



Report 2014





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- 2. Hourly price for the purpose of the PVPC and the auctions held by OMIE
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### **GLOSARY**



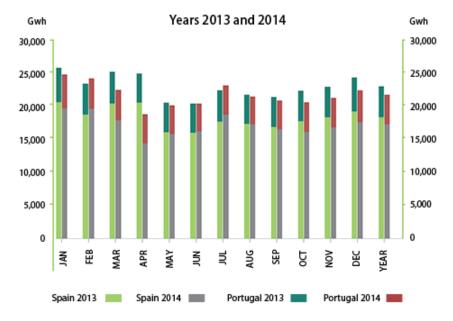


- 1.1. Trading on the MIBEL: energy, economic volume and types of technology
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- 1. 1. Trading on the MIBEL: energy, economic volume and types of technology
  - 1.1.1. Purchases on the MIBEL of energy traded on the daily and intraday markets.

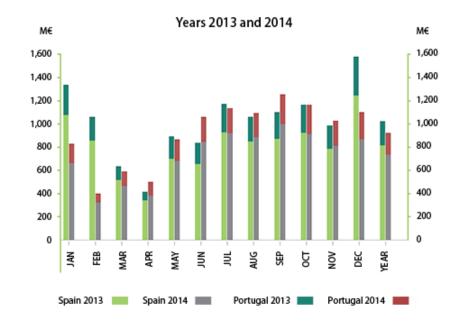
Variation 2014/2013: -5.4%
The Spanish zone includes exports across the borders with France, Morocco and Andorra



1.1.2. Economic value of the purchases negotiated on the daily and intraday markets.

Variation 2014/2013:-10.0%

The Spanish zone includes exports across the borders with France, Morocco and Andorra





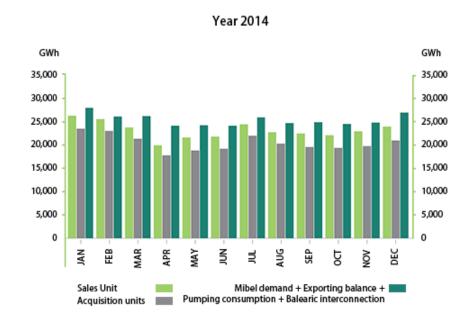
- 1. 1. Trading on the MIBEL: energy, economic volume and types of technology
- 1.1.3. Energy values and contracting on the MIBEL.

Year 2014

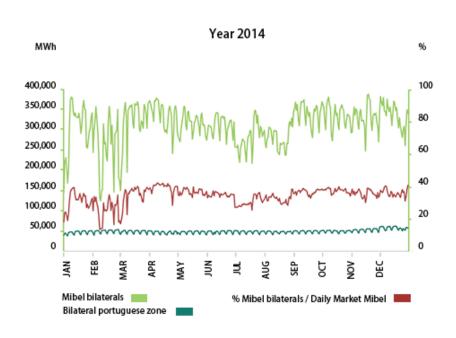
	DAILY N	IARKET	INTRADAY	MARKET	TC	TAL
	Energy GWh	Contracting kEUR	Energy GWh	Contracting kEUR	Energy GWh	Contracting kEUR
Jan	21,288	708,839	3,344	115,289	24,632	824,128
Feb	21,305	346,276	2,735	47,637	24,041	393,913
Mar	19,390	500,737	2,948	85,441	22,339	586,178
Apr	15,840	422,684	2,780	72,947	18,620	495,631
May	17,101	736,900	2,881	124,812	19,982	861,712
Jun	17,491	913,892	2,754	140,713	20,245	1,054,605
Jul	20,142	994,511	2,837	135,518	22,979	1,130,028
Aug	18,381	942,971	2,905	145,788	21,286	1,088,758
Sep	17,986	1,081,979	2,746	168,332	20,733	1,250,311
Oct	17,663	1,001,728	2,798	157,836	20,461	1,159,564
Nov	18,180	874,876	2,951	145,331	21,130	1,020,207
Dec	19,078	938,209	3,132	157,237	22,210	1,095,446
Year	223,845	9,463,601	34,811	1,496,880	258,656	10,960,481

1.1.4. Energy traded on the daily and intraday markets and final demand on

the MIBEL.



- 1. 1. Trading on the MIBEL: energy, economic volume and types of technology
- 1.1.5. Daily energy executed by sales units in physical bilateral contracts on the MIBEL.





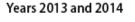


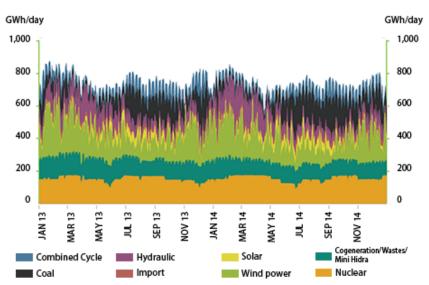
1. 1. Trading on the MIBEL: energy, economic volume and types of technology

1.1.6. Energy by technologies in Spain.

Year 2013 Coal 13.6% Cogeneration/Wastes/ Mini Hidra 15.2% Fuel-Gas 1.3% Solar 4.8% Nuclear 20.4% Wind power 21.1% Cogeneration/Wastes/ Mini Hidra Hydraulic 11.8% Solar Combined cycle 8.7% Import 3.1% Wind power Combined cycle Year 2014 Import Cogeneration/Wastes/ Coal 15.5% Hydraulic Mini Hidra 14.3% Nuclear Solar 5.1% Fuel-Gas Coal Nuclear 21.2% Wind power 19.5% Hydraulic 13.0% Import 3.7% Combined cycle 7.7%

1.1.7. Demand coverage by technologies in Spain.







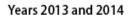
1. 1. Trading on the MIBEL: energy, economic volume and types of technology

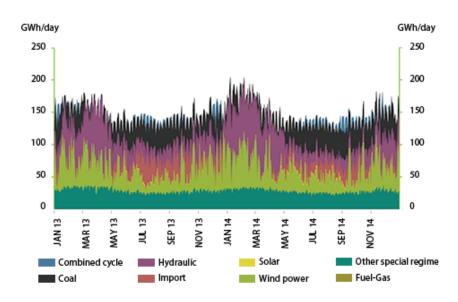
1.1.8. Energy by technologies in Portugal.

