EPEX SPOT counted over 200 trading participants at the end of 2011, 12 more than a year before. These figures are proof of the confidence of our Members. This very diverse community – producers, suppliers, brokers, Transmission System Operators or industrial consumers from all over Europe – is the guarantee of high liquidity of EPEX SPOT’s markets.

Day-Ahead auctions in Germany/Austria, France and Switzerland, Intraday continuous trading in Germany and France: The four countries covered by EPEX SPOT’s different market segments account for an area of 1200 TWh and nearly 40% of the EU’s yearly power consumption. They are situated at the heart of Europe – and highly interconnected with neighbouring countries.

Liquidity on EPEX SPOT’s markets is visibly increasing – up 13% from the previous year. This figure represents one year of light and heating for 78 million European households. The electricity volumes traded in 2011 are an essential part of the European power wholesale market – and a basis for the everyday life of European citizens and companies.

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ABOUT EPEX SPOT

The European Power Exchange, EPEX SPOT, is the platform for short-term wholesale power trading at the heart of Europe. Whether your company wants to trade power for today or the following day, our markets will help you to balance your supply and demand. The markets of EPEX SPOT cover Germany, France, Austria and Switzerland — four countries that account together for more than one third of the European electricity consumption.

EPEX SPOT, headquartered in Paris with an office in Leipzig, was created in 2008 through the merger of the power spot markets of the energy exchanges Powernext SA in France and European Energy Exchange AG in Germany. Our company is at the service of the European power business. The underlying incentive of our work is the transformation of the historically national power markets into one European single market.
JEAN-FRANÇOIS CONIL-LACOSTE
CEO OF EPEX SPOT

HOW WE TACKLE INTEGRATION

It has only been ten years that Power Exchanges have emerged in Continental Europe. Amongst them, the European Power Exchange EPEX SPOT is an outlier. Its history begins at the national level. At the beginning of the new millennium, its mother companies Powernext in France and European Energy Exchange in Germany were pioneers in the liberalisation of power markets. With the integration of the European power markets, both companies anticipated the course of history by launching EPEX SPOT in 2008, a European Exchange dedicated to short-term power trading. In retrospect, the creation of EPEX SPOT might one day be seen as the decisive milestone on the road to integrating power markets.

Today, both mother companies have become Energy Exchanges, and their child, EPEX SPOT, has grown up to become a major entity in the European power business. **Our market volumes, integrated into the Market Coupling in Central Western Europe, grew by 13% in 2011. They provide precise and transparent price signals for power spot trading in Europe.** Furthermore, EPEX SPOT is designed to be truly European: its state-of-the-art governance, its customers, its trading systems and its teams are fundamentally international. And it needs to be: the context of our work is a constant challenge of European scale.

We work in a strongly interconnected sector. To increase social welfare in Europe, we cooperate closely with Transmission System Operators, other Power Exchanges as well as National and European regulators. Our motivation: implementing market coupling solutions which optimize capacity allocation and contribute to a higher security of supply. The price convergence between the individual but coupled markets is a true yardstick of integration.

We love this European teamwork and are dedicated to the final goal of an integrated European power market. The road to integration, however, gets more and more complex: The more actors that cooperate, the harder it becomes to find common ground. And last but not least, an increasing number of different technical interfaces have to be harmonised.

We tackle this challenge by being alert to closer cooperation. **Simplifying interfaces by creating common systems is a crucial task for convergence.** For the sake of integration, we agreed on a technical cooperation with Nord Pool Spot, announced in September 2011. It can deliver a blueprint for efficient transnational day-ahead and intraday trading systems.

“OUR WORK AS A SERVICE PROVIDER IS ANOTHER KIND OF PAVING THE WAY TOWARDS INTEGRATION.”

Our work as a service provider is another kind of paving the way towards integration. We offer our expertise to other Exchanges, for example, to the Hungarian Power Exchange HUPX since July 2010. In 2012, EPEX SPOT will deliver coupling services to the Power Exchanges in Czech Republic, Hungary, and Slovakia, integrating the first of markets of Central Eastern Europe. In so doing, EPEX SPOT contributes to the creation of another piece of the puzzle, foreshadowing a European single market for short-term power trading.

This report bears witness to our European credo. It is also proof of the trust of our members in our markets and the hard work and dedication of our teams. They may be relatively small, but they are a flexible and constant motor of this fast-changing business. EPEX SPOT and its teams are essential facilitators of the integration process. They will continue to do so, assuming fully their responsibility for a fair and orderly price formation at the national and European level.

How we tackle integration.

For the sake of integration, we agreed on a technical cooperation with Nord Pool Spot, announced in September 2011.
The year 2011 had a seismic effect on international energy markets. The Fukushima nuclear disaster has accelerated the discussions about the future energy mix and the exit from nuclear power. Basic assumptions are being re-evaluated – especially in Germany: By deciding to withdraw from nuclear energy in the medium term and to take German nuclear power plants completely off the grid by 2022 at the latest, the German government has sent a clear signal. While politicians are talking of an “Energiewende”, suggesting a deep transformation of the energy sector by promoting renewable energies, the situation is more complicated from a practical point of view.

In fact, the discussions that have been stirred up by the Fukushima events to further integrate renewables into the market is not as new as the notion of the “energy turnaround” wants to suggest. For instance, the integration of power from renewable energy sources has been on the agenda of EPEX SPOT since its creation. And this is not only due to the fact that Transmission System Operators in Germany are obliged by law to market the majority of their green power on an Exchange. It’s also due to the activity of EPEX SPOT which is focused as much as possible on the market and the customers.

EPEX SPOT accommodates the increasing role of renewables in the power production mix and its ever growing potential as an alternative to less ecological energy sources.

It is a crucial part of the philosophy of EPEX SPOT to be pacemaker in the development of markets and market mechanisms – not only in an economic sense, but especially as regards the integration of new production technologies into the existing markets. If necessary, existing standards will be adapted to fit new evolutions. The fact that the market of EPEX SPOT could absorb the trading volumes of power from renewable energies without any failure since its beginning, testifies to the high level of professionalism of trading, of the processes and of the market participants. Since the start of marketing green power on the Exchange more than two years ago, there have been no price distortions nor any other unexpected effects on the markets of EPEX SPOT.

As a driving force in the centre of the European power system, EPEX SPOT is however not resting on its laurels. In this respect, the projects of EPEX SPOT dedicated to the integration of renewable energies deserve all the support of the EEX group. The extension of trading on the Exchange to 15-minute contracts on the German Intraday market accommodates not only the volatility of power production from renewable energies, but also the needs of the market participants.

The initiative of EPEX SPOT to develop a certificated green power product, composed of power coming exclusively from renewable energies, is another important step towards the future. There is an increasing demand for this “green” quality in Europe – in society as a whole as well as from Exchange Members. With the development of a market design aimed at integrating the green origin of electricity into the power spot market and the creation of a certification process, EPEX SPOT can and will contribute once again to the integration of the European power market – as you would expect from a facilitator in the centre of the system.

Iris Weidinger
Chairman of the Board of Directors

“EPEX SPOT is the European motor of the integration of renewable energies.”
EPEX SPOT SE AND THE LIBERALIZATION OF EU POWER MARKETS

1996 — European Directive on energy market liberalization
1998 — Implementation of the Directive in German and Austrian law
2000 — Establishment of LPX (Leipzig Power Exchange) and EEX (European Energy Exchange) in Frankfurt
2001 — Establishment of Powernext SA
2002 — Merger of the former Leipzig Power Exchange LPX and the EEX Frankfurt to EEX AG in Leipzig
17/09/2008 — Creation of EPEX SPOT SE, owned 50/50 by Powernext SA and EEX AG
01/01/2009 — Transfer of Powernext Power Spot activities into EPEX SPOT SE
01/09/2009 — Transfer of EEX Power Spot into EPEX SPOT SE

POWER /ˈpauər/
ENERGY THAT IS PRODUCED BY MECHANICAL, ELECTRICAL, OR OTHER MEANS AND USED TO OPERATE A DEVICE

Electric power is one of the most essential goods in the society: invisible yet omnipresent it surrounds us in form of light, warmth, transport, sound, computers or telecommunications. However, power is not storable – it has to be consumed the moment it is produced. That’s why we need markets: to efficiently match production and consumption, imports and exports, supply and demand.

MARKET /ˈmɑː.kɪt/
AN AREA OR ARENA IN WHICH COMMERCIAL DEALINGS ARE CONDUCTED

Power markets have emerged in the last two decades all over Europe. They are an effective means to bring together producers, suppliers, Transmission System Operators, brokers and industrial consumers. They can trade power bilaterally – or they can participate in organised markets by becoming a Member of an Exchange.
Power trading has become a key component of the energy sector’s value chain. EPEX SPOT is a Power Exchange, a platform for wholesale power trading, at the heart of Europe. Our markets are highly interconnected with neighbouring countries and benefit from excellent liquidity – a prerequisite for reliable and fair price signals. By delivering robust transnational trading systems and focusing on customer service, we are building trustful and enduring relationships with our Members.

On the road from ‘interconnected’ to ‘integrated’: Power markets all over Europe are changing. EPEX SPOT promotes this transition together with its partners: by its cross-border trading systems, by working on market coupling solutions and, naturally, by the geographical position of its markets. The integration of the European power market, the creation of a single pan-European price zone composed of once isolated national markets, is the underlying incentive of our work.

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CWE MARKET COUPLING: A RELIABLE SOLUTION FOR EUROPE

BY DANIEL DOBBENI
CEO OF ELIA AND PRESIDENT OF ENTSO-E

It seems fair to say that Europe more than ever needs a well-functioning power market. The competitiveness of our industries, our modern societies and a friendly future for our children depend significantly on a reliable and cost-effective power supply for all. Unfortunately, the challenges have grown in number and difficulty. Re-regulation of electricity and gas prices is even contemplated in some countries and the February cold spell showed that the power system has reached its limits in severely constrained situations.

A well functioning market, delivering competitive wholesale and retail prices, requires that both the “software” and “hardware” operate well. On the software side, major steps have been achieved with the European market model, agreed in the context of the “Regulator’s Forum of Florence”. To transform this model into tools and applications for market parties, clear roles and responsibilities have been identified for the Commission, ACER and ENTSO-E in the Third Package. Network codes, among the Capacity Allocation and Congestion Management code, will set and clarify the rules knowing that, in parallel, experience is gathered with regional implementations in Central Western Europe (CWE) and Nordic countries. This target model is largely based on a mechanism known as market coupling that was adopted in November 2006 to allocate daily capacity between Belgium, France and the Netherlands. At that time, integrating the allocation of transmission capacity and energy trading appeared the only way to grant sufficient liquidity for the yet to be created Belgian Power Exchange. Four years later, this unprecedented cooperation for market coupling between Transmission System Operators (TSOs) and Power Exchanges from three countries was brought to a new level: Market Coupling in CWE, encompassing the German power market as well, was launched in November 2010 by a growing team of stakeholders. In the meantime, EPEX SPOT had emerged as the largest Power Exchange in Continental Europe, specifically concerned with the future of the CWE area.

Nowadays, CWE has proven to deliver a reliable solution. The next generation of market coupling, comprising North Western Europe, is the next challenge to be faced by TSOs, Power Exchanges and other stakeholders. Experience has shown that daily market coupling successfully delivered the needed liquidity and also helped integrate electricity markets. The same holds true for intraday markets as can be seen with the two recent initiatives between Belgium and the Netherlands on the one hand and France and Germany on the other. Implementing market coupling all over Europe has to tackle national and regional specificities, whether it be the energy-mix, network or RES support mechanisms, to name just a few of them.

