

María Luisa Huidobro

President and CEO
of the Spanish Power
Exchange OMEL



Process of creating the electricity market

"To play a decisive role in the creation of a new market is a unique opportunity. This experience, if it is followed by a rapid process of the market development, can imply also to assist to an important change of mentality of all the participants in this process whose behaviours are accommodated to the new scenery as if the market has existed always."

OMEL has experienced this process with the creation of the electricity market in Spain with the special task of setting up the power exchange and the responsibility and management of the market.

For the OMEL President, "the existence in a short period of time of an organised market, as the economic base of the system and the possibility opened to the interested agents, including eligible consumers, to be participants in this market, is the result of the modernisation and liberalisation of the electricity sector based on the Electricity Sector Act 54/1997.

This process entails a substantial mo-

The Spanish electricity market began operations on January 1st, 1998 with the daily market sessions. As a consequence, the production and consumption of electricity is the result, from this date on, of the market transactions resulting from the matching of sell and purchase bids. For this purpose, the Spanish Power Exchange, OMEL, is entitled to assume the economics of the electricity system.

Our interviewed, Mrs. M^a Luisa Huidobro is President and C.E.O. of OMEL, entity entrusted of the management of the electricity market. In this market, producers, supply companies, traders and eligible consumers buy and sell electricity every day.

Mrs. Huidobro have been professor in ICADE and latter joined the Public Administration in the special branch of Commercial and Economics Advisers. She reached the highest responsibility of the Energy Administration as Director General of Energy of the Ministry of Industry and Energy from 1990 to 1997. This experience has been very useful for her present employment as President and CEO of the Spanish Power Exchange.

dification of the economic and legal framework affecting the institutions and companies involved."

The OMEL team has developed a high capability in the design and management of the electricity market and in the operating companies relationship within the market participants and interested entities and in the proposals for regulating the market as well as external and internal training.

Electricity market technology

OMEL's setting up and satisfactory running of all the processes and functions of the electricity market for more than two years is based on the organisation of human and technological means which has been combined to allow a high degree of effectiveness.

"The electricity market is a fully electronic market which makes possible

the participation of a large number of agents.

In order to comply with these requirements we have adopted the Internet technology as the base of the electronic market. Also the use of personalised smart cards commonly used in electronic commerce and the secure communications protocol https, have both presented innovations in the electricity markets.

Our information system allows the participation of companies of very diverse characteristics and needs including small participants who need an easy accessibility as well as larger participants. Its characteristics are similar to the ones adopted by the Ministry of Economics and Finance to declare taxes through Internet or to access to digital television.

The market agent's equipment requirement is simple and reliable in design and uses standard software consistent of PC computers, and it allows market operations in the same way as in electronic bank transactions.

Furthermore, our public web site <http://www.omel.es> provides free information about electricity prices, market agents, market functioning and regulation.

These developments have helped us to export our technology and consultancy services to the Amsterdam market and to other Eastern European countries, in spite of our short, less than three years, experience from market opening..

I believe that it is possible to say that Spain have followed an innovative path regarding our liberalisation market process and regarding our market technology".

Functioning of the electricity market

In addition Mrs. Huidobro considers that "with this system we comply with the regulatory requirements regarding market participants. Producers should send plant by plant bids to the market, in case they have no physical bilateral contracts. Distributors buy electricity in the market so as to sell it to tariff consumers. Traders use the market to provide electricity to eligible consumers. Eligible consumers could buy the energy they need in the market as well. These eligible consumers have at present two options: to be supplied at a regulated tariff, or to celebrate free contracts, with a trader, with a producer or bidding in the organised market. The

recent experience shows that the majority of eligible consumers have signed contracts with traders, although some of them are agents of our market. The participation in the market is also open to foreign companies who can buy and sell in the market as external agents.

At present, we offer market participants the possibility to contract in seven sessions, the first, and main one, is the daily market and six following sessions of the intraday market, as an adjustment market on top of the daily market positions, distributed along the 24 hours of the day.

Every day, before 10 o'clock (closing time for the bids reception), market agents present, through the IT System, the sell and purchase electricity bids for the following day. These bids are ordered so as to build the supply and demand curves, whose intersection determines the price and energy resulting from the market session. At eleven o'clock the energy to be exchanged under physical bilateral contracts is communicated to OMEL. The session results and the physical bilateral contracts determine a generation and consumption schedule, known as "base operating schedule". This schedule is communicated electronically to the system operator, and he executes a security analysis of the electricity grid and establishes, if it is necessary, adjustments to the production schedule. In this case the OMEL balances back the energy production and consumption using the economic merit order of the power production bids.

Once finished the previous process, the ancillary services auction takes place, managed by the system operator. At four o'clock, the intraday market sessions begin (currently six sessions), giving the agents new possibilities to perform transactions.

In real time the system operator uses ancillary services to ensure the supply, using, whenever possible, auction mechanisms.

As a result of all transactions that took place, OMEL determines the settlement for each agent. The day ahead settlement is available to all market participants, through the same IT system.