Year 2013 Coal 21.1% Other special regime 18.6% Solar 0.8% Fuel-Gas 0.0% Other special regime Wind power 21.8% Solar Hydraulic 25.5% Wind power Combined cycle 2.3% Import 9.9% Combined cycle Import Year 2014 Hydraulic Other special regime 18% Coal 21.7% Fuel-Gas Coal Solar 1.1% Fuel-Gas 0.0% Wind power 22.0% Hydraulic 27.4%

Combined cycle 2.2% Import 7.6%

1.1.9. Demand coverage by technologies in Portugal.







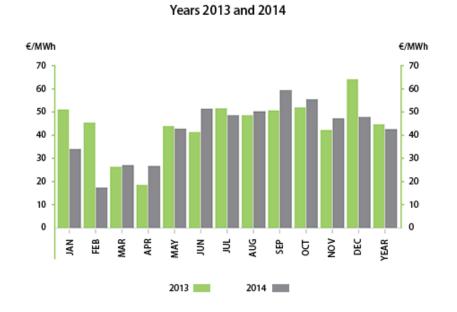
1. 2. Daily market

1.2.1. Monthly energy and Average monthly price of the daily market. Spanish side. Data table.

	AVERAGE MONTH	LY PRICE (€/MWh)	ENERGY PUR	CHASED (GWh)
	2014	2013	2014	2013
Jan	33.62	50.50	16,647	17,443
Feb	17.12	45.04	17,072	15,888
Mar	26.67	25.92	15,167	17,292
Apr	26.44	18.17	11,927	18,002
May	42.41	43.45	13,113	13,422
Jun	50.95	40.87	13,639	13,405
Jul	48.21	51.16	16,010	14,772
Aug	49.91	48.09	14,518	14,316
Sep	58.89	50.20	13,960	14,083
Oct	55.11	51.49	13,489	14,542
Nov	46.80	41.81	13,954	15,284
Dec	47.47	63.64	14,405	16,699
Year	42.13	44.26	173,902	185,148

1.2.2. Monthly energy and Average monthly price of the daily market. Spanish side. Graph.







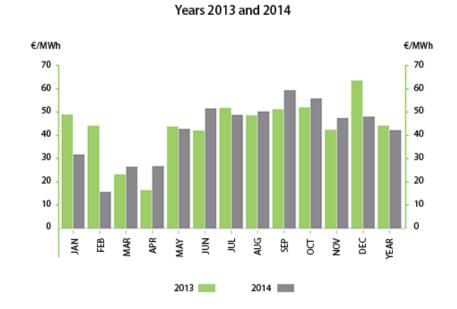
# 1. 2. Daily market

1.2.3. Monthly energy and Average monthly price of the daily market. Portuguese side. Data table.

	AVERAGE MONTH	LY PRICE (€/MWh)	ENERGY PURCHASED (GWh		
	2014	2013	2014	2013	
Jan	31.47	48.53	4,641	4,575	
Feb	15.39	43.74	4,234	4,111	
Mar	26.20	22.82	4,223	4,359	
Apr	26.36	16.08	3,913	3,949	
May	42.47	43.25	3,961	3,910	
Jun	51.19	41.70	3,848	3,815	
Jul	48.27	51.40	4,132	4,204	
Aug	49.91	48.12	3,863	3,986	
Sep	58.91	50.68	4,026	4,024	
Oct	55.39	51.58	4,145	4,128	
Nov	46.96	42.10	4,087	4,129	
Dec	47.69	62.99	4,426	4,545	
Year	41.86	43.65	49,498	49,734	

**1.2.4.** Monthly energy and Average monthly price of the daily market. Portuguese side. Graph.



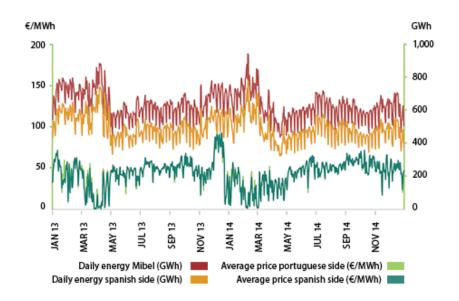




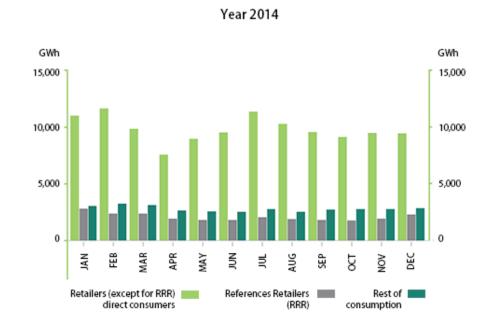
# 1. 2. Daily market

### 1.2.5. Energy and price of the daily market MIBEL.

Years 2013 and 2014



# 1.2.6. Acquisitions on the Spanish Electricity System daily market.



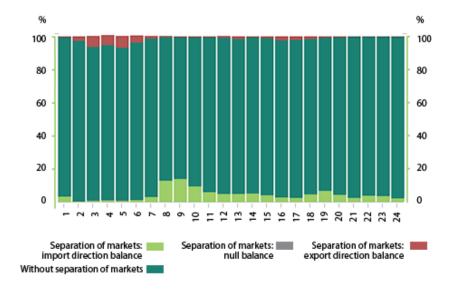


# 1. 2. Daily market

1.2.7. Percentage of the number of hours with market splitting by hourly period in the daily market.

Without separation of markets: 94.3%





1.2.8. Significant figures of the daily market.

PRICES		SPAIN	PORTUGAL		
PRICES	€/MWh	Date	€/MWh	Date	
Peak hourly	113.92	1 HOUR (27 MAR)	110.00	1 HOUR (17 FEB)	
Minimum hourly	0.00	117 HOURS OF 27 DAYS	0.00	195 HOURS OF 27 DAYS	
Maximum price differ.	110.00	17 FEBRUARY	110.00	17 FEBRUARY	
Minimum price differ.	2.53	2 MARCH	2.53	2 MARCH	
Average daily max.	71.06	10 OCTOBER	71.06	10 OCTOBER	
Average daily min.	0.48	9 FEBRUARY	0.48	9 FEBRUARY	
Average monthly max.	58.89	SEPTEMBER	58.91	SEPTEMBER	
Average monthly min.	17.12	FEBRUARY	15.39	FEBRUARY	



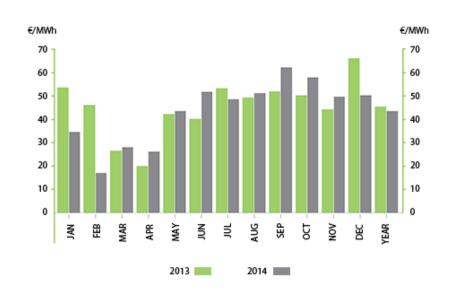
1. 3. Intraday market

1.3.1. Monthly energy and Average monthly price of the intraday market. Spanish side. Data table.

	AVERAGE MONTH	LY PRICE (€/MWh)	ENERGY PUR	CHASED (GWh)
	2014	2013	2014	2013
Jan	34.26	53.18	2,943	3,051
Feb	16.74	45.74	2,414	2,784
Mar	27.66	26.27	2,578	3,014
Apr	25.82	19.66	2,394	2,429
May	43.17	41.86	2,561	2,556
Jun	51.35	39.81	2,490	2,486
Jul	48.12	52.75	2,608	2,835
Aug	50.84	48.95	2,686	2,898
Sep	61.69	51.45	2,487	2,718
Oct	57.56	49.91	2,493	3,081
Nov	49.28	43.83	2,635	2,952
Dec	49.79	65.62	2,831	2,434
Year	43.20	44.97	31,118	33,237