Among the issues to be solved are the roles and responsibilities between Power Exchanges and TSOs, so as to ensure that their customers will benefit from their core competences. As the power system gets more complex, with the increasing share of variable energy sources such as wind and sun (above 35% of the supply by 2020), the liquidity brought by the (intraday) market coupling will have a major impact on reliability, a TSO responsibility by law. The way forward is one or several compatible IT platforms open to all Power Exchanges and transmission system operators, with equal rights and responsibilities, so as to ensure that transmission capacity is available for the secure physical delivery of the energy deals.

This “software” needs the backing of a strong network. Current permitting procedures are still the major obstacle to building new capacity. Political will and public acceptance are insufficient to ensure that the “hardware” includes adequate capacity (generation, transmission and distribution). Already today, some overhead lines and substations cannot be taken out of service, even for a day. As a consequence, wind and solar energy will have to be curtailed on an increasing number of days, because of a lack of generation flexibility. A stable and attractive regulatory framework would induce investors to invest, now. All parties need to assume their responsibilities to finally make it happen.
2011: A YEAR OF INTEGRATION

For EPEX SPOT’s markets, 2011 has been a year of growth with a record volume of 314 TWh traded including a 57% increase of intraday traded volume year on year.

Since 9 November 2010, the power markets of Central Western Europe (CWE), including Germany, France and the Benelux countries, have been successfully coupled. Additionally, CWE has been coupled with the Nordic power markets via Interim Tight Volume Coupling (ITVC). This unprecedented achievement allows the optimal use of cross-border capacity and favors price convergence. In 2011, the advantages of Market Coupling became obvious: prices between the French and the German EPEX SPOT markets converged 67.4% of the time.

ACER ROADMAPS: A RECIPE FOR INTEGRATION

At the EU Council on 4 February 2011, the European Union has set an ambitious target to complete its Internal Electricity Market by 2014. Concerning spot market integration, ACER, the Agency for Cooperation of Energy Regulators, in consultation with European stakeholders, has defined two target models since July 2011:
- Price coupling based on day-ahead zonal implicit auctions,
- Continuous intraday trading based on a shared order book and a Congestion Management Module.

To make it happen, ACER has recently published roadmaps on the sequence for different regions to implement the target model. EPEX SPOT is strongly committed to reach these target models by establishing the basis of several integrating projects in 2011.

ENHANCING COOPERATION WITH PARTNER EXCHANGES

2011 was a year of integration and growth for EPEX SPOT. Cooperation and sharing of knowledge have proven to be a key driver. In this way, EPEX SPOT has been taking steps towards a joint venture with the Nordic Power Exchange Nord Pool Spot since September 2011. The goal of this technical cooperation is to create common trading platforms for the day-ahead and intraday market. In a second step, the technical platforms shall be operated by the joint venture itself. Both EPEX SPOT and Nord Pool Spot will stay independent exchanges, covering an area of approximately 2,000 TWh of power consumption and 630 TWh of trading volume on the spot markets. The creation of harmonized transnational trading platforms by Nord Pool Spot and EPEX SPOT will help to achieve the day-ahead and intraday target models of the European Commission.

With the implementation of a market coupling solution for North Western Europe (NWE) based on the Price Coupling of Regions initiative, the Single European Price Coupling gets closer to becoming a reality. This is a huge leap forward in the integration of the European power market. It will permit the market to get to the 2014 goal as quickly and as efficiently as possible, in cooperation with all official stakeholders, including partner exchanges and TSOs. Servicing other exchanges has always been one of the ways EPEX SPOT contributes to the integration of the European power market. EPEX SPOT will provide a state-of-the-art price coupling service to the Czech, Slovakian and Hungarian Power Exchanges that will be operational in 2012.

ELIX: SHOWING THE BENEFITS OF FURTHER EUROPEAN MARKET INTEGRATION

Since 18th October 2010, EEX and EPEX SPOT publish ELIX, the European Electricity Index for each delivery day at EPEX SPOT. The index is calculated on the basis of the actual aggregated bid and offer curves for all EPEX SPOT market areas. ELIX is an essential benchmark price for the single European market, as it is the market price that would result in a physically unconstrained market environment. The index follows the objective of a truly integrated, single European market. It shows the additional benefit that could be achieved through further market integration.
EPEX SPOT is operated by EPEX SPOT SE, a European company which is held 50/50 by Powernext SA and European Energy Exchange AG and which is based in and operates out of Paris.

The Board of Directors is responsible for taking the commercial and economic decisions regarding EPEX SPOT SE and reports to the shareholders during the General meetings.

EPEX SPOT SE also has the following exchange bodies:
- the Exchange Council and
- the Market Surveillance Office (see page 38).

Both are independent bodies that have been put in place in order to ensure state of the art governance rules.

In order to open the shareholders’ structure of EPEX SPOT, the company will be transformed in the near future into a two-tier company, comprising a Supervisory Board and a Management Board, while the General Meeting of the Shareholders remains as before. In the new governance scheme, the main stakeholders (Transmission System Operators, Utilities and Exchanges) will thus be able to be represented at the Supervisory Board of EPEX SPOT.
THE EXCHANGE COUNCIL

The Exchange Council of EPEX SPOT is an official body of the Exchange. The first Exchange Council has been nominated by the Board of Directors of EPEX SPOT with effect on September 2009. Its composition will be renewed in June 2012. The current split of the 16 seats follows the proportion of members and volumes traded per category:

In the future composition of the Exchange Council, two different kinds of categories will be represented:

**Elected Members:**
- Bank and financial service providers (2 seats)
- Commercial and industrial consumers (1 seat)
- Utilities and trading companies, (7 seats), i.e. companies trading with physical capacity and which are not financial institutions or municipals
- Municipal and regional suppliers (2 seats), i.e. entities whose main task is to supply residential consumers
- Transmission System Operators/Auction Office (2 seats)

**Appointed Members:**
- Clearing bank (1 seat)
- Other concerned parties i.e. academics or other experts (2-4 seats)
- TSOs selling Market Coupling Contracts (1 seat)
- TSOs permanent guests

The missions of the Exchange Council include the adoption of the Rules and Regulations of the Exchange and their amendments as well as the validation of the introduction of new trading systems. The body makes sure that the services and products correspond to the needs of the market. Its task also comprises the appointment of the Head of Market Surveillance.

The Exchange Council takes a position whenever the design of the European power market has an impact on the Exchange or on its capacity to choose, develop, maintain and constantly enhance the trading platforms. The Exchange Council defends the necessary elements of competition in a non-discriminative manner which will guarantee innovation and efficiency among the trading platforms to the benefit of Exchange Members.

GOVERNANCE OF EPEX SPOT SE

**EXCHANGE COUNCIL** *(Elected by Members)*
- approves rules & system

**GENERAL MEETING** *(Shareholders)*
- nominates directors & approves strategy

**BOARD OF DIRECTORS**
- CEO
- manages the Exchange

**EPEX SPOT** EUROPEAN POWER EXCHANGE
- Organizes trading
- Admits new Members
- Elaborates Rules and Regulations
- Defines products

**MARKET SURVEILLANCE OFFICE**
- monitors the markets

**COMPETENT AUTHORITIES***
- regular reports
- on-demand reports
- data transmission
- alerts

* see also page 37
What is the decisive advantage of trading on EPEX SPOT for your company?

*Dr. Nigel Hawkins:* For us, EPEX SPOT provides an exchange in which transactions are transparent and non-discriminatory. It provides useful information to help our understanding of the market closure; not just prices and volumes, but also market resilience. We appreciate also the fact that with EPEX SPOT we are able to participate in multiple market areas on one common platform. Finally, we gain comfort from EPEX SPOT’s active market surveillance group that helps protect market participants from potential abuse.

Why is the work of the Exchange Council important?

*N.H.:* The Exchange Council is a very open decision forum that successfully ensures that the rules of the market are developed in line with the expectations of market participants and in a form that is also supported by sound economic theory. In this forum for debate and decision we try to ensure that the market rules deliver a marketplace that attracts liquidity and satisfies the needs of physical players as well as non-physical traders. As the physical characteristics of the European power system develop, the Exchange Council fulfills a very important role by adapting the products and rules of the market to the developing needs of market participants.

After three years as a Council Member: Was there a discussion, a decision you remember in particular?

*N.H.:* Not just one. There have been many and with each discussion a high quality of contributions from the Exchange Council members; on questions of a practical as well as a theoretical nature. There have been debates on the maximum and minimum market price limits, the mechanisms of market coupling and the products needed by the market. The membership of the Exchange Council has been well balanced, such that the opinions of physical and non-physical market participants and of academics have all been represented.

“2011 – a year of integration”: That’s the motto of the Annual Report. How do you see the current process of integration of the European power market?

*N.H.:* The integration of the European power markets is a challenging process with challenging timescales. The timescales necessitate the cooperation between Exchanges, as well as an Exchange Council clear on its priorities; priorities set with a clear vision of global integration. There have been some major achievements with the coupling of the day-ahead markets. A larger effort now needs to be placed on integrating the elements of the spot market close to real time; integrating the intraday markets and the balancing markets. Full use needs to be made of cross-border transmission capacity as close to real time as possible.

The Exchange Council makes sure that the services and products of the Exchange correspond to the needs of the market. How would you describe the needs of the market for the years to come and, correspondingly, the Exchange Council’s role in the future?

*N.H.:* The physical conditions underlying the European spot markets are changing and at the same time we are seeing a radical change in the market arrangements through the various market coupling initiatives. Europe is seeing a strong growth in renewable generation sources, with production that is by nature difficult to predict – even in day-ahead timescales.

For such an environment, the market must deliver the means by which producers and consumers can compensate for the unpredictability of their physical positions by trading down to timescales close to real time. The challenge of the Exchange Council for the future must therefore be to enable participants to gain access to energy from flexible generation sources in the timescales of the intraday and balancing markets. This will mean an integration of the markets in these timescales with liquid products that can be traded across international boundaries with granularities as short as 15 minutes.
What is the decisive advantage of trading on EPEX SPOT for your company?

Dr. Günther Rabensteiner: EPEX SPOT covers the main spot power markets VERBUND is trading in: Germany, France and Austria. It offers high liquidity, a reliable pricing mechanism, a stable trading process and well established clearing procedures. These are the main reasons for us to trade on EPEX SPOT.

Why is the work of the Exchange Council important?

G.R.: The Exchange Council, representing the market participants, is responsible for integrating their needs and experiences into the market design and rules for trading on the exchange. In parallel the Exchange Council defines the relevant codes for trading members and transparency obligations. These are crucial elements for a high degree of acceptance in the community, including regulatory and political institutions.

After three years as Chairman of the Exchange Council: Was there a discussion, a decision you remember in particular?

G.R.: Yes, I remember quite well the start of EPEX SPOT, trying to harmonize the surveillance process with EEX Leipzig. The outcome was a unanimous resolution of the Exchange Council on a new strong Code of Conduct for EPEX SPOT, to prevent abuse of the exchange by any trading member.

“2011 – a year of integration”: That’s the motto of the Annual Report. How do you see the current process of integration of the European power market?