Day 15th of each month, or the previous business day, if it is a bank holi-



day, OMEL sends the energy bills which corresponds to each agent of the market for the previous month. Collection and payments are made the same day.

I believe that our IT system, both in the market participation and in the settlement and billing processes, is non discriminatory, transparent and convenient for market participants".

European situation

At present there are four organised markets in Europe, ordered by incorporation date, the United Kingdom, Scandinavian countries, Spain and Netherlands. Other European countries are in the process of implementation of an organised market that is the case of Germany, Poland, etc.

Regarding the possibility of a future implementation of a European power exchange that covers the whole Europe, OMEL's President considers that "It is not clear that the establishment of Power Exchanges in different European Countries will lead necessarily and in the short term to the existence of a Single European Market Operator whose operations cover the whole Europe. It is difficult to know when this will happen, and if it is the best solution for increasing energy exchanges in Europe.

In the short and medium term the international trade could be limited by the physical capacity of the existing international interconnections and by the traditional technical management of the electric systems. The interconnection lines that exist between the different electric systems were not developed, in its origin, for free market trade,



Antonio Colino, President of ENRESA, participating in the interview.

although they have been increased during the last years making possible a significant growth of the commercial capacity and the electricity exchanges.

A lot of electric systems were regulated on the basis of a centralised planning, playing the international exchanges a marginal role. The grid managers were accommodated to these principles, being for them key tasks to maintain high security levels, quality and feasibility. The electricity system liberalisation has created a favourable environment for increasing free transactions. In this context, it is necessary an in depth analysis about these issues, analysis that has already started in the European Union. The European Commission has ask the grid managers to present studies so as to solve these problems and has also requested opinions from other interested entities such as the European power exchanges, Eurelectric, the associations of traders, the association of large eligible consumers and distributors, etc...through the Florence forum.

I believe that it is very important to develop free trade and transactions because this will be the best guarantee to reach the internal market for electricity. A necessary condition required is to improve co-ordination between the electric systems and specially between those which, from a technical point of view, present a high degree of integration, as the Iberian system, that very well could derive in an Iberian electricity market. However the technical aspects linked to these issues should be complemented by the contributions regarding the economics associated to them, being Power Exchanges valuable entities to be considered to this respect.

Even if it is difficult to determine what kind of market reference will configure the future, it is important to point out that together with the the organised markets transactions, it could also take

place a development of bilateral contracts. I believe that these two ways of contracting electricity can be complementary and not excluding of each other.

Under these conditions it is generally accepted the convenience that markets develop in liquidity which imply growing number of transactions, meaningful prices linked to new contracts, such as energy blocks, forwards and once develop futures could be negotiated over indexes created. This kind of new products are being developed by many Power Exchanges.

Nevertheless, one of the problems of this process is the different market opening between the European countries. In Spain we have followed a very dynamic liberalisation process, quick and ambitious, and today all consumers with an annual consumption greater than one thousand megawatt-hour are eligible consumers (43% of the electric consumption). In five months, July 1st of this year, all consumers connected to the grid at high voltage (more than 1 kilovolt) will be eligible consumers. This means that more than 54% of the electricity consumption will be capable of contracting electricity at free prices “.

Mrs. Huidobro pointed out that “the Spanish supply liberalisation goes far beyond that the one existing in the neighbouring countries. This situation could derive in problems associated to reciprocity, because all the companies operating in European markets do not have the same opportunities.

Conclusions

The concept of electricity as a delivery at regulated tariffs is being removed and substituted by free trading, as any other commodity sell and buy under competition rules.

The existence of the electricity market has produced benefits for the Spanish companies:

- A favourable climate has been created for new investments in power generation as it can be deduced from the projects been processed, some of them advanced, of combined natural gas cycle power plants.

- The number of market participants has increased significantly. At present twelve utilities participate in the market as sellers, being eight of them external agents.

- A trading activity has been developed, which did not exist prior to the liberalisation of the electricity sector. The reselling activity between traders and eligible consumers is developing under huge competition creating favourable conditions for consumers.

- More than 8,000 companies are eligible consumers. This means that the 42% of the final electricity consumption of the country can be supplied under free conditions and that these eligible consumers can establish contracts with traders, with producers, or by participating directly in the organised market. This coming July all the consumers connected at high voltage will be eligible consumers, and then, close to 55% of the electricity consumption will be liberalised. The Spanish market opening, that has taken a short period of time, is far beyond the situation of our neighbour countries. Furthermore the right to chose supplier given to eligible consumers has been exercised by the majority of them.

- The prices of the organised market are a necessary reference to the different kinds of trading that are taking place.

- It has been developed, as a consequence of the organised market, a trading activity managed by the electric utilities which represents a useful experience for acting in other European markets that are in phase of growing or implementation.

- The positive impact that the creation of the electricity market in Spain, as well as its effective functioning, is having in Europe can be underlined as a contribution to the single European market. OMEL has collaborated in the implementation of the Netherlands market and, at this moment, with other Eastern European countries.