1.3.2. Monthly energy and Average monthly price of the intraday market. Graph.

Years 2013 and 2014





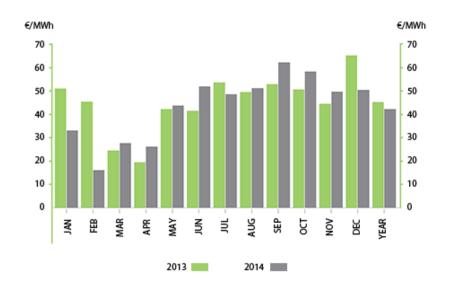
# 1. 3. Intraday market

1.3.3. Monthly energy and Average monthly price of the intraday market. Portuguese side. Data table.

	AVERAGE MONTH	LY PRICE(€/MWh)	ENERGY PUR	CHASED (GWh)
	2014	2013	2014	2013
Jan	32.75	50.66	401	589
Feb	15.82	44.93	321	438
Mar	27.31	24.08	370	401
Apr	25.73	19.04	386	382
May	43.26	41.83	321	459
Jun	51.50	41.10	264	524
Jul	48.22	53.18	229	437
Aug	50.83	49.01	219	355
Sep	61.68	52.51	259	394
Oct	57.87	50.20	305	438
Nov	49.34	44.03	316	442
Dec	49.96	64.75	301	511
Year	41.85	44.78	3,693	5,370

1.3.4. Monthly energy and Average monthly price of the intraday market. Portuguese side. Graph.

Years 2013 and 2014







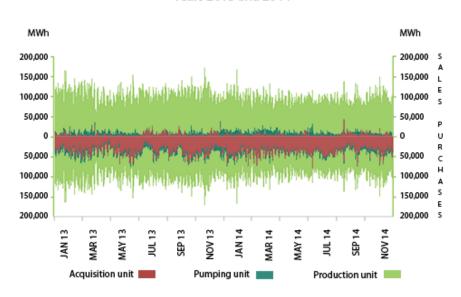
# 1. 3. Intraday market

### 1.3.5. Energy and price of the intraday market.

Years 2013 and 2014 €/MWh MWh 300 200,000 250 150,000 200 100 JAN 14 Average arithmetic price spanish Total acquired Average arithmetic price electricity system (€/MWh) energy MIBEL portuguese electricity system (€/MWh)

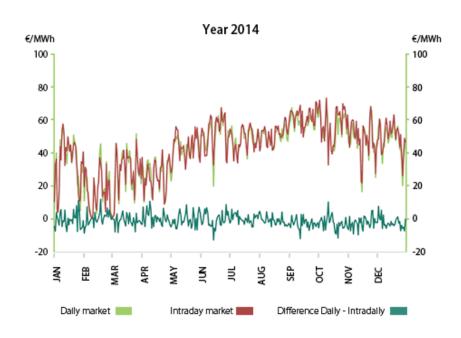
**1.3.6.** Sales and purchases on the intraday market. Spanish Electricity System.





# 1. 3. Intraday market

1.3.7. Comparison of average arithmetic daily prices of the daily and intraday markets. Spanish Electricity System.

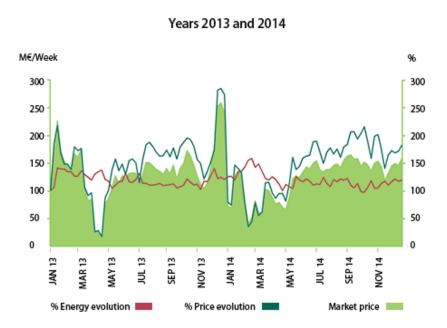




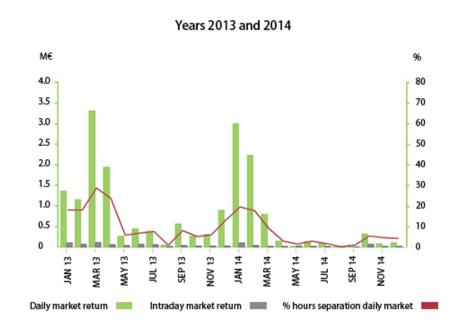


1. 4. Settlement of the daily and intraday market

1.4.1. Weekly trend in the volume of collections and payments, in price and energy. Daily and intraday markets.



1.4.2. Congestion return in the Spanish-Portuguese interconnection.



1. 4. Settlement of the daily and intraday market

# 1.4.3. Congestion return in the Spanish-French interconnection.

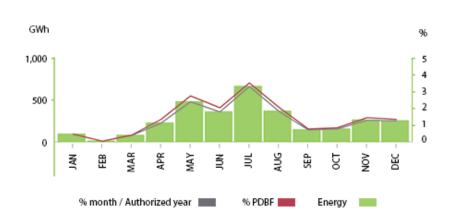


1. 5. Services for adjusting the Spanish Electricity System

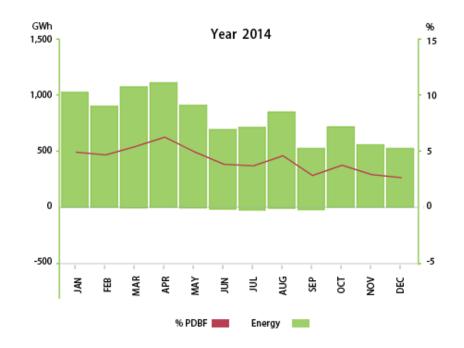
### 1.5.1. Energy in the solution of Supply Security Constraints.

Total energy/Authorized in the year = 15.29%

Year 2014



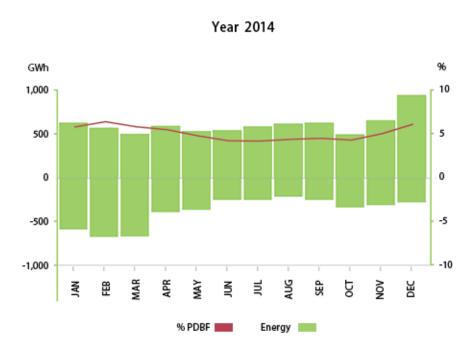
### 1.5.2. Energy in Phase 1 of the Technical Constraints Process.