G.R.: Some outstanding initiatives on market coupling have been taken in the last few years for further integration of the European power market. CWE market coupling is a positive example and good for EPEX SPOT’s reputation, being the system provider or operator for such solutions. Unfortunately these initiatives are driven more and more in a nationally oriented way, which is totally in contradiction to the EU goal to create a harmonized pan-European energy market.

The Exchange Council makes sure that the services and products of the Exchange correspond to the needs of the market. How would you describe the needs of the market for the years to come and, correspondingly, the Exchange Council’s role in the future?

G.R.: The Exchange Council of EPEX SPOT faces a number of crucial challenges in the future. One chapter contains the new initiatives of the European Union concerning the implementation of financial markets regulation in the energy markets. This is a highly sensitive area to avoid splitting the physical and financial energy markets. Another chapter is the unclear situation of national capacity market models and the consequences for the auction model of EPEX SPOT. The third chapter on the table is the modelling of a harmonized green energy market. All these aspects, rules and models have finally to be resolved by the Exchange Council in a more and more complex rulebook. As the outgoing chairman of the EPEX SPOT Exchange Council I am proud of having had the opportunity to create workable and stable regulations for EPEX SPOT together with all the other members of the Council.
our members make the market.
THE POWER OF 201 MEMBERS
2011: A YEAR OF GROWTH

OUR MARKETS

DAY-AHEAD

The Day-Ahead auction takes place at a specific time of a day which bundles the liquidity and enables EPEX SPOT to determine reliable reference prices for the respective market area. For each hour of the next day, EPEX SPOT calculates the Market Clearing Price and the Market Clearing Volume resulting from the aggregated supply and demand curves, based on the orders of the Exchange Members. The physical delivery of the power quantities traded on the auction takes place the following day, therefore these markets are called Day-Ahead markets.

<table>
<thead>
<tr>
<th>DAY-AHEAD AUCTIONS</th>
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<tbody>
<tr>
<td>MARKET AREAS</td>
</tr>
<tr>
<td>GERMANY/AUSTRIA</td>
</tr>
<tr>
<td>FRANCE</td>
</tr>
<tr>
<td>SWITZERLAND</td>
</tr>
</tbody>
</table>

- Blind auction procedure, takes place 7 days a week, year-round
- 24 hours of the following day are traded
- Hourly and block contracts available for trading
- Integrated in Market Coupling in Central West Europe (France, Germany, BeNeLux)
- Reliable platform: EPEX trading system (ETS)

INTRA-DAY

The Intraday markets enable the Exchange Members to buy and sell power at very short notice. The price formation takes place in continuous trading, i.e. all buy and sell orders in the order book are constantly tested on their feasibility. As soon as two orders are executable, they will be matched immediately.

In December 2010, EPEX SPOT introduced the Flexible Intraday Trading Scheme (FITS) which gives its Members the opportunity to trade via the Exchange between France and Germany by implicitly using cross-border capacity.

<table>
<thead>
<tr>
<th>INTRA-DAY CONTINUOUS TRADING</th>
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<tbody>
<tr>
<td>MARKET AREAS</td>
</tr>
<tr>
<td>GERMANY</td>
</tr>
<tr>
<td>FRANCE</td>
</tr>
</tbody>
</table>

- 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
- Hourly and block contracts available for trading
- 15-minute contracts on the German market allow highly flexible balancing of portfolios
- Cross-border trading between France and Germany – Flexible Intraday Trading Scheme (FITS)

MEMBERS OF EPEX SPOT

At the end of 2011, EPEX SPOT had 201 Members (12 more than last year), coming from 20 different countries. 48 Members were active on all three Day-Ahead Markets (5 more than last year) and 63 Members were active in both Intraday areas. The growing number of Members active on several market segments is proof of the integrating European focus of the Exchange.

Germany remains the most active area with 180 Members on the German/Austrian Day-Ahead auction, 170 Members on the German Intraday Market and 71 Members based in Germany. Switzerland, proportionally has had the most remarkable development in terms of Members, gaining 8 new trading participants over the last 12 months. This increase is due to the progressive liberalization of the Swiss electricity wholesale market and is also reflected in trading volumes of the Swiss auction.

- Utility and trading companies
- Municipal and regional suppliers
- TSO/Auction office
- Commercial consumers
- Bank and financial service providers
- Energy brokers
LIQUIDITY

In 2011, 314 TWh were traded on our markets (35 TWh more than the previous year), out of which 296.5 TWh was for the Day-Ahead segments and 17.5 TWh for the Intraday segments. This is an increase of 13% compared to 2011.

DAY-AHEAD VOLUMES

In the first full year of CWE Market Coupling, the liquidity increased by 9% in the German/Austrian area and by 14% in the French area. The Swiss area increased volumes by 29%, partly due to the 16% increase in the number of Members.

<table>
<thead>
<tr>
<th>AUCTION (MWH)</th>
<th>DE/AT</th>
<th>FR</th>
<th>CH</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>205 479 149</td>
<td>52 433 288</td>
<td>9 324 648</td>
<td>267 237 085</td>
</tr>
<tr>
<td>2011</td>
<td>224 550 816</td>
<td>59 692 111</td>
<td>12 060 800</td>
<td>296 303 727</td>
</tr>
<tr>
<td>variation</td>
<td>+9%</td>
<td>+14%</td>
<td>+29%</td>
<td>+11%</td>
</tr>
</tbody>
</table>
Cross-border trading had a stronger effect on France due to the smaller market size: 58% of the French volumes in 2011 came from cross-border trades. In Germany, cross-border trades represent 6% of the total Intraday Market volumes.

**15-MINUTE CONTRACT VOLUMES**

15-minute contracts were launched in the German area on 14 December 2011. 967.25 MWh had been traded up to 31 December 2011. This new product has been created to answer specific needs of German market participants in reaction to the noticeable fluctuations in production of power from renewable energy sources.
**PRICE DEVELOPMENT**

**DAY-AHEAD PRICES**

In 2011, the French area was the one with the lowest price level, with an average price of 48.89€/MWh, close to the 2010 average price of 47.50€/MWh. The German/Austrian average price was 2.23€/MWh above the French level, with a 15% increase year on year for the second year in a row. Switzerland remains a high-price area with an average baseload price of 56.18€/MWh in 2011.

<table>
<thead>
<tr>
<th>BASELOAD PRICE (€)</th>
<th>2010</th>
<th>2011</th>
<th>VARIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE/AT</td>
<td>44.49</td>
<td>51.12</td>
<td>15%</td>
</tr>
<tr>
<td>FR</td>
<td>47.50</td>
<td>48.89</td>
<td>3%</td>
</tr>
<tr>
<td>CH</td>
<td>51.02</td>
<td>56.18</td>
<td>10%</td>
</tr>
</tbody>
</table>

**STANDARD DEVIATION/VOLATILITY (€)**

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>VARIATION (YEAR ON YEAR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTRADAY DE</td>
<td>10.58</td>
<td>-1.63</td>
</tr>
<tr>
<td>DAY-AHEAD DE</td>
<td>8.32</td>
<td>-3.74</td>
</tr>
<tr>
<td>INTRADAY FR</td>
<td>10.51</td>
<td>-6.25</td>
</tr>
<tr>
<td>DAY-AHEAD FR</td>
<td>10.21</td>
<td>1.10</td>
</tr>
</tbody>
</table>

**INTRADAY PRICES**

Intraday prices followed the trend of the Day-Ahead auction prices with an average standard deviation of 5.03€ in France and 5.70€ in Germany. The volatility of Intraday prices remains higher than for auction prices but was significantly lower this year for France and Germany.
CORRELATION WITH FUNDAMENTALS

French prices are highly sensitive to temperature and nuclear availability while German prices are more sensitive to solar and wind energy. On the German market, negative prices can occur especially when wind production is significantly superior to consumption. We counted 15 hourly negative prices in 2011 on the German Day Ahead market – three occurrences more than in 2010. Four occurred on 1st January 2011 and five occurred on 25/26 December, both times due to a combination of low consumption on a bank holiday and relatively high input from wind power (around 12 GW). Four hourly negative prices appeared on 4 and 5 February 2011, the two windiest days of the year, when wind energy was above 22 GW. Two hours with negative prices were observed on 19 June where wind energy was around 17 GW. The maximum negative price was at -36.82€.

In France, on the other hand, we traditionally tend to observe high prices due to extreme temperature sensitivity. 2011 was a smooth year thanks to mild temperatures and CWE coupling effects. We counted only ten hourly prices superior to 100€, nine of them at hour 19, the highest being 117.48€ on 20 October 2011, at hour 20. Negative prices on the French market occurred on only five days, all on the Intraday Market.
ADMISSION: HOW TO BECOME A MEMBER OF EPEX SPOT

More and more companies are interested in trading on EPEX SPOT and being part of the Exchange Members’ community. EPEX SPOT guides them through the first steps of their power spot market activity.

1. **Contact**
   - Fill in the “Know Your Customer” questionnaire
   - If the scoring of EPEX SPOT is positive, the admission process begins

2. **Questionnaire**
   - A Find a Clearing Bank
   - B Sign a balance agreement
   - C Take the trader examination

3. **First Steps**
   - Submit documents to the Membership Department of EPEX SPOT SE
   - and to European Commodity Clearing AG (ECC)

4. **Submit**
   - The documents are checked by EPEX SPOT and ECC

5. **Check**
   - Approval as an Exchange Member by EPEX SPOT

6. **Approval**
   - Connection to the trading systems of EPEX SPOT

**Technical Set-Up**

You may now trade on EPEX SPOT

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If your company is willing to trade power in a fair, secure and transparent manner, you are welcome to become a Member of EPEX SPOT. You have to follow the Exchange’s admission process in order to become a Member and start trading on EPEX SPOT’s markets. There is a single admission process for all market segments of EPEX SPOT.

The first contact point with the Exchange is the Sales team. It provides all relevant information and answers all your questions concerning EPEX SPOT’s functioning and admission process. A “Know Your Customer” questionnaire is then sent to the applicant. This questionnaire enables EPEX SPOT to get to know its future Members and to protect its markets from fraudulent activities. This is the first step in the admission process.

If your company wants to become a Member, it also has to fulfil a few requirements in order to trade on EPEX SPOT’s markets. Applicants should get in touch with a Clearing Bank and sign a balance agreement with a Transmission System Operator at the beginning of the admission process.

Once all these requirements are met, you can start the membership process in coordination with the EPEX SPOT Membership department. As soon as your company is approved as an Exchange Member, you can connect yourself to the trading systems of EPEX SPOT and start trading on our markets.

Your company finally designates individual persons who will be admitted as traders. Before becoming a trader, the person has to pass an exam. Training as well as the exam can easily be completed via EPEX SPOT’s E-Learning platform (see also page 31). The trader can be an employee or a Designated Broker.
CUSTOMER SURVEY: LISTENING TO THE NEEDS OF OUR MEMBERS

Every year EPEX SPOT runs a Customer Survey among its Members in order to evaluate their satisfaction with the Exchange over the previous year and to ask for their opinion about potential changes in market design, the introduction of new products and functionalities. Last year, several projects and products were developed and launched on the request of Members of the Exchange.

QUALITY OF SERVICES

This year, we received feedback from 89 participants in 70 different companies, representing a 35% increase compared to the previous survey. Overall, Members are satisfied with the quality of EPEX SPOT’s services.

