

Project Representative and Contact for this Overview:

Name: Red Eléctrica de España
Country: Spain
Phone: _____
Email: _____
Date Prepared: September 17, 2004

Section I: Electric Industry

1. Does your country operate as one national electricity marketplace or do you have multiple regional electricity marketplaces?

The Electric Sector's Law establishes an only one national market, making a separation between the economic and technical management market. The technical operation of the system is developed by Red Electrica de España (REE). The technical operation include the operation markets. The economic management is carried out by the Operador del Mercado Español de Electricidad (OMEL). The creation of futures market is in process.

2. If you have multiple regional marketplaces, how many exist in your country? Please explain.

A single national market exists. European external agents have access to this market. The creation of a joint market for Spain & Portugal is in process.

3. What market actors perform the following functions in your marketplace: (Please list and briefly describe).

a. Generation

Exist 4 large generation utilities (Iberdrola, Endesa, Unión Fenosa, Hidrocantabrico). They operate in free competence since the electrical market was deregulated.

They can be holding companies with separation of activities.

There are also Special Producers (PS) that have special economic treatment because they use the renewable energy sources, wastes and cogeneration

b. Transmission

REE is the major transmission company. The ownership of most of the transmission system is of REE, and it is the responsible company for the operation of Spanish electric system and management of the electric energy transportation network.

It came out the development and enlargement to the transportation network, and guarantees its maintenance and improvement under coherent and homogeneous criterion.

c. Distribution

They can be distribution companies member of holding companies or independent agents. They have the role to locate the energy in the point of consumption and to proceed to its sale to fees, as well as to build, maintain and operate the installations of distribution network.

d. Trader

They can be companies member of holding companies or independent agents. As a result of they have access to the transportation and/or distribution networks, they have to sale the electric energy to the customers or other systems participants.

e. Reliability management

REE is the company responsible to ensure and to supervise reliability system, additionally all market agents must have to cooperate with it.

4. What market actors' work directly with the retail consumers (e.g. Distribution Company, competitive suppliers, energy service companies, etc)? Please provide brief description of their roles.

Trader companies member of holding companies or independent agents. The energy acquired in the market may be selling to Spanish consumers or to external agents.

5. Please list key regulatory players and their roles.

- The Departments of Industry and Economy arranges the organization and operation of the market production, so determines the minimum requisite of quality and security in the electric supply.
- The National Commission of Energy (CNE) supervises the electric sector's effective competence and its objectivity and transparency, it proposes besides the regulation of the sector

6. Please list key industry stakeholder groups (e.g. large customer associations, reliability organizations, trade associations, etc.)

Large energy users
 Electric Utility Companies
 CNE
 REE
 OMEL
 APPA -Renewable Energies Producers Association

7. How many commercial, industrial and residential customers exist in your marketplace (add additional customer classes, e.g. agricultural, as needed)?

Customer Class	Number of Customers	Summer Peak Demand (MW)	Winter Peak Demand (MW)	Annual MWHs
Commercial	556,779	5,343	5,809	31,059
Industrial	52,556	17,110	18,602	99,460
Residential	22,205,414	11,088	12,054	64,452
Agricultural	56,861	348	379	2,027
Public Light	63,416	360	391	2,095
Transport	99	47	52	278
Other Distribution Co.	544	690	750	4,014

8. - How many distribution companies operate in your marketplace? Please list the top five largest distribution companies.

Distribution companies: 11

Largest Distribution Companies	Number of Customers	Summer Peak Demand 2003 34.990MW	Winter Peak Demand 2004 38.040MW
Iberdrola Distribution	9,815,710	13,638	14,827
Endesa Distribution	8,769,666	13,387	14,554
Unión Fenosa Distribution	3,274,557	5,008	5,444
Hidrocantábrico Distribution	551,127	1,450	1,576
E de Viesgo	523,003	805	875

9. If you have retail competition, how many competitive suppliers exist in your marketplace?

There are 65 trader agents registered with OMEL.

10. If you have retail competition, what percentage of the summer and winter peak demands do competitive suppliers supply?

