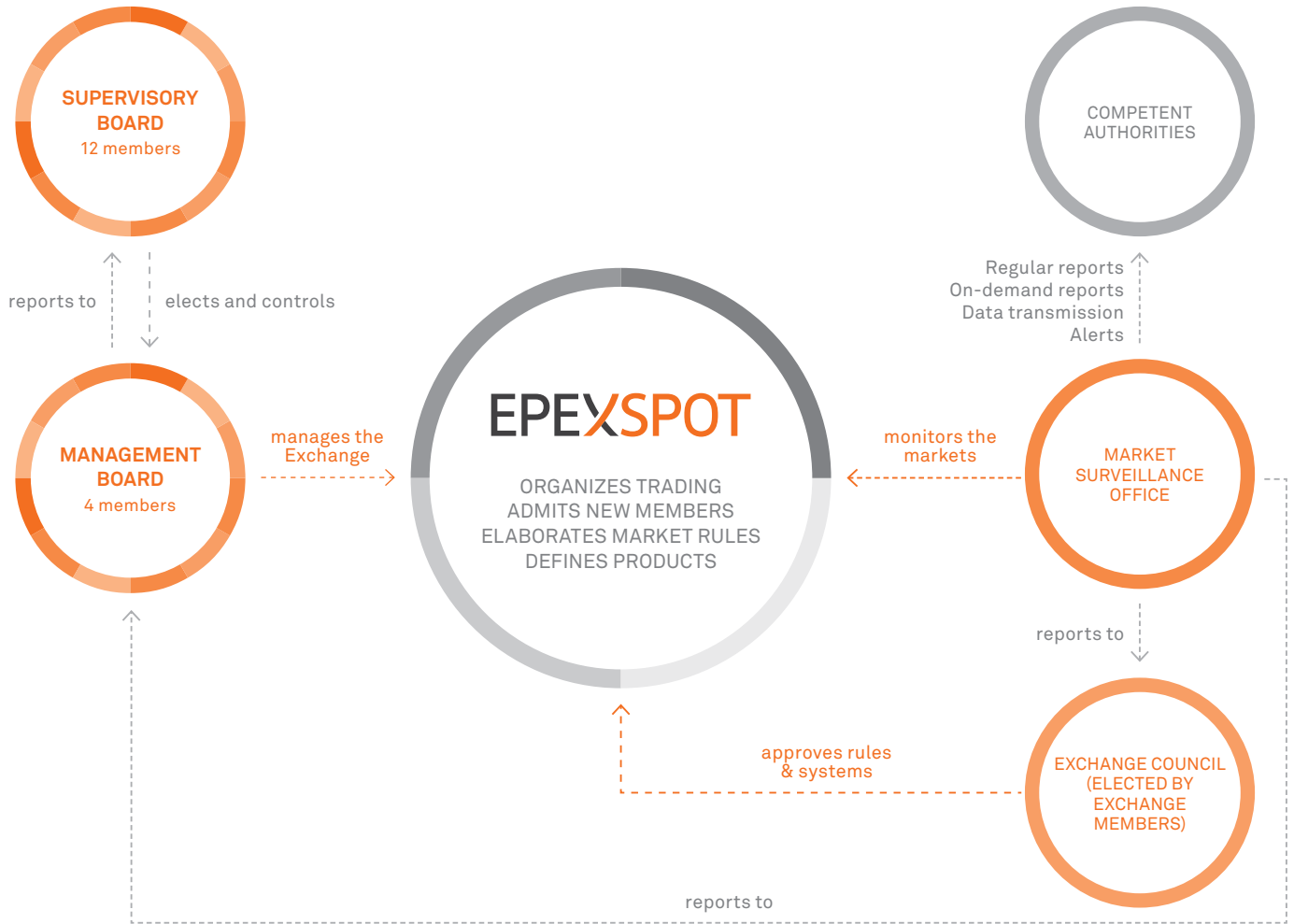
This item (2.540 KEUR) increased by 44% compared to the previous year (1.762 KEUR) mainly due to the increase of the item "Wages and Salaries".

Financial income

This item represents interests on current accounts (Paris & Leipzig).



EPEX SPOT SE is a company with a two-tier governance system. The shareholders appoint a **Supervisory Board**, composed of outstanding actors in the European energy sector. The Supervisory Board elects the **Management Board**, which approves the company's strategy and budget and controls the management's actions. The Supervisory Board also supports EPEX SPOT's work on the integration of the European power market and takes into account the increasing number of European and international partnerships.



Management Board:

Jean-François Conil-Lacoste,
Chairman of the Management Board

Iris Weidinger, Deputy Chairman of the
Management Board and Chief Financial
Officer

Thierry Morello, Chief Operating Officer

Dr. Dr. Tobias Paulun, Director

The **Market Surveillance Office** is an independent Exchange body which continuously monitors the EPEX SPOT markets and verifies that Members comply with the rules and regulations and more specifically with the code of conduct of the Exchange. It is the central point of contact for authorities in charge of the EPEX SPOT market areas.

The **Exchange Council** represents the interests of our Exchange Members and is involved in all decisions of fundamental importance to the Exchange. Its mission includes in particular the adoption of the rules and regulations of EPEX SPOT and their amendments.

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To find out more about the European
Power Exchange EPEX SPOT,
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offer, please visit our website.

Conception, realisation & design

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