HOW DO YOU ASSESS THE QUALITY OF SERVICE PROVIDED BY EPEX SPOT IN GENERAL?

Mean = 2,56
Scale from 1 (Poor) to 3 (Good)

<table>
<thead>
<tr>
<th>Quality</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>2,2%</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>39,3%</td>
</tr>
<tr>
<td>Good</td>
<td>58,5%</td>
</tr>
</tbody>
</table>

Total 89

Most of the Members are also satisfied by the ergonomics, the functionalities and the performance of the EPEX Trading System (ETS) and ComXerv, the two trading systems used by EPEX SPOT. ETS, used for the Day-Ahead Auction, seems to enjoy strong support from our members.

ARE YOU SATISFIED WITH THE PERFORMANCE OF ETS?

Mean = 2,24
Scale from 1 (Poor) to 3 (Good)

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied</td>
<td>3,4%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>66,3%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>25,8%</td>
</tr>
<tr>
<td>No answer</td>
<td>4,5%</td>
</tr>
</tbody>
</table>

Total 89

Members are almost completely satisfied with the liquidity of EPEX SPOT’s markets. The German/Austrian hub has an outstanding satisfaction, with the number of satisfied members reaching 100 percent, with 51.9 percent being “very satisfied” with its liquidity. Moreover, it has been found that Members are pleased with the price signal sent out by EPEX SPOT’s markets. They witness solid confidence in the security of the markets as well.

ARE YOU SATISFIED WITH THE PERFORMANCE OF COMXERV?

Mean = 2,07
Scale from 1 (Poor) to 3 (Good)

<table>
<thead>
<tr>
<th>Satisfaction Level</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied</td>
<td>6,7%</td>
</tr>
<tr>
<td>Satisfied</td>
<td>61,8%</td>
</tr>
<tr>
<td>Very satisfied</td>
<td>12,4%</td>
</tr>
<tr>
<td>No answer</td>
<td>19,1%</td>
</tr>
</tbody>
</table>

Total 89

Patrick Adigbli is Business Analyst for Germany, Austria & Switzerland. He is responsible for the strategic analysis of market dynamics and customer needs to improve products and enhance the quality of service.
EVALUATION OF THE INCIDENT ON 26 OCTOBER 2011

For the 2011 survey, a specific section has been devoted to the technical incident encountered by EPEX SPOT on October 26th. On that day, Members could not properly connect to the trading system. The Trading-on-Behalf procedure was triggered, which significantly delayed the publication of prices. The increased number of participants in the survey is explained by the need of several affected Members to be heard on the consequences of the incident. A relatively high number of respondents said they were generally dissatisfied with the information and support from EPEX SPOT during the incident. The level of dissatisfaction experienced last year on this specific topic was significantly lower.

Although the global satisfaction level with the services of EPEX SPOT remained stable compared to last year, EPEX SPOT developed an action plan to improve responsiveness in the event of an incident and ranked it as a top priority in 2012. The part of the survey dedicated to the evaluation of the incident had two aims: achieving a better understanding of the consequences of this incident on Members’ side, and getting feedback on ideas for improvements of the Trading-on-Behalf procedure. The survey helped us to identify that around 70% of the Members experienced problems on that day. The main difficulties they encountered were:

- Connection issues to ETS, slowness of the application.
- Communication issues concerning the activation of the Trading-on-Behalf procedure.
- Lack of feedback from EPEX SPOT to the Members on the status of the technical problem, the status of the trading session, the status of the orders sent and the actions for resolution or fail-back.

For 46% of the respondents, the help of the Sales team proved valuable on that day. More than 60% of the Members were satisfied with the long-term communication in the aftermath of the incident. All in all, Members requested an improvement of the reliability of the trading system and the communication in the event of an incident.

MARKET DESIGN

Regarding the market design, several proposals have been made to the Members. As most expressed their interest in these proposals, the following evolutions will be studied with priority in 2012.

Day-Ahead Market: Smart block bids

Smart Block Bids will provide a significant enhancement of the current block trading functionalities on the Day-ahead market and will introduce more flexibility for Members allowing for an improved optimisation of their power plants. The following three Smart Block Bids will be evaluated:

- Linked block order – an order (“son”) whose execution is conditional to the execution of another block (“father”).
- Choice block order – an order whose execution excludes the execution of another block order.
- Flexible block order – an order executed on the most profitable hour range of the day.

Intraday Market

On the French intraday market, we will study the possibility of allowing trading until delivery. This would be a noticeable improvement of trading, largely supported by Members. We will also assess the possibility of opening the hours of the next day earlier than the current start of trading at 3 pm.
THE EPEX SPOT TEAM AT WORK
International and reliable: The EPEX SPOT team reflects its markets. This growing community, composed of people from ten countries, coming from various sectors, is united by common ideas: to develop the best tools for electricity trading, to listen to the needs of our Exchange Members, and to work towards a pan-European power market. These are some impressions from their life at EPEX SPOT.
MARKET OPERATIONS:
“COMMUNICATION IS THE KEY”

Market Operations are one of the key elements of the Exchange. At EPEX SPOT, Market Operations work across borders every day. One part of the team is based in Paris and the other part in Leipzig. In this interview, the heads of EPEX SPOT’s Market Operations tell us about organisational differences, shared visions and a common "child".

YOUR TEAM IS BASED ON TWO SITES AND IN DIFFERENT COUNTRIES. HOW DO YOU MANAGE TO WORK TOGETHER IN THIS FRANCO-GERMAN CONSTELLATION?

Céline Maurer, Director of Market Operations: We actually have to face two different challenges every day: work with two geographically separated sites that are located in different countries – and two different cultures and ways of working. Communication is the key. Harmonization, organization and splitting of work have to be done the best possible way in order to ensure smooth running of the operations. This is also a matter of understanding each other and making sure questions and issues are understood the same way. Visions and goals as well as their understanding need to be the same in the two locations: what does client service mean, how can we best manage our risks, what level of training is needed on which systems and products?

To make this happen, we spend time together: conference calls, regular telephone calls, but also travelling and team exchanges. The better we know each other, so much the better! Of course the operators’ profile is crucial. We constantly focus on recruiting international and open-minded people.

Thomas stated once that we actually have three teams: one in Leipzig, one in Paris and one global one. I think that's a very good picture: we have two different teams with two different cultures and backgrounds, with best practices to be preserved. And we have a global one that we all need to take care of, as a common child. It grows and evolves over time and you always have to be patient and careful to make it work and last!

WHICH LANGUAGE – OR LANGUAGES – DO YOU USE?

Thomas Drescher, Head of Market Operations Leipzig: For all communication between Leipzig and Paris, as well as for all documents, we always use English. This is our daily working language. For communication within each location we can of course also speak in our native languages. Communication with our Members can be in different languages – English, French, German –, depending on the Member’s needs or preferences.

WHAT IS THE BIGGEST CHALLENGE IN EVERYDAY WORK?

Arnaud Thomas, Head of Market Operations Paris: The biggest challenge in a team based in two different locations is the sharing of information. Communication is a key success factor to ensure we all have the same level of information which is crucial in a work environment in constant evolution. We permanently have to adapt to new procedures, new markets, and new systems. The knowledge has to be spread to all market operators to ensure a safe running of the operations.

The video conference which is constantly open between Paris and Leipzig helps a lot, as well as regular team meetings and the training program we are currently working on. Trips to the other location are also welcomed to make sure the way of working is harmonized by taking the best practice of each team.

RECENTLY, YOU MERGED THE TWO E-MAIL ADDRESSES FOR MARKET OPERATIONS. WHY DID YOU DO THIS – AND WHY NOW?

Salima Leulmi, Head of Market Operations Paris: The merger of two mailboxes was one of the concrete actions we discussed within the Market Operations to improve our organization. With one single mailbox, we can better communicate with our market participants. Furthermore, this is also the best way to exchange with other departments within the company. This improvement is an opportunity to work as one single team with one single spirit despite the geographical distance. It took us a little time to implement it as we had to “compromise to reach common ground”: we first had to adapt to each other’s ways of working before deciding on common solutions. We had to harmonize the way we answer the client, the way we handle each client request and e-mail, we had to be pro-active in both locations and make sure work is correctly and equally split up. We have to trust each other sufficiently to share the amount of work. I think we can be proud of that achievement, which is one of the most visible ones.
TECHNICALLY, HOW DO YOU SPLIT UP THE WORK BETWEEN THE SITES?

**Thomas Drescher:** In general all Market Operations team members work on the same daily processes and systems. In order to define clear responsibilities for daily operations we have several operator roles. Each of them covers fixed dedicated operational tasks. Depending on the availability of the team members the roles are allocated to them each day no matter where they are located. This of course requires a careful planning and coordination within the team. Incoming customer requests and e-mails will be flagged by the operator who is working on it so that all other operators can see at first glance which request is already being processed and which one is new and open. Furthermore, each Market Operation team member is also deeply involved in dedicated projects, mainly concerning development and enhancement of trading products, systems or market models.

**HOW DID CWE CHANGE YOUR WORK – DID IT FURTHER “INTERNATIONALISE” IT?**

**Céline Maurer:** Market Operations as well as many other EPEX SPOT teams were “internationalised” long before CWE. We have always worked with partners all over Europe. However, the recent coupling projects are leading us even more in that direction. And many others ahead of us will reinforce the trend: Trilateral Coupling in CEE, NWE, Flow-Based market coupling, PCR. The real challenge is to maintain the same level of operational safety and cooperative coordination with all partners.
PROJECTS & PRODUCTS
**March 2011**

**REDUCTION OF LEAD-TIME ON THE INTRADAY MARKET**

A small adjustment with big effects: on 29 March 2011, EPEX SPOT reduced the lead-time from 75 to 45 minutes on its Intraday markets. This improvement enables trading even closer to real-time, a prerequisite for market integration of highly fluctuating power sources.

**May 2011**

**COSMOS AS STARTING POINT FOR PCR**

In May 2011, the Power Exchanges involved in the Price Coupling of Regions (PCR) initiative took a major step forward. They agreed on COSMOS, the algorithm used for Price Coupling in Central Western Europe, as a starting point for the PCR algorithm.

**August 2011**

**INTRODUCTION OF PRICE COUPLING SYSTEM**

Making our systems even more reliable: on 4 August 2011, EPEX SPOT switched smoothly to a new Market Coupling System, called Price Coupling System (PCS). Since then, Market Coupling in CWE runs on the basis of PCS whenever EPEX SPOT is the Functional System Operator.

**October 2011**

**EPEX SPOT CHOSEN AS SERVICE PROVIDER FOR MARKET COUPLING**

In October 2011, the Czech, Slovakian and Hungarian Power Exchanges OTE, OKTE and HUPX chose EPEX SPOT as provider for their trilateral market coupling, scheduled to start in 2012. The service will consist in the implementation and operation of a coupling solution based on the systems used in CWE.

**November 2011**

**ONE YEAR OF CWE MARKET COUPLING**

Market Coupling in Central Western Europe (CWE) was launched on 9 November 2010. 2011 was its first full calendar year – and CWE had remarkable effects on price convergence on the coupled markets. For about two thirds of the time, wholesale power prices were the same over all five countries.