The trader's acquisitions during the month of March (winter peak demands) correspond to 31.25% of the daily market, while in the month of July (summer peak demands) correspond to 34.50%.

11. What is the forecasted peak demand growth rate in your marketplace?

From 2004 until 2007 the range will be approximately between 2.45-3.2% each year.

12. What is the projected supply (capacity) growth rate in your marketplace?

From 2004 until 2007 the range will be approximately between 12-14% each year. Nevertheless considerable delays are being produced.

Section II: Demand Response

13. Has demand response been attempted in your market? If so, please provide brief description of relevant successes and challenges.

A program of Interruption Flexible Management is available for large consumers, the estimated capacity of the program is 2600MW.

The consumers can participate directly in the wholesale market, but the participation is very low.

Rates of hourly discrimination exist.

14. Which market actors might be most supportive of demand response in your marketplace? Please explain why.

The trader agents will be the most adequate to support the demand response, although it is possible to create demand aggregators whose will be specialist in grouping the participating of demand resources, coming mainly of large willing consumers to carry out parts of its loads.

15. Which market actors would be the most likely to offer demand response services to the consumer? Please explain why.

Traders and demand aggregators. At present any entity does not provide the service.

16. Can demand response resources participate in electric market transactions today? If so, how?

Yes, DR can participate through bilateral contracts, in the day-ahead market and intra-day-ahead market; but DR cannot participate in operation markets yet.

17. What are the most important objectives for demand response? Please explain.

The objectives are to participate in the local cover deficit moments of the system, and to allow possible delays in the needs of network investment.

18. Do energy consumers see different electricity prices at different times of the day? (Please explain in terms of how many and by class or size)

In wholesale market:

The day-ahead market has a scheduling period of an hour and with a horizon of programming of the 24 hours on day ahead, being applied a unique marginal price schedule for each hour.

The market intra-day-ahead has a unique marginal price of session, nevertheless for a same hour there are different prices, so many as sessions.

Both markets are negotiated by OMEL.

For the time being not reaction exists more than token in a pair of cases

In retail market:

The consumers can choose hourly rates.

19. Have any energy efficiency and/or a demand response market potential studies been completed in your marketplace in the last ten years? YES / NO

If yes, please provide a reference location or attach the report.

<http://www.mineco.es/energia/desarrollo/doc/Estrategia%2030.06.pdf>

http://www.cne.es/pdf/cne53_03.pdf

Position of REE respect to development of the electric demand management.

Section III: Market Transactions

20. What type of electricity products traded in your marketplace (e.g. 5-minute spinning reserve, 30-minute non-spin, day ahead, capacity, hourly energy/spot, etc.)?

Complementing the day-ahead and intra-day-ahead markets, the operation market achieved by REE resolves the imbalances that can arise between generation and demand, which groups:

- Secondary Regulation: to Re-establish the imbalances between generation and demand in a time limit of 30 seconds to 15 minutes.
- Tertiary Regulation: Negotiates the variation of power that is possible to obtain in a maximum time of 15 minutes and that can be maintained, at least, during 2 consecutive hours
- Balance Technical Market: If the behavior demand does not coincide with its forecast in the time limit between sessions of intra-day market.
- Primary Regulation: Automatic correction of the instant imbalances, its temporary horizon of action reaches since 0 to 30 seconds.
- Voltage Control: Actions on the elements of generation and transportation oriented to maintain the voltage of the transport network.
- Black Start: Facilitates the reinstatement of the service in case of a disruption or loss of supply.

21. Do you have a central trading exchange in your marketplace?

There is a central spot market which is operated by OMEL

22. How are reserve margin targets established in your marketplace? Please explain.

In the long-term the operator system REE and the government establish the reserve's margins. In the short-term, the margins of reserve are different according to the conditions of the network ($6\sqrt{P_{max}}$, P_{max} = maximum power predicted in the respected period).

23. - What is the current reserve margin target in your marketplace?

The reserve margin target minimum is 10%

24. Does your market currently exceed or fall short of the current reserve margin target? Please explain.

The risk to fall the reserve is not despicable.