# 1. 5. Services for adjusting the Spanish Electricity System

### 1.5.3. Energy in the technical operation.



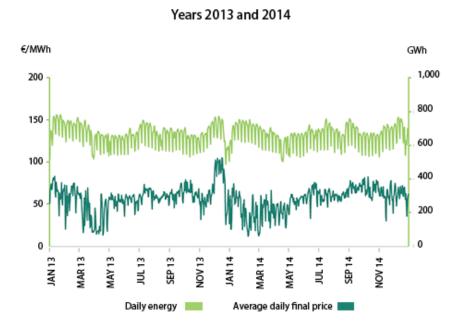
# 1.5.4. Cost for the demand of the adjustment services.

				% PRICI	E/PMD			TOTAL COST
	PMD €/MWh	CONSTRAINTS		POWER	O.T.S.	O.T.S.	FOR THE	
		Supply Guar.	Phase 1 Increase	Phase 2 decrease	RES. AND SEC. REG.	INCR.	DECR.	DEMAND kEUR
Jan	33.62	288	323	69	93	175	25	157,246
Feb	17.12	609	532	57	210	328	13	152,013
Mar	26.67	285	370	70	92	228	18	144,814
Apr	26.44	210	373	61	88	274	21	151,259
May	42.41	217	262	85	41	138	50	117,369
Jun	50.95	271	218	87	43	128	61	100,827
Jul	48.21	238	220	87	43	122	48	118,153
Aug	49.91	292	227	89	42	124	60	118,613
Sep	58.89	401	273	100	48	132	64	124,662
Oct	55.11	273	266	88	60	145	57	140,444
Nov	46.80	256	356	88	60	144	62	139,921
Dec	47.47	287	354	85	47	131	58	137,565
Year	42.13	288	279	77	63	154	40	1,602,887

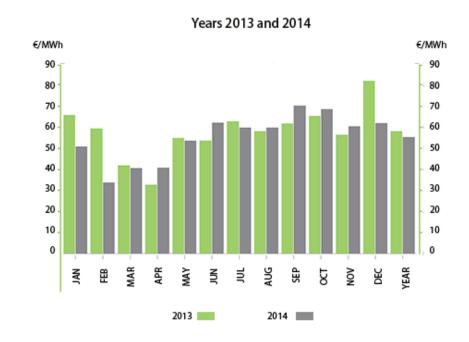


1. 6. Energy and final price in the Spanish Electricity System

1.6.1. Evolution of the final price and energy in Spain.



### 1.6.2. Weighted final hourly price in Spain.

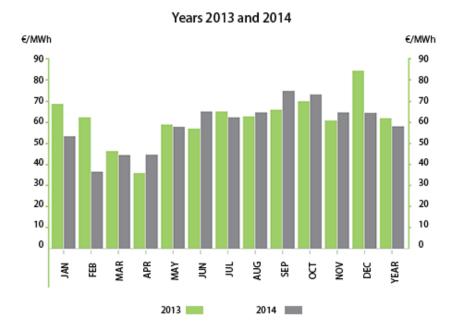




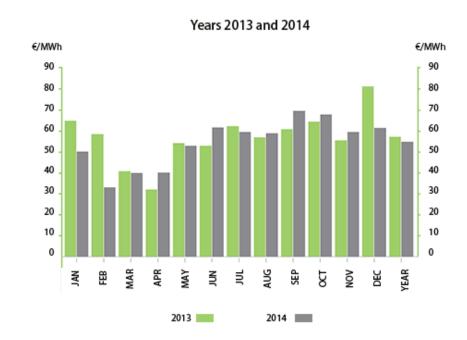
1. 6. Energy and final price in the Spanish Electricity System

1.6.3. Final hourly price of the References Retailers in Spain.

#### Variation 2014/2013: -6.1%



### 1.6.4. Final hourly price retailing and direct consumers in Spain.



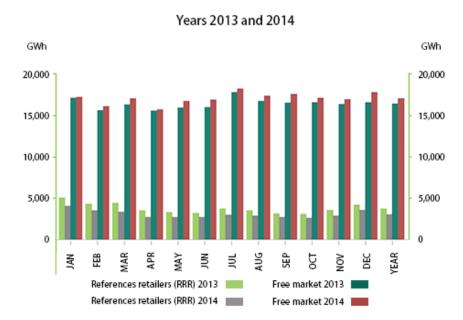




# 1. 6. Energy and final price in the Spanish Electricity System

### 1.6.5. Final energy in the Spanish Electricity System.

References retailers variation 2014/2013: -18.8% Free market variation 2014/2013: 3.8% Total energy variation 2014/2013: -0.3%



1.6.6. Components of the final hourly price in Spain.

### Years 2013 and 2014

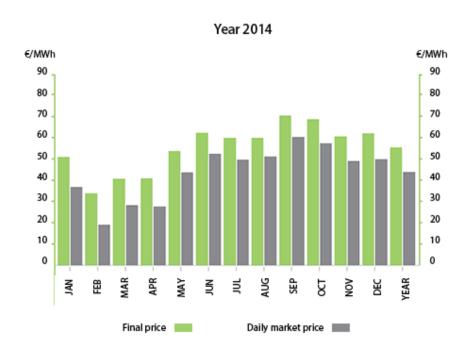
		ILY RKET		ADAY RKET		STEM MENT SERV.		ACITY MENT	то	TAL
	€/M	Wh	€/M	Wh	€/M	Wh	€/M	Wh	€/M	Wh
	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Jan	53.21	36.39	-0.01	-0.08	5.21	7.20	7.09	7.00	65.51	50.51
Feb	46.90	18.77	-0.08	-0.12	5.29	7.78	6.95	6.88	59.06	33.32
Mar	28.41	27.90	-0.11	-0.07	7.58	7.02	5.71	5.46	41.57	40.31
Apr	19.33	27.26	-0.02	-0.06	7.55	8.00	5.46	5.28	32.31	40.48
May	44.14	43.13	-0.09	0.00	5.21	4.89	5.36	5.20	54.64	53.22
Jun	42.14	51.95	-0.14	-0.03	5.23	3.60	6.13	6.21	53.36	61.73
Jul	52.25	49.11	0.02	-0.04	2.86	3.37	7.29	7.10	62.42	59.53
Aug	49.01	50.70	-0.02	-0.02	3.79	4.19	4.87	4.47	57.66	59.34
Sep	51.68	59.90	-0.02	0.03	4.19	4.82	5.48	5.23	61.32	69.97
Oct	52.78	56.85	-0.16	-0.02	7.08	6.29	5.39	5.08	65.09	68.20
Nov	43.48	48.57	-0.04	-0.01	7.09	6.14	5.59	5.31	56.12	60.01
Dec	68.58	49.32	-0.03	-0.01	6.23	5.43	6.89	6.90	81.67	61.63
Year	46.23	43.46	-0.06	-0.04	5.59	5.71	6.04	5.86	57.80	55.00
% of FPM	79.98%	79.03%	-0.10%	-0.06%	9.67%	10.38%	10.45%	10.66%	100.00%	100.009