**December 2011**

**15-MINUTE CONTRACTS ON GERMAN INTRADAY MARKET**

EPEX SPOT also contributes to the German energy transition. One of the most visible efforts is the introduction of 15-minute contracts on the German Intraday market on 14 December 2011. They are designed to facilitate the integration of renewables into the market.
PROJECTS & PRODUCTS: INTEGRATING EUROPEAN POWER MARKETS

We want to facilitate and improve wholesale power trading in Europe. Our Day-Ahead and Intraday markets are geographically predisposed to be the facilitator of a single European power market. Market Coupling in Central Western Europe, established in November 2010, pioneered the interaction between national power markets. In 2011, EPEX SPOT commenced seminal projects promoting Market Coupling and the furthering of the integration process.

DAY-AHEAD MARKETS

Concentration of liquidity, the starting point of integration: Day-Ahead auctions are the core of our business. In 2011, several decisive steps towards a pan-European power market were taken.

NORNED MARKET COUPLING: IMPROVING THE CONNECTION BETWEEN CWE AND NORDIC COUNTRIES

On 12 January 2011, the NorNed cable successfully joined the interregional market coupling between Central Western Europe (CWE: France, Germany, Benelux) and the Nordic countries (Norway, Sweden, Finland, Estonia and Denmark). The CWE price coupling and the Interim Tight Volume Coupling (ITVC) solution had started simultaneously on 9 November 2010, connecting the existing volume coupling between Germany and the Nordic market with the price coupling initiative in Central Western Europe. The two projects integrate a day-ahead market area of more than 1,800 Terawatt hours of power production and cover approximately 60% of electricity consumption in Europe. The inclusion of NorNed with the undersea DC link between Norway and the Netherlands is the final milestone of the ITVC. 17 parties were involved, including Transmission System Operators (TSOs) and Power Exchanges, working closely together to complete the ITVC.

PRICE COUPLING OF REGIONS: POWER EXCHANGES AGREE ON THE STARTING POINT FOR THE FUTURE EU DAY-AHEAD MATCHING ALGORITHM

In 2009, EPEX SPOT initiated the Price Coupling of Regions (PCR) project, together with the Iberian and Nordic Power Exchanges OMIE and Nord Pool Spot. In 2010, three other exchanges (APX-Endex, Belpex, GME) joined this open initiative, which is also supported by Europex, the European association of Energy Exchanges. The PCR project is a response to the common wish of regulators, TSOs and Exchange Members for the implementation of a single day-ahead price coupling solution across Europe. Spot electricity price formation will be coordinated in an area covering Europe from Portugal to Finland and the Baltics. This amounts to over 80% of yearly European power consumption. PCR also builds pragmatically on the existing arrangements, including the contractual and regulatory frameworks of each region. The approach thus minimizes the required changes, and accelerates the speed of implementation. The PCR project changes the scale of the market coupling projects, from a regional to a pan-European one.

DEVELOPMENT OF THE PRICE COUPLING OF REGIONS (PCR) INITIATIVE

PRICE COUPLING SYSTEM: OPTIMISING CWE PRICE COUPLING

The CWE price coupling is using a so-called Market Coupling System. The COSMOS matching algorithm is embedded in this Market Coupling System. On 4 August 2011, EPEX SPOT introduced the Price Coupling System (PCS) developed by Soops. Soops is also the provider of ETS, the EPEX Trading System for the Day-ahead markets. PCS secures the operational process and provides flexibility by improving the level of support and maintenance and the code design of the system. Moreover, it establishes a generic system in which further hubs can be added in a simple and efficient manner.

Markets initially included in PCR — yearly power consumption of 2 860 TWh
Markets which showed interest to join
Markets that could join next as part of an agreed European roadmap
COSMOS: COUPLING OF SPOT MARKETS WITH OPTIMAL SOLUTIONS

In May 2011, the PCR Power Exchanges decided to use an existing algorithm based on mathematical optimization methods that have already been applied and proven to be effective in several Day-Ahead implicit auction markets. The parties have agreed to use an enhanced version of the COSMOS algorithm currently in use in the CWE Market Coupling as the starting point. COSMOS is today co-owned and used on a daily basis by EPEX SPOT. It will be used as starting point for the development of a fully functional algorithm able to cover the entire scope of PCR and support the European single price coupling target model. The decision followed an extensive review of the potential algorithms by the parties over a period of six months. Following this announcement, ACER, the Agency for the Cooperation of Energy Regulators, formally requested the European association of TSOs, ENTSO-E, to validate the algorithm proposed by Power Exchanges in terms of meeting the requirements of capacity allocation constraints.

TRADE QUANTITY LIMITS: DECREASING FINANCIAL RISKS

Following a request from clearing to limit financial risks, trade quantity limits were introduced on hourly orders on the French, German/Austrian and Swiss EPEX SPOT Day-Ahead markets as of 8 August 2011. Hourly order quantity limits are determined for the members by each clearer who bears the responsibility of assessing the limit and of informing the clearing house ECC about its value. Trade quantity limits consist of a maximum hourly order quantity of MWh to be purchased at a positive price (or sold at a negative price) for each portfolio and each TSO area. The trade quantity limits do not apply to block orders.

STUDY OF A GREEN MARKET: MAKING RENEWABLE POWER TRADABLE

With steadily growing volumes, power from renewable energies is playing a key role in EPEX SPOT’s activity. Therefore, EPEX SPOT has studied in close cooperation with Members, political actors and regulators two ways of integrating the “green” character of power from renewables into its markets. EPEX SPOT continues to investigate the possibility to trade Guarantees of Origin (GoO) on the Exchange and follows the implementation of GoO registers in several EU countries.

CONVERGING PRICES: THE ADVANTAGES OF CWE MARKET COUPLING GET TANGIBLE

In the first full year of CWE Market Coupling, prices converged on all markets 66% of the time. For comparison, the full convergence rate of the Trilateral Market Coupling (TLC) between France, Belgium and the Netherlands amounted to 59% in 2010 (until 9 November, when CWE Market Coupling was launched). The most convergent areas in 2011 were France and Belgium with a 99% convergence rate (to be compared with 85% in 2010 with TLC) and Germany and the Netherlands with an 88% convergence rate.
PROJECTS & PRODUCTS

INTRADAY MARKETS

Trading until minutes before delivery of power with seamlessly integrated cross-border transactions: EPEX SPOT’s Intraday markets are state-of-the-art power trading solutions for portfolio balancing very close to real-time. In the past 12 months, EPEX SPOT brought several improvements to its Intraday segments.

NEW RELEASES OF COMXERV

In the course of 2011, EPEX SPOT released three new versions of its Intraday trading platform, ComXerv. ComXerv Release 3.3 brought, amongst other aspects, the possibility to trade block orders cross-border. ComXerv Release 3.4 further improved the overall system performance. ComXerv Release 3.4.1 introduced 15-minute contracts.

LEAD-TIME REDUCTION

On 29 March 2011, lead-time on the Intraday Market was reduced from 75 to 45 minutes, optimising trading procedures.

AUSTRIAN INTRADAY MARKET

On 1st December 2011, the Exchange Council welcomed the concept of an Austrian Intraday market. The concept was elaborated in cooperation with the Austrian transmission system operator APG, Austrian Power Grid whose Day-Ahead market is already integrated with neighbouring countries. Austria will now benefit from an organized Intraday market which will facilitate the integration of renewable energy into the power system.

EPEX SPOT started a project to offer an Austrian Intraday market, pragmatically using existing infrastructure. In addition, easy and secured access to the Franco-German Intraday liquidity pool via cross-border trading can promote the future Austrian Intraday market. Its implementation is scheduled for the third quarter of 2012, but is still subject to testing and regulatory approvals.

15-MINUTE CONTRACTS

On 15 December 2011, EPEX SPOT successfully launched 15-minute contracts on the German Intraday Market. They allow the Exchange Members to better take into account the fluctuations of wind and solar power production over the hour and to accordingly balance their portfolios on the Exchange. In so doing, the new contracts help to optimise grid stability.

15-minute contracts are available for trading in addition to the existing hourly contracts. 15-minute contracts open two hours before the delivery of the corresponding underlying hour and close 45 minutes before the start of the quarter’s delivery. Due to the growing influx of renewable energy in Germany, the production of power varies more and more within one hour. Renewable energy producers are therefore in need of more flexible instruments. By introducing 15-minute contracts, EPEX SPOT facilitates the German energy transition.

SERVICING AND COOPERATION

Operating markets and implementing Market Coupling solutions are not the only task of EPEX SPOT. We also pave the way for the integration of the European power market by sharing our knowledge with other actors of the power sector and servicing other Exchanges.

OTE, OKTE, HUPX AND EPEX SPOT COOPERATE ON PRICE COUPLING SOLUTION

The Czech, Slovakian and Hungarian power exchanges announced in May 2011 together with their respective TSOs, national regulatory authorities, and in collaboration with ministries, their cooperation to launch a trilateral market coupling between the Czech Republic, Slovakia and Hungary in 2012. EPEX SPOT was chosen by the participating Power Exchanges as provider of state of the art price coupling services. These services will consist of implementing and operating the coupling solution, relying on the Price Coupling System with COSMOS as the matching algorithm, the current system developed and used by EPEX SPOT within the framework of CWE.

This cooperation is a pragmatic step towards the pan-European power market supported by the European Commission. The initiative is open for other markets to join.

GOING OVERSEAS: COOPERATION AGREEMENT WITH US-BASED “TRES AMIGAS”

In 2011, US-based Tres Amigas and EPEX SPOT signed a cooperation agreement to share mutual expertise in the development and coupling of their respective markets.

Tres Amigas is uniting America’s electric grid. Using the latest advances in power grid technology, Tres Amigas is focused on providing the first common interconnection of America’s three power grids to help the country achieve its renewable energy goals and facilitate the smooth, reliable and efficient transfer of green power from region to region.

EPEX SPOT’s experience in market coupling will help Tres Amigas to develop a Power Exchange between the eastern, western and ERCOT grids.
E-LEARNING: TRAINING THE ACTORS IN THE EUROPEAN POWER INDUSTRY

Since its creation, EPEX SPOT has been a pioneer in offering online training courses for the power trading industry. When in 2009 the issue of a cost-effective easy certification exam for traders was raised, EPEX SPOT quickly came to the conclusion that the best solution to meet this goal was to develop online training courses. We then launched our E-Learning platform by implementing our first trader online training module and the online EPEX SPOT certification exam. Although not used to online training solutions, most of our members quickly adopted these modules as they appreciated the convenience of training at their own pace and taking the exam in their own time. Scores from the EPEX SPOT online exam, when compared to the ones of the traditional method, confirm that the freedom and flexibility of online training courses contribute to greater preparedness of the trainees and better exam results. Indeed, successfully completing online or computer-based courses builds self-confidence and encourages trainees to take responsibility for their learning. The exam can be taken three times. The availability of online demos of our two trading systems ETS and ComXerv is also a valuable asset as traders can familiarize themselves with all functionalities of the systems in a safe environment and thus eliminate the risks of potential entry errors.

IMPROVING THE STAFF’S COMPETENCES

Members also take advantage of computerized processes by receiving the score of their exam immediately and being able to start trading the next day. As a consequence of the success of this first online module, EPEX SPOT, dedicated to share its expertise with professionals of the energy sector, has substantially expanded its E-Learning offer by constantly developing new modules to answer the needs of the markets. New modules have been added, such as “The power system”, “Functionality of a Power Exchange”, “How to use a Power Exchange”, “Functionality of the Intraday Market” and “Market Coupling in Europe”. These modules designed for all professionals raise awareness of European power markets among industry actors and contribute to the improvement of the staff’s competence.

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elearning@epexspot.com
www.epexspot.com/en/elearning

"Our company is impressed with EPEX SPOT’s E-Learning program - especially the trader training and exam. New traders can become familiar with the trading system very quickly, take the exam online and if successful, start trading the next day. As E-Learning can be accessed anytime and anywhere, it is also a very cost-effective way to train people in other departments from risk-management to back-office and Sales."

Manfred Knabl, Head of Trading and Portfolio management Liquid Markets, VERBUND Trading AG

"EPEX SPOT’s E-Learning initiative offers flexible access to training courses on their markets. The online platform is cost effective, available in three languages and demonstrates a positive approach to facilitating market participants’ activity in this market."

Emeric De Vigan, Senior Trader & Julien Haure, Intraday Trading Manager, EDF Trading

"EPEX SPOT has created a very useful multilingual set of online training modules. We appreciate this possibility to train our colleagues in a lean and targeted manner. The online trainings and trader exams provide an excellent platform to increase our staff’s knowledge on trading fundamentals and market rules."

Niek den Hollander, Head of Trading, Statkraft Markets GmbH
The launch of Market Coupling in Central Western Europe had to be celebrated. Jean-François Conil-Lacoste and EU Commissioner for Energy Günther Oettinger at the CWE launch party in Brussels on 22 March 2011.

Jean-François Conil-Lacoste and Frank Vandenberghe, chairmen of the CWE Steering Committee, welcomed the guests from all over Europe in Brussels on 22 March 2011.

The German Embassy in Paris, in cooperation with EPEX SPOT, invited guests to a VIP dinner on 5 April 2011. German and French high-level politicians discussed energy policy issues and the challenges the power market faces in France, Germany and the EU.

From left to right: French MP Claude Gatignol, Jean-François Conil-Lacoste, Jan-Horst Keppler, Professor of economics at the Université Paris-Dauphine, former French Minister of European Affairs Noëlle Lenoir, Günther Rabensteiner, Member of the Executive Board of Austrian Verbund AG and Chairman of the Exchange Council of EPEX SPOT, Pierre Bornard, Vice Chairman of the Executive Board of RTE, Christopher Delbrück, CFO of E.ON Energy Trading and Jean-Christophe Cheylus, COO of Poweo.

The German regulator Bundesnetzagentur and EPEX SPOT jointly organised a conference on 12 July 2011 about the marketing of power from renewables on the Exchange. Over 300 participants from all over Europe came to Berlin.
A press briefing by Nord Pool Spot and EPEX SPOT was held on 28 September 2011 in London, when Jean-François Conil-Lacoste and Mikael Lundin, CEO of Nord Pool Spot, announced a closer cooperation in Europe.

At one of the biggest annual energy conferences in Paris, Gazelec, on 27 September 2011, transparency issues of the power market were on the agenda of the panel. From left to right: Emanuele Colombo, Director of European Market Integration at RTE, Robert Durdilly, President of UFE, the French union of electricity, Jean-François Conil-Lacoste and Pierre Buffière de Lair, Secretary General of EFET France.

Commodity round table at the annual conference of Paris Europlace, 5 July 2011. From left to right: Jean-François Conil-Lacoste, Michel Prada, President of the Conseil de Normalisation des Comptes Publics, the French public sector accounting standards board, François-Xavier Saint-Macary, CEO of Bluenext, Amine Bel Hadi Soulami, Global Head of Commodity Derivatives at BNP Paribas and Philippe Mudry, General Director of French economy magazine Agefi.

Jean-François Conil-Lacoste, as chair of the working group Electricity and Gas of Paris Europlace, together with Arnaud de Bresson, Managing Director of Paris Europlace, presented recommendations to the G20 presidency of France at a press briefing in Paris on 20 October 2011.

The Emart conference and exposition on 23 and 24 November 2011 is a traditional highlight in the energy trading business calendar.
Present in the energy press as well as in national journals, EPEX SPOT’s achievements have been largely covered.

**EPEX SPOT IN THE PRESS**

**31 January 2011**

**Healthy demand seen for Franco-German intra-day market**

The introduction of a Franco-German intra-day market in December 2010 has led to a surge in traded volumes on European power exchange EPEX Spot’s intra-day markets, according to French energy regulator CRE.

A CRE spokeswoman told a conference in Vienna on Monday that traded volumes on EPEX Spot’s intra-day market had increased capacity users on the exchange’s intra-day markets over the last month, compared to three during all of 2008.

The CRE spokeswoman said that the birth of a pan-European intra-day market would be “difficult”, but said that there was “political will to achieve it” (see EDEM 20 August 2010).

Frank Reyer, a senior manager of system operation planning at Am�ron, told the conference that the proportion of implicit and explicit allocations of capacity had changed every day since 14 December 2010.

“This is proof that the explicit OTC model is still needed. It depends how traders want to make use of the capacity,” he said.

**20 October 2011**

**Europlace propose une remise à plat du marché de l’énergie**

Paris Europlace has presented the recommendations of a sub-commission on the development of the national electricity and gas markets, set up in the context of the French presidency of the G20, on the regulation of the markets of last resort. For the president of this sub-commission, Jean-François Conil-Lacoste, director general of EPEX SPOT, the European stock exchange, the French market of electricity suffers from a lack of obligations, which represent the two-thirds of the consumption.

**15 December 2011**

**EPEX SPOT exchange considers green power product**

The Paris-based EPEX SPOT exchange is investigating the introduction of a green product for power from renewable energy sources, it said on Wednesday. For some months now, the exchange has worked on an internal study on the topic with the findings indicating a need for a green Power product, which labelled energy from exclusively renewable energy sources can be traded, it said.

**30 April 2011**

„Niedrige Strompreise sind unökologisch“

Der Chef der deutsch-französischen Energiebörse ärgert sich über künstlich verbilligten Atomstrom und abgeschottete Märkte


SZ: Das klingt nicht sehr modern.


SZ: Funktionsiert dieser Markt? Wenn in Norddeutschland der Wind kraftig bläst, müssen Überkapazitäten aus der Windkraft teilweise exportiert und dann wieder teuer zurückgeschafft werden.


Ein beunruhigender Markt mit klaren Br-

Epex schielt auf Österreich


Monitoring-Bericht: Preiskonvergenz in CWE-Region bei 70%

Die Preiskonvergenz in der Marktkopplung für Zentralwesteuropa wird mittlerweile in rund 70% der Stunden erreicht. Vor der Einführung der Marktkopplung im November 2010 sei die Preisgleichheit zwischen Deutschland, Frankreich und den Benelux-Ländern nur in weniger als 1% der Stunden feststellbar gewesen, heißt es im Monitoring-Bericht 2011 der Bundesnetzagentur, der am Freitag veröffentlicht wurde. Diese Entwicklung sei eine «bemerkenswerte Effizienzsteigerung». Preiskonvergenz ist laut der Börse EPEX SPOT bei einem Preisunterschied von bis zu 0,005 EUR/MWh gegeben.

Bloomberg

Nord Pool, EPEX SPOT Exchanges Plan Joint London-Based Power Platform

Nord Pool Spot AS and EPEX SPOT SE, Europe’s two biggest electricity exchanges for near-term delivery, plan to start a joint-venture power trading platform as the European Union seeks a single market for the bloc. The two exchange companies signed a letter of intent to start the as-yet unnamed venture next year and base it in London, the two chief executive officers of the companies, Mikael Lundin of Nord Pool Spot and Jean Francois Conil-Lacoste at EPEX SPOT, said today at a press briefing in London.
Transparency promotes equal opportunities for all trading participants. The efficient publication of relevant market data creates a level playing field for market actors and ensures the comprehensibility of market developments and prices. Relevant market data is limited to aggregated information and excludes commercially sensitive information.

Integrity ensures clear market rules and allows the full traceability of market actions for supervision and monitoring. By their full access to all necessary data, authorities prevent insider dealing and market abuse. The challenge lies with the efficient use of existing reporting infrastructure in markets with growing transnational interdependency.
To live up to transparency standards and to ensure the safety of trading on EPEX SPOT, the Market Surveillance office strengthened its relations … … with the authorities: Market Surveillance has put in place a regular reporting and has tightened its relations with the four National Energy Regulators in charge of its market areas (BNetzA, CRE, E-Control, ElCom); … with other Market Surveillance departments: the pilot project of a central repository of trades and several discussions within Europex about the REMIT proposal have been occasions to start new relations with other teams responsible for the same activity; … and with ACER by starting discussions on the implementation of REMIT.
CONTINUING THE FIGHT AGAINST VAT FRAUD

In 2011, the level of risk of possible VAT fraud on the electricity market has increased. EPEX SPOT, through its Market Surveillance, has actively participated in the different actions to fight against VAT fraud.

At a European level, one important milestone has been the publication of a joint statement on VAT fraud prevention in the electricity and gas sector by nine Energy associations at the Florence Forum in December 2011 raising awareness of the risk and the need for improvement. At the national level, the French National Assembly has voted a law to introduce reverse charge on the wholesale market for gas and electricity as of 1st April 2012.

As far as EPEX SPOT is concerned, the Market Surveillance has continued to improve internal processes to reduce the risk of fraud on the EPEX SPOT markets:

• by reviewing all new applicants' KYC and via an updated KYC during the circularization process
• by monitoring and reacting to any unusual behavior of Members.

EPEX SPOT has continued to warn all the stakeholders and especially its Members about the VAT carousel risk in order to avoid that fraudsters have access to the electricity market. Therefore, EPEX SPOT has sent a circular in November 2011 to its Members with recommendations and criteria to respect when establishing business relations with new customers or with customers increasing their volumes.

In addition, EPEX SPOT offers training to fight against VAT fraud and VAT carousels through its E-Learning platform.

EPEX SPOT continues to push for regulation changes at a European level particularly for the introduction of the reverse charge mechanism on energy transactions in Europe.
2011 was marked by important changes in European regulation on energy markets. EPEX SPOT actively takes part in consultations and amended its Rules and Regulations to comply with regulatory standards.

In 2011, several changes in European regulation on energy markets have been implemented. First of all, the so-called Third Package entered into force on 3 March 2011. This package includes two Directives on electricity and gas respectively, as well as three Regulations on access rules to electricity and gas networks and the creation of the Agency for the Cooperation of Energy Regulators (ACER).

At the moment, five legislative processes are in progress in the electricity sector among which the one concerning Capacity allocation and Congestion Management is of particular interest for EPEX SPOT. In the framework of implementing the Third Package, Entso-E has been designated to draft several network codes. The aim of these codes is notably to provide and manage the optimal and coordinated use of the transmission network capacity across borders.


The main objective of this Regulation is to prohibit trading based on inside information, a practice which would undermine public trust in the market and could distort the price signal on the power market. Market abuse or attempts thereof is prohibited. REMIT gives ACER the power to monitor the European energy market and establishes reporting obligations for all market participants who trade wholesale energy products. ACER can request information from national regulatory authorities in order to detect and punish abusive behaviors. The Regulation also provides for the implementation of a system for registration of market participants and for market data reporting (see figure below).

Furthermore, the European Commission is working on a proposal of Governance Guidelines for the European Day-Ahead Market Coupling in view of the implementation of the European Target Model according to the ACER roadmap.