1. 6. Energy and final price in the Spanish Electricity System

1.6.7. Comparison between daily market price and final hourly price.



1.6.8. Components of the final hourly price of retailing and direct consumers.

Years 2014

	DAILY MARKET	INTRADAY MARKET	SYSTEM ADJUSTMENT SERV.	CAPACITY PAYMENT	TOTAL
	€/MWh	€/MWh	€/MWh	€/MWh	€/MWh
Jan	36.28	-0.11	7.18	6.56	49.92
Feb	18.57	-0.15	7.82	6.46	32.71
Mar	27.91	-0.09	6.98	4.78	39.58
Apr	27.29	-0.08	7.98	4.65	39.84
May	43.11	0.00	4.89	4.55	52.55
Jun	51.98	-0.03	3.60	5.72	61.26
Jul	49.10	-0.05	3.37	6.73	59.15
Aug	50.70	-0.03	4.19	3.68	58.54
Sep	59.84	0.03	4.81	4.61	69.29
Oct	56.77	-0.03	6.29	4.46	67.49
Nov	48.50	-0.02	6.16	4.65	59.29
Dec	49.24	-0.01	5.44	6.46	61.13
Year	43.60	-0.04	5.69	5.29	54.52
% PFM	79.96%	-0.08%	10.43%	9.69%	100.00%

1. 6. Energy and final price in the Spanish Electricity System

1.6.9. Components of the final hourly price of the References Retailers.

Year 2014

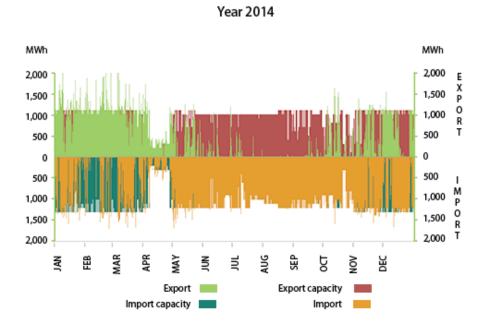
	DAILY MARKET	INTRADAY MARKET	SYSTEM ADJUSTMENT SERV.	CAPACITY PAYMENT	TOTAL
	€/MWh	€/MWh	€/MWh	€/MWh	€/MWh
Jan	36.85	0.05	7.25	8.89	53.04
Feb	19.70	0.01	7.61	8.84	36.15
Mar	27.88	0.02	7.23	8.94	44.06
Apr	27.10	0.03	8.08	9.04	44.25
May	43.29	0.00	4.89	9.27	57.45
Jun	51.78	0.00	3.59	9.35	64.72
Jul	49.17	0.03	3.35	9.37	61.91
Aug	50.72	0.02	4.23	9.35	64.32
Sep	60.30	-0.01	4.86	9.34	74.50
Oct	57.38	0.01	6.31	9.24	72.94
Nov	49.01	0.02	6.04	9.21	64.28
Dec	49.67	0.02	5.38	9.11	64.19
Year	42.71	0.02	5.83	9.14	57.70
6 PFMR	74.02%	0.03%	10.11%	15.84%	100.00%

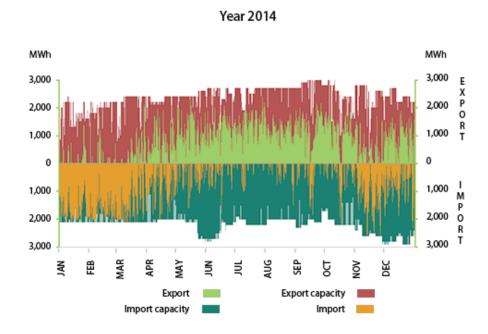


1. 7. International electricity exchanges

1.7.1. Interconnection with France. Available commercial capacity and occupation in the exporting and importing directions.



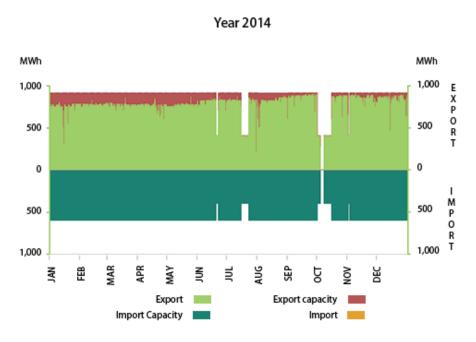






# 1. 7. International electricity exchanges

1.7.3. Interconnection with Morocco. Available commercial capacity and occupation in the exporting and importing directions.



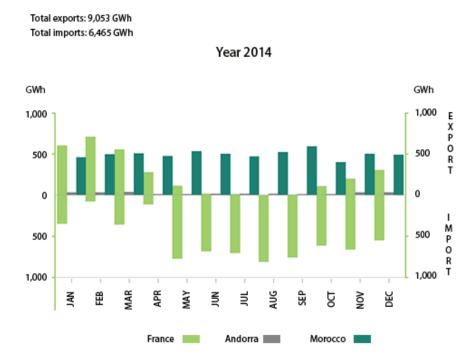
1.7.4. Average hourly energy in the interconnections.

	FRA	FRANCE		PORTUGAL		ссо
	2013	2014	2013	2014	2013	2014
EXPORT (MWh)						
Comercial capacity	897	861	1,728	1,977	886	862
Capacity not used	434	531	1,132	1,516	272	196
Occupation	463	330	596	461	614	666
IMPORT (MWh)						
Comercial capacity	1,037	1,045	1,711	2,060	594	583
Capacity not used	379	306	1,431	1,697	594	583
Occupation	658	739	280	363	0	0

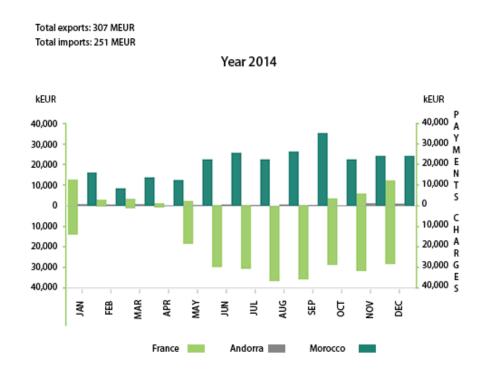


# 1. 7. International electricity exchanges

1.7.5. Monthly energies exchanged on the MIBEL borders.



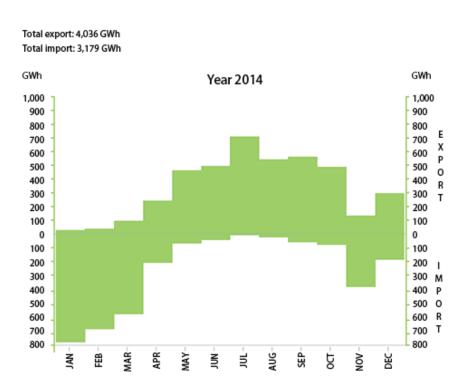
1.7.6. Monthly economic volumes exchanged on the MIBEL borders.