For the time being, market coupling is based on private commercial agreements between different parties like Power Exchanges and TSOs. By drafting these governance guidelines, the European Commission aims at the creation of a governance framework which enables an efficient market coupling system based on a sustainable and efficient organizational structure.
FINANCIAL REPORT.
The turnover has increased by 14% in 2011 compared to the prior year.

EPEX SPOT succeeded in creating steadiness within the operating costs – a proof of its efficiency.

Due to higher cost-efficiency EPEX SPOT posts an EBIT growth of 20%.

The stability of our markets is reflected in the net profit. EPEX SPOT continues to be a growing company.
## BALANCE SHEET

The following balance sheet reflects the financial situation of EPEX SPOT SE before distribution of the net income of the period. The financial statements are established according to French generally accepted accounting principles which corresponds to International financial reporting standards.

### ASSET

#### FIXED ASSETS

- **Intangible fixed assets**
  - Concessions, patents and similar assets
    - Concessions, patents and similar assets: 7,249,240 / 5,625,591 = 1,623,649
    - Depreciation of concessions, patents and similar assets: -3,424,023 / -1,716,870 = -1,707,153
  - Goodwill: 1,544,079 / 1,544,079 = 0
  - Intangible fixed assets in progress: 240,024 / 0 = 240,024
  - Total intangible fixed assets: 5,609,320 / 5,452,800 = 156,520

- **Tangible fixed assets**
  - Other tangible fixed assets: 344,238 / 92,420 = 251,817
  - Depreciation of other tangible fixed assets: -95,743 / -34,862 = -60,881
  - Financial fixed assets: 34,800 / 0 = 34,800
  - Total fixed assets: 5,892,614 / 5,510,358 = 382,256

### CURRENT ASSETS

- **Debts receivable**
  - Trade debtors and related accounts: 5,543,592 / 6,469,337 = -925,745
  - Other debts receivable: 1,236,480 / 1,857,910 = -621,430
  - Liquid assets: 15,368,747 / 11,476,349 = 3,892,399
  - Prepayments: 265,347 / 5,314 = 260,033
  - Total current assets: 22,414,166 / 19,808,909 = 2,605,257

**OVERALL TOTAL**

### STOCKHOLDER'S EQUITY AND LIABILITIES

#### CAPITAL AND RESERVES

- **Share Capital**: 4,973,094 / 4,973,094 = 0
- **Premiums on shares issued, mergers, contributions**: 2,473,138 / 2,607,960 = -134,822
- **Legal reserve**: 497,309 / 362,487 = 134,822
- **Profit for the financial year**: 11,682,767 / 9,831,470 = 1,851,297
- **Total capital and reserves**: 19,626,309 / 17,775,011 = 1,851,297

#### PROVISIONS FOR LIABILITIES AND CHARGES

- **Provisions for liabilities**: 1,025,000 / 575,000 = 450,000
- **Provisions for charges**: 60,719 / 61,636 = -917
- **Total provisions**: 1,085,719 / 636,636 = 449,083

#### DEBTS PAYABLE

- **Trade creditors and related accounts**: 2,659,580 / 2,583,964 = 75,616
- **Tax and social security debts payable**: 4,555,460 / 4,252,166 = 303,294
- **Other debts payable**: 379,712 / 71,490 = 308,222
- **Total provisions**: 7,594,752 / 6,907,620 = 687,132

**OVERALL TOTAL**
COMMENTS TO BALANCE SHEET ITEMS

Concessions, patents and similar rights:
The gross amount increased by 1,624 KEUR and is amortized according to the straight-line method over a duration of 36 months. The investments in 2011 concern essentially the EPEX Trading System (ETS), the Price Coupling System (PCS) and the Flexible Intraday Trading Scheme (FITS).

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:
The intangible fixed assets in progress amount to 240 KEUR and contain essentially investments for the Central Western Europe (CWE/COSMOS) and Intraday cross-border projects.

Other tangible fixed assets:
The gross amount increased by 252 KEUR due to the move of the office space to another floor.

Financial fixed assets:
This item represents the participation of 60% in the joint venture between EPEX and Soops BV (30 KEUR) which has been established in April 2011.

Trade debtors and related accounts:
This item (5,544 KEUR) decreased by 14.3% referring to last year (6,469 KEUR) because project costs were invoiced more regularly over the year and not mainly in December. Transactions fees for December 2011 amount to 2,800 KE and annual membership fees to 1,480 KEUR. Trade debtors concerning CWE amount to 737 KEUR on December 31, 2011 (2,665 KEUR on December 31, 2010). There was further billing in December 2011 for services to HUPX (109 KEUR) and in the context of the PCR project (36 KEUR).

Other debts receivable:
This item relates essentially to deductible VAT amounting to 962 KEUR (balance on December 31, 2010: 1,380 KEUR).

Liquid assets:
The total "cash" of EPEX SPOT SE amounts to 15,369 KEUR and is placed on current accounts (Paris & Leipzig).

Prepayments:
This item increased by 260 KEUR and contains the following costs:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT support</td>
<td>180,667</td>
</tr>
<tr>
<td>insurances</td>
<td>52,858</td>
</tr>
<tr>
<td>subscriptions</td>
<td>18,575</td>
</tr>
<tr>
<td>trade fair participation</td>
<td>8,488</td>
</tr>
<tr>
<td>rent</td>
<td>2,648</td>
</tr>
<tr>
<td>training</td>
<td>2,111</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>265,347</strong></td>
</tr>
</tbody>
</table>

Capital and reserves:
The share capital is unchanged from 2010 and amounts to 4,973 KEUR. From the net income of financial year 2010 (9,831 KEUR) 135 KEUR have been attributed to the legal reserve so that the legal reserve amounts now to the legal maximum ratio of 10% of the share capital. The amount of 135 KEUR has been distributed out of the position “Premiums on shares issued, mergers, contributions”. The entire results was distributed.

Provisions for liabilities:
This item contains a provision of 1.025 KEUR for business risks.

Trade creditors and related accounts:
This item increased by 76 KEUR (+ 3% compared to previous year) mainly due to billing of costs from PCR project parties (180 KEUR on December 31, 2011).

Tax and social security debts payable:
This position essentially contains income tax and business entity tax amounting to 2,920 KEUR to be paid in 2012, turnover tax payable of 211 KEUR and personnel and social security debts payable (bonuses, holiday pay and social security fund) of 1,273 KEUR compared to 1,071 KEUR on December 31, 2010.
## PROFIT AND LOSS ACCOUNT

The income statement of 2011 covers a 12 month period (fiscal and financial year of EPEX SPOT SE) compared to 12 months of the prior year.

<table>
<thead>
<tr>
<th></th>
<th>31/12/2011 (12 months)</th>
<th>31/12/2010 (12 months)</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit and loss account</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales of services</td>
<td>34 352 714</td>
<td>30 121 602</td>
<td>4 231 112</td>
</tr>
<tr>
<td>Net turnover</td>
<td>312 617</td>
<td>203 855</td>
<td>308 762</td>
</tr>
<tr>
<td>Provisions and depreciation written back, charges transferred</td>
<td>475 917</td>
<td>0</td>
<td>475 917</td>
</tr>
<tr>
<td>Other income</td>
<td>18 417</td>
<td>88</td>
<td>18 329</td>
</tr>
<tr>
<td>Total income</td>
<td>35 359 665</td>
<td>30 325 545</td>
<td>5 034 121</td>
</tr>
<tr>
<td>Operating charges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT costs</td>
<td>-1 945 939</td>
<td>-2 791 210</td>
<td>845 271</td>
</tr>
<tr>
<td>Personnel costs</td>
<td>-5 011 536</td>
<td>-3 956 061</td>
<td>-1 055 475</td>
</tr>
<tr>
<td>Overhead costs</td>
<td>-8 132 880</td>
<td>-8 070 490</td>
<td>-62 390</td>
</tr>
<tr>
<td>Operating taxes</td>
<td>-156 194</td>
<td>-144 372</td>
<td>-11 822</td>
</tr>
<tr>
<td>Extraordinary expenses</td>
<td>0</td>
<td>-83 822</td>
<td>83 822</td>
</tr>
<tr>
<td>Total Operating charges</td>
<td>-15 246 549</td>
<td>-15 045 955</td>
<td>-200 594</td>
</tr>
<tr>
<td>EBITDA</td>
<td>20 113 116</td>
<td>15 279 590</td>
<td>4 833 527</td>
</tr>
<tr>
<td>Adjustment transfer</td>
<td>-925 000</td>
<td>-129 639</td>
<td>-795 361</td>
</tr>
<tr>
<td>Amortization, tangibles</td>
<td>-60 195</td>
<td>-5 202</td>
<td>-54 993</td>
</tr>
<tr>
<td>Amortization, intangibles</td>
<td>-1 707 839</td>
<td>-651 405</td>
<td>-1 056 434</td>
</tr>
<tr>
<td>EBIT</td>
<td>17 420 082</td>
<td>14 493 344</td>
<td>2 926 739</td>
</tr>
<tr>
<td>Financial income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other interest and similar income</td>
<td>124 038</td>
<td>69 595</td>
<td>54 443</td>
</tr>
<tr>
<td>Total Financial profit</td>
<td>124 038</td>
<td>69 595</td>
<td>54 443</td>
</tr>
<tr>
<td>Income tax</td>
<td>-5 861 353</td>
<td>-4 731 469</td>
<td>-1 129 884</td>
</tr>
<tr>
<td>Profit or loss</td>
<td>11 682 767</td>
<td>9 831 470</td>
<td>1 851 297</td>
</tr>
</tbody>
</table>
**COMMENTS TO INCOME STATEMENT ITEMS**

**Net turnover**: the turnover increased by 14% compared to prior year and is due to the increase of variable fees:

<table>
<thead>
<tr>
<th>31/12/2011</th>
<th>31/12/2010</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>34 352 714</td>
<td>30 121 602</td>
</tr>
<tr>
<td>thereof</td>
<td></td>
<td>4 231 112</td>
</tr>
<tr>
<td>variable fees</td>
<td>25 623 575</td>
<td>21 914 223</td>
</tr>
<tr>
<td></td>
<td>3 709 351</td>
<td>17%</td>
</tr>
</tbody>
</table>

**Written back provisions and depreciation, charges transferred**: This item refers to the dissolution of the prior year provisions and concerned business risks.

**Staff**: This item increased significantly because of the hire of new staff members in 2011.

**STAFF EVOLUTION**

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>29</td>
<td>39</td>
<td>48</td>
</tr>
</tbody>
</table>

Number of employees

**Adjustment transfer**: This position concerns appropriations to provisions for business risks.

**Amortization, intangibles**: Compared to 2010, where the projects (ETS and CWE) were launched at the end of the year, the depreciation covered only a few months. In 2011 the depreciation covered a whole year which explains the huge increase of the depreciation in 2011.

Gökhan Sengezer is EPEX SPOT’s Accountant. Together with Head of Accounting and Controlling Nina Weckesser, he keeps track of the financial evolution of the company.
GLOSSARY

ATC: Available Transfer Capacity
Part of the total day-ahead capacity made available for Market Coupling.

Auction
Procedure for making transactions after a period of time during which the orders entered by Members in the Order Book are accumulated but not executed. The price determination algorithm aims at optimising the total welfare, i.e. the seller surplus, the buyer surplus and the congestion rent.