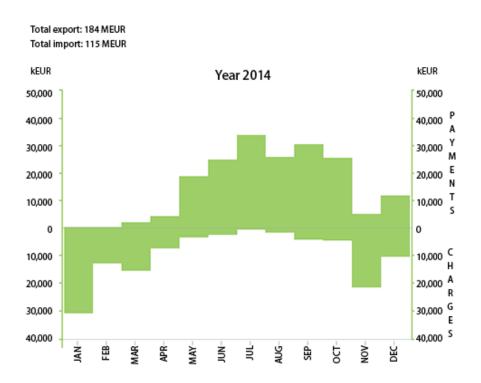


# 1. 7. International electricity exchanges

1.7.7. Monthly energies exchanged on the border with Portugal.



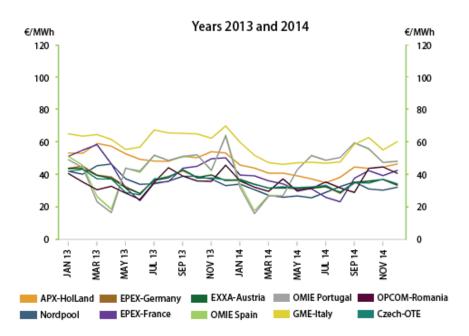
1.7.8. Monthly economic volumes exchanged on the border with Portugal.



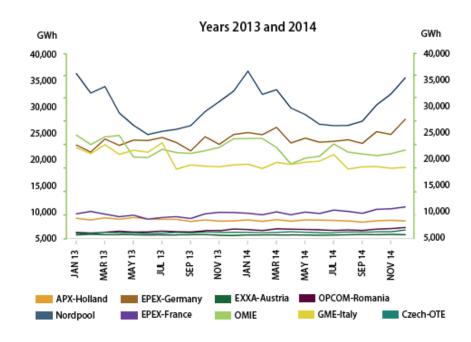


▶ 1.8. Prices and energies of other European market operators

### 1.8.1. Average monthly prices Europex.



### 1.8.2. Monthly energies Europex.





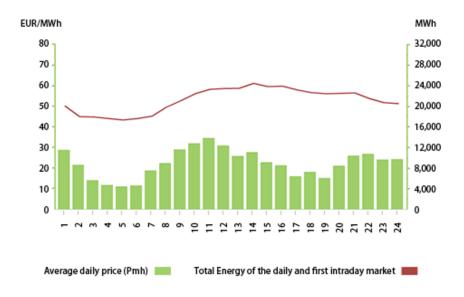




- 2.1. Average hourly price for purposes of PVPC calculation
- 2.2. Auctions for the difference in prices in the interconnection with Portugal
- 2.3. Gas auctions

2. 1. Average hourly price for purposes of PVPC calculation

2.1.1. Average hourly price for purposes of PVPC calculation.





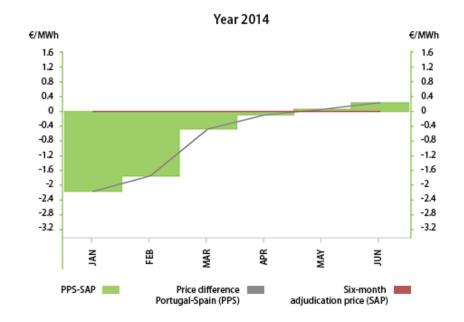


 2. 2. Auctions for the difference in prices in the interconnection with Portugal

2.2.1. Results of the auctions for interconnection with Portugal.

AUCTION	PERIOD	SUCCESFUL BID PRICE (€/CONTRACT)	CONTRACTS TENDERED BY SES (MW)	CONTRACTS AWARDED TO SES (MW)	TOTAL CONTRACTS AWARDED (MW)
8 <sup>th</sup>	First half of 2013	0.05	400	400	400
Эth	Second half of 2013	0.00	400	35	152
10 <sup>th</sup>	First half of 2014	0.00	400	53	105

2.2.2. Evolution of the settlement of the six-month product of interconnection auctions.





# 2. 3. Gas auctions

### 2.3.1. Results of the TURGAS auctions.

AUCTION	PERIOD	PRODUCT	PRICE (€/MWH)	QUANTITY (GWH)
6 <sup>th</sup>	01/07/12 - 31/12/12	BASE	33.50	1,377.0
	01/11/12 - 31/03/13	WINTER	30.75	2,184.5
7 <sup>th</sup>	01/01/13 - 30/06/13	BASE	30.48	1,620.0
8th	01/07/13 - 31/12/13	BASE	31.28	750.0
	01/11/13 - 31/03/14	WINTER	32.55	948.0
9 <sup>th</sup>	01/01/14 - 30/06/14	BASE	30.99	1,500.0
10 <sup>th</sup>	01/07/14 - 31/12/14	BASE	28.81	1,320.0
	01/11/14-31/03/15	WINTER	32.14	838.0
11 <sup>th</sup>	01/01/15 - 30/06/15	BASE	30.76	1,320.0

# 2.3.2. Results of the GAS Storage auctions.

AUCTION	PERIOD	PRICE (€/GWh)	QUANTITY (GWh)
5 <sup>th</sup>	01/04/12 - 31/03/13	0	3.822
6 <sup>th</sup>	01/04/13 - 31/03/14	0	960



### 2. 3. Gas auctions

# 2.3.3. Results of the Operation Gas auctions.

AUCTION	PERIOD	PRICE (€/MWH)	QUANTITY
6 <sup>th</sup>	01/07/12 - 30/06/13	32.31	20 blocks/100% demand
7 <sup>th</sup>	01/07/13 - 30/06/14	34.85	20 blocks/100% demand
8th	01/07/14 - 31/12/14	29.70	20 blocks/100% demand
9th	01/01/15 - 30/06/15	28.45	20 blocks/100% demand

# 2.3.4. Results of Cushion Gas Auction.

AUCTION	PERIOD	QUANTITY (GWH)	PRICE RANGE OF SUCCESSFUL BIDS (€/MWh)	
			Min. Price	Máx Price
1 <sup>st</sup>	15/06/2012 - 15/08/2012	45	31.55	32.38
	16/08/2012 - 15/10/2012	1,468	31.96	32.58
2 <sup>nd</sup>	01/06/2013 - 15/08/2013	355	30.86	32.88
	16/08/2013 - 31/10/2013	1,819	30.42	33.00
3 <sup>th</sup>	01/07/2014 - 31/08/2014	1,177	27.05	27.73
	01/09/2014 - 31/10/2014	232	27.45	28.59





# Glosary

# **Secondary Regulation**

It is the energy load to be raised or dropped which electricity generators complying with adequate technical conditions offer the Electricity System in order to maintain the balance between supply and demand at all times. It is part of the secondary regulation ancillary service and is assigned by the System Operator by means of an auction. The generators have the right to collection of the marginal price of the auction for the hour, and shall be penalised if, when the time comes, they are incapable of offering the System the energy assigned in the event that it is required.

### Cross-border capacity

It is the maximum hourly energy that can be programmed at each border and in both directions, in the event that additional hourly energy is not assigned in the opposite direction. The Spanish System Operator publishes the hourly cross-border capacities with France, Portugal and Morocco, and the Portuguese System Operator publishes the hourly cross-border capacities with Portugal. These capacities must be respected in the matching of the daily and intraday markets, taking into account the energy of the physical bilateral contracts.

### **Collections and Payments**

The settlement horizon is weekly. Each agent is debtor or creditor for the sum of the daily invoices issued the week before, from Monday to Sunday. The payments are normally made on Wednesday and the collections, on Thursday.

### Retailer

Company set up in Spain or Portugal acquiring energy on the market to sell it to their customers on the MIBEL, or any other company set up beyond MIBEL borders taking part in the same by making purchases or sales.

### Reference Retailer

Retailers established in Spain nominated by the Ministry of Industry to operate as suppliers of electricity to consumers subject to the voluntary price for small consumers.

### **Direct Consumer**

End consumer buying the energy they need for its consumption in Spain directly on the market or by means of a bilateral contract with a generator and not by means of a contract with a retailer.

### Bilateral contract

A contract by which a market agent undertakes to supply energy to another market agent in a series of hours at a price agreed by both parties. Bilateral contracts are executed daily and are included in the basic operating programme through the corresponding sell and buy units, and are entitled to adjust their programme on the intraday markets.

### Market contract

The energy contracted on a market within the MIBEL is the quantity sold or the quantity purchased.

Since the implementation of market coupling, these amounts differ in the flow at the interconnection between Spain and France resulting from said coupling that is performed in the



matching of the daily market. With a view to upholding the uniformity of the series of log records, the contracting data also include the energy imported (in the sales data) or exported (in the purchase data) at said interconnection for the Spanish electricity system.

Within one zone, Spain or Portugal, it must be distinguished whether it refers to purchases or sales as, if there is an exchange between zones, within each zone, the energy sold is not the same as the energy purchased.

# Final energy

Energy delivered according to the meters in the reference territory, without including the energies used for pumping and the producers' own consumptions, with addition made of transport and distribution losses. Exports are not included.

# Matched energy

On the daily market, within MIBEL, matched energy is the energy sold by sell units or the energy bought by buy units. Since the implementation of market coupling, these amounts differ in the flow at the interconnection between Spain and France resulting from said coupling that is performed in the matching of the daily market. With a view to upholding the uniformity of the series of log records, the contracting data also include the energy imported (in the sales data) or exported (in the purchase data) at said interconnection for the Spanish electricity system.

Within in one area, Spain or Portugal, it must be distinguished if it refers to purchases or sales as, if there is an exchange

between zones, within each zone, the energy sold is not the same as the energy purchased. On the intraday market, within MIBEL, matched energy is the energy sold or the energy bought, both equal. If referring to a type of unit, it is the sum, in absolute value, of the energy sold and bought by this type of unit. If the figure does not mention any specific type of unit, it is the energy sold, which is equal to the energy purchased.

### Europex

EUROPEX is a non-profit making association of European energy exchanges representing the interests of wholesale electricity and gas market operators and environmental markets in relation to the developments of the European regulatory framework for wholesale energy trading, and provides a discussion platform at European level.

### Daily Market (DM)

The daily production market is where the transactions for the acquisition and sale of electricity with physical delivery for the following day are established using a bid matching process. Daily market contract sessions are structured around programming periods equivalent to one hour, the consecutive 24-hour periods of programming being considered the programming horizon. The sale bids are ordered from lowest to highest price and buy bids are ordered in the opposite sense. The cut-off point determines the matched energy and the resulting price, at which all the offered energy matched will be charged, and all the energy requested that has been matched, paid.





# Intraday Market (IM)

The purpose of the intraday market is to deal with any adjustments that may arise in the offer and demand of energy after the viable daily programme has been set.

The sale units can participate by selling more or repurchasing the energy forming part of a previous programme, and the buy units can take part by buying more or reselling energy forming part of a previous programme.

There are 6 contracting sessions: the first covers the 24 hours of the following day and the last 4 hours of the current day, the second covers the 24 hours of the following day, the third, the hours from 4 until 24, the fourth, from 7 until 24, the fifth, from 11 until 24, and the sixth, from 15 until 24.

The mechanism for assigning energy and determining price is similar to that of the daily market.

### **MIBEL**

The Iberian Electricity Market, «MIBEL», is made up of a group of regulated and non-regulated markets on which electricity transactions or contracts are made and on which financial instruments that take said electricity as a reference are traded, together with others convened by the Parties.

The MIBEL was created by means of the "International agreement relating to the constitution of an Iberian electricity market between the Kingdom of Spain and the Portuguese Republic, signed in Santiago de Compostela on 1 October 2004" whose objective is the creation and development of an electricity market common to both Parties, within the framework of a process of integration in the electricity systems of both countries.

The MIBEL started operating in July 2007.

# Market Operators (PX)

As far as this report is concerned, these are companies managing the electricity spot markets in the different countries.

### **Capacity Payment**

It is a regulated rate system complementing the revenue produced on the electricity market with an aim to establishing a token payment to promote new capacity on the market and to avoid the closure of such facilities as guarantee the reliability of the electricity supply. Included under the item Capacity Payments are two types of service:

- 1. Availability service, aimed at contracting power capacity in a time horizon equal to or less than the year with such technologies as are most likely not to be programmed in the peak demand periods. This service began to be applied on 15 December 2011.
- 2. Incentive for investment in long-term capacity, aimed at promoting the building and effective start-up of new generation facilities through payments that help their developers to recover the outlay costs.