Balance Responsible Party
Legal entity financially liable towards a TSO for the after-the-fact imbalances within the Balance Responsible’s Perimeter.

Balance Responsible Agreement
All contractual agreements between the TSO and the grid user regarding the settlement of power imbalances recorded on balance perimeters.

Balance Responsible Perimeter
Set of withdrawals and injections that constitute the after-the-fact Balance Responsible Imbalance.

Balancing Market
Market managed by TSOs in order to guarantee the availability of power reserves in D-1 and intraday to ensure global supply-demand balance in real time.

Baseload
Characterises the type of load for the delivery of electricity or the procurement of electricity with a constant output over 24 hours of each day of the delivery period.

BNetzA: Bundesnetzagentur
The Bundesnetzagentur (Federal Network Agency) is a German authority whose task is to provide, by liberalisation and deregulation, for the further development of networks and markets in electricity. The Agency has rights of information and investigation as well as the right to impose graded sanctions.

Block Order
Combination of hours which must be met for their execution.

Buyer Surplus
Difference between the submitted price and the market price, multiplied by the quantity actually purchased.

CEE: Central Eastern Europe
Region encompassing the power markets of Germany, Austria, Hungary, the Czech Republic, Slovakia, Poland and Slovenia.

Clearing
Financial and physical settlement of transactions.

Clearing House
Central counterparty of the transactions on EPEX SPOT, handling settlement, delivery and collateralisation of transactions.

Clearing Member
Participant in the clearing procedure holding a clearing licence with ECC.

Code of Conduct
The Code of Conduct is part of EPEX Rules and Regulation and sets forth the rules of conduct and market behaviour which must be respected at all times by the Exchange Members.

Congestion Rent
Price difference between two markets linked by market coupling arising when there is congestion on the border.

Continuous Trading
Unlike in an auction, orders may be executed as soon as they are placed in the order book. Competing orders are prioritized by their price and then by their time stamp.

Contract
Commercial contracts traded on EPEX SPOT, whose specifications and parameters are described in the Operational Rules.

CRE: Commission de Régulation de l’Energie
Independent administrative body in charge of regulating the French electricity and gas markets.

Curtailment
Imbalance of purchase and sale leading to out-of-scale prices on the Auction Segment.

CWE: Central Western Europe
Region encompassing the power markets of France, Germany, Belgium, the Netherlands and Luxembourg, which are coupled since 9 November 2010.

Day-Ahead Market
Part of the spot market where a commodity is tradable one day before delivery.

Delivery
The physical fulfilment of transactions is called delivery.

Delivery Area
Power transmission grid managed by a Transmission system Operator.

Designated Broker
Trading Member who trades on behalf of another Trading Member.

E-Control
As the Austrian independent regulation authority, E-Control is responsible for drawing up and enforcing market rules. Its job is to strengthen competition and to ensure that this does not compromise security of supply and sustainability.
ECC: European Commodity Clearing AG
Clearing House and central counterparty for all transactions on EPEX SPOT.

ElCom: Eidgenössische Elektrizitätskommission
ElCom is Switzerland’s independent regulatory authority in the electricity sector. ElCom monitors electricity prices as well as electricity supply security and regulates issues relating to international electricity transmission and trading.

ELIX: European Electricity Index
Calculated daily, based on the order books of the three EPEX SPOT markets, Elx shows the benefit of further market integration under the assumption of no congestion between the countries.

EMCC: European Market Coupling Company GmbH
Auction Office for the Volume Coupling between Denmark and Germany with registered offices in Hamburg.

Entso-E
Shortname for the association of the European Network of Transmission System Operators for Electricity.

ERCOT: Electric Reliability Council of Texas
Operates the electric grid and manages the deregulated market for 75 percent of the US state of Texas.

ETS: EPEX Trading System
Electronic system operated by EPEX SPOT that allows exchange members to trade on EPEX SPOT market segments. The EPEX Trading System is used for the day-ahead market.

Exchange Council
One of the Exchange Bodies of EPEX SPOT, as described in the Exchange Rules.

Exchange Member
Legal entity that has signed an agreement with EPEX SPOT.

Exchange Rules
Part of the Rules and Regulations of EPEX SPOT that sets forth the terms on which EPEX SPOT carries out its duties and on which Exchange Members trade in the market.

Exchange Trader
Person authorised to trade in the name of an Exchange Member.

FITS: Flexible Intraday Trading Scheme
Trading system used for the Intraday market. It enables Exchange Members to trade cross-border freely between Germany and France, on an integrated market platform.

Flow-Based
Method to calculate transfer capacity at several interconnections at a time to get rid of the capacity split between borders.

Futures Contract
Standardized contract between two parties to buy or sell a specified asset of standardized quantity and quality at a specified future date (e.g. week, month, year) at a price agreed today.

Implicit / Explicit
An auction is called implicit, if market price calculation and cross-border capacities are calculated simultaneously. If cross-border capacities are determined separately by the TSOs, it is called explicit.

Iceberg Order
Buy or sell order which is specified by means of its limit, total quantity and peak quantity. The Iceberg Order is placed in the order book in partial orders up to the amount of the peak quantity. As soon as a partial order has been executed, a new partial order up to the amount of the peak quantity is placed in the order book. This process is repeated until the total quantity of the Iceberg Order is executed.

Imbalance
Difference, within the perimeter of the Balance Responsible, between the total quantities of power injected and the total power quantities withdrawn, including all quantities resulting from transactions made on EPEX SPOT.

Injection
Power produced or declared to the TSO and included as a positive figure in the calculation of the Balance Responsible Imbalance.

Interconnection Capacity
Cross-border electric energy transfer capacity on the interconnections.

Intraday Market
Part of the spot market where the commodity is tradable continuously up to 45 minutes before physical fulfilment.

Limit Order
Buy or sell order which is entered with a position limit; it is executed at this limit or at a better price.

Market Area
An area comprising one or several Delivery Areas.

Market Coupling
Market Coupling is a method to manage capacity congestion between adjacent power spot markets by optimizing the capacity allocation. It allows the matching of power exchanges’ orders and the implicit allocation of the available cross-border capacities received from the TSOs.

Market Surveillance Office
Independent Exchange body, as described in the Exchange Rules.

Matching
Combination of two compatible opposite orders that leads to a Transaction.
**MCC: Market Coupling Contract**
Market Coupling Contracts are listed for the purpose of Price Coupling. The commodity underlying the Market Coupling Contracts is the Physical Transmission Right (PTR). The PTR is delivered under the form of specified PTRs which correspond to the specification of the executed PTRs on each electrical border by the Market Coupling Facilitator.

**MCP: Market Clearing Price**
Synonym for auction price. The market clearing price corresponds to the intersection between the aggregated supply and demand curves.

**Nomination**
Daily declaration of power supply, of purchase and sale or of imports and exports made to the TSO by the Balance Responsible Party. Physical delivery of transactions is fulfilled by means of reporting schedules/nominations to the TSO.

**NCM: Non-Clearing Member**
Participant in the clearing procedure which has concluded a “NCM agreement” with a clearing member and is approved as a trading participant by ECC.

**NWE: North Western Europe**
Region encompassing the power markets of CWE, the UK, the Nordic countries and Poland.

**OMIE: Operador del Mercado Ibérico de Energía**
Power Exchange operating the markets of Spain and Portugal.

**Operational Rules**

**Order**
Electronic document by which the Exchange Member submits the price and the quantity for which it seeks to make a transaction in a contract.

**Order Book**
Centralisation by the trading system of buy and sell orders and ranking based on the execution priority determined by the matching algorithm.

**OTC: Over the Counter**
An OTC contract is a bilateral contract in which two parties agree on how a particular trade or agreement is to be settled in the future.

**OTC Clearing**
Service offered by exchanges. OTC transactions which correspond in their contract specification to exchange transactions can be registered. In this case clearing and settlement of the OTC transactions will be done by the respective clearing house.

**PCR: Price Coupling of Regions**
Initiative by six Power Exchanges to create a price coupling solution encompassing the markets from Portugal to Finland.

**Peakload**
Characterizes the load type for the delivery or procurement of electricity at a constant load over 12 hours from 08:00 am until 08:00 pm on every working day (Monday to Friday) during a delivery period.

**Phelix: Physical Electricity Index**
Calculated on a daily basis by EPEX SPOT. The Phelix is the average price for base load (Phelix Day Base) and peak load (Phelix Day Peak) electricity traded on the German/Austrian auction.

**Price Coupling**
Price coupling between different countries allows creating a single exchange zone – and consequently single price zones when interconnection capacities do not limit cross-border Power Exchanges. It improves the market liquidity and participates in the creation of a single European electricity market.

**Price Inelastic Bids**
Orders to be executed whatever the market price.

**PTR: Physical Transmission Rights**
The right under ATC-based Market Coupling to use a specified quantity of the available interconnection capacity in the export direction, expressed in MW for each hourly period of a given day. In the framework of ATC based Market Coupling, the PTR is granted to ECC through the execution of Market Coupling Contracts. The PTRs are inferior or equal to the ATC under the ATC Market Coupling.

**REMIT: Regulation on Energy Market Integrity and Transparency**
Proposal by the EU Commission of a harmonised EU-wide regulation of energy markets with directly binding effect on national level in force since 28 December 2011.

**RES: Renewable Energy Sources**
Energy which comes from natural resources such as sunlight, wind, tides, and geothermal heat, which are naturally replenished.

**Rules and Regulations**
Set of documents issued by EPEX SPOT SE, comprising the Trading Agreement or the Market Coupling Facilitator Agreement (for Market Coupling Facilitator only), the Exchange Rules, the Operational Rules and the Code of Conduct and governing the organisation of EPEX SPOT.

**Seller Surplus**
Difference between the submitted price and the market price, multiplied by the quantity actually sold.

**Settlement**
Payment of Transactions executed on EPEX SPOT and handled by the Clearing House.

**SMWA: Sächsisches Ministerium für Wirtschaft und Arbeit**
Saxon ministry of economy. Part of the German market surveillance authorities.
SOB: Shared Order Book
Projected central order book for transnational intraday crossborder transaction. It is planned to be provided with the bids on all participating Power Exchanges and intraday platforms and real-time information on available transmission capacity.

Spot Market
Market on which transactions of products are concluded and/or registered and which are settled within a period of two settlement days. Settlement can take place immediately (intraday), the following day (day-ahead) or two days ahead.

Spread
The price range between the best bid and the best ask is called the spread.

TRACFIN: Traitement du renseignement et action contre les circuits financiers clandestins
Service of the French Ministry of Finances fighting money laundering.

Trading Agreement
Contract between the Exchange Member and EPEX SPOT whereby the Exchange Members accepts to comply with the Rules and Regulations of EPEX SPOT SE.

Trading Member
Category of Exchange Member which is authorised to trade on EPEX SPOTs markets.

TSO: Transmission System Operator
Entity in charge of operating the power transportation grid of a given Delivery Area.

Volatility
A measure of the price fluctuations.

Volume Coupling
Coordinated day-ahead auction involving two or more power markets. Cross-border volumes computed by an Auction Office are transferred to the exchanges which enter them as price acceptant bids into their system. The calculated flows are based on anonymous order books and the available transmission capacities, while the pricing authority remains with the involved power exchanges.

Withdrawal
Power consumed or declared to the TSO and included as a negative figure in the calculation of the Balance Responsible Imbalance.
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