This service is financed by means of a unitary price applied to the energy purchased by clients, depending on the differentiation of rate periods of the transit charges.

Settlement of this service is carried out by the System Operator. The balance resulting from the difference between the income deriving from the financing of the capacity payments and the costs corresponding to their compensation shall be considered taxable income of the system for the purposes laid down in Royal Decree 2017/1997, of 26 December.





### **PDBC**

The programme resulting from the matching of the daily market (PDBC) is the result of the matching referred to in Royal Decree 2019/1997 in section 10. The Market Operator places at the disposal of the agents the contents of the programme resulting from the matching corresponding to their sell and buy units under the terms and conditions laid down in the Market Rules.

### **PDBF**

The basic operating programme for the following day (PDBF) is established by the System Operator by considering the information on the execution of bilateral contracts with physical delivery, communicated by the holders of said bilateral contracts, and the programme resulting from the matching of the daily market, communicated by the daily market operator.

### **PDVD**

The programme for solving restrictions due to guarantee of supply, for solving technical restrictions and of the results of the market for assigning secondary regulation is called the viable daily programme.

### PHF

Final hourly programming is set up by the System Operator as a result of the aggregation of all firm transactions entered into for each programming period as a consequence of the viable daily programme and of the matching of the intraday market, once, where appropriate, the technical restrictions identified have been solved and the subsequent rebalance carried out.

### **PMD**

In this report, these letters stand for the term "daily market price".

### Pmh

This refers here to the Average hourly price (Pmh). The Average hourly price is obtained by the weighted calculation in each hour of the prices and energies on the daily and first intraday markets.

### **PVPC**

This refers here to the Voluntary Price for Small Consumers (PVPC). The voluntary price for small consumers is the maximum price that can be charged by those retailers that assume the obligations of the reference supply to those consumers who according to current legislation meet the applicable requirements.

### Final Price

Average price of the energy purchased on the market. It is calculated hourly by adding up all the price components, as a result of the settlements made by the Market Operator and the System Operator.

The National Commission of Markets and Competence (CNMC) calculates and publishes the end prices and average price indexes of electricity on an hourly basis, in accordance with Additional Provision 2 of Royal Decree 1454/2005. In addition, both the System Operator and the Market Operator, as per Additional Provision Five of ITC Order/1659/2009, publish the values of the costs and overrun in each hour, in their



respective websites, and likewise indicate the final cost of the energy and the components of the end price as a whole and for each type of consumer.

# System technical operation processes (O.T.S.)

For the purposes of this report they are considered the following:

- Ancillary services for secondary and tertiary regulation energy.
- Deviation management.
- Solving technical restrictions in real time

The purpose of the procedures for the management of deviations and the rendering of ancillary services is to manage the generation and consumption deviations that arise following the closure of the final hourly programming.

# **Congestion Revenue**

In the interconnections to which the coupling mechanism is applied, which currently involves the interconnections with Portugal, Morocco and France, settlement of the Daily and Intraday production market following the application of this process gives rise to income equal to the product at each hour of the price difference of each electricity system for the exchange capacity actually used within the framework of the coupling process in this market. Said income is called "congestion revenue".

This congestion revenue is shared between the electricity systems located on each side of the frontier.

### **Upwards Power Reserve**

This is a complementary service that involves the additional upwards power reserve that may be required as regards

that available in the Provisional Viable Programme (PVP) for guaranteeing the security of the Spanish mainland electricity system. The system operator assigns it through an auction process that is open to bids from those entities that own ordinary and/or special regime programmable thermal units of a manageable nature that fulfil certain conditions laid down in the Operating Procedure regulating this mechanism.

# **Guarantee of Supply Restrictions**

Restriction due to guarantee of the necessary supply to production is understood as being of such thermal electricity production units as use autochthonous primary energy combustion sources to ensure the guarantee of supply. In the process of settling guarantee of supply restrictions, the system operator shall make the necessary modifications to the programme to include thermal generation with power plants using autochthonous coal as a fuel which have been designated by the Ministry for Industry, Tourism and Trade to the maximum limit laid down in section 25 of Act 54/1997, of 27 November, provided that this maximum limit implies that, in the corresponding annual period, production does not exceed the quantities of energy produced laid down by the corresponding Ruling from the Secretary of State for Energy.

### **Technical Restrictions**

A technical restriction is understood as any circumstance or incident deriving from the situation of the transmission grid or of the system which, as they affect conditions of safety, quality and reliability of the supply established in the regulations and through the corresponding operation procedures, call for, according to the system operator's technical criteria, the







modification of the programmes.

The solving of technical restrictions of the PDBF shall require the incorporation or removal of bids in Stage I in order to solve the restrictions, and a Stage II in which purchase bids or sale bids shall be assigned to solve the imbalances between production and demand.

Solving technical restrictions in real time shall be done by incorporating or removing energy, balancing production with demand by managing deviations or rendering ancillary services.

# Market Coupling (PCR)

Market coupling is the joint matching, for the daily market, of the sale and purchase bids received regarding a series of interconnected market operators, with setting of the prices for each one of the specified zones and the flows between each one of the interconnected zones. Each one of the markets has its own bidding terms and conditions, with prices and flows being set through the application of a single matching algorithm that simultaneously matches all the conditions for all the coupled markets. The Price Coupling of Regions (PCR) refers to the project initially launched by six market operators, one of which was OMIE, and subsequently extended to other market operators, for the application of market coupling in European markets.

# System Adjustment Services

They include the following:

- Solving restrictions due to guarantee of supply.
- Solving technical restrictions.
- Ancillary services.
- Deviation management.

Settlement of these services corresponds to the System Operator.

### Price difference auctions in the interconnection with Portugal

Auctions held under ITC Order/4112/2005, of 30 December, which lays down the applicable system for carrying out intra-Community and international exchanges of electricity. Said Order stipulates the holding of auctions for contracts based on price difference for each hour on the daily market between the Spanish electricity system and the Portuguese electricity system in different time horizons.

Section 2 of appendix III establishes the different types of contract, although so far the rulings that establish the contracts to be auctioned in each of the auctions have only set Contract 1-type contracts, "forward coverage contract for exporting electricity from Spain to Portugal".

Order IET/107/2014 has revoked Order ITC/4112/2005, of 30 December, whereby the last auction held corresponds to the one that took place in December 2013, in which the forward contract for the first half-year of 2014 was negotiated.

#### **TURGAS Auctions**

Auctions held under ITC Order/863/2009, of 2 April, which regulates the auctions for the acquisition of natural gas and which will be used as a reference to set the last resort rate. Said Order lays down the auction procedure and, in Additional Provision One, it designates Operador del Mercado Ibérico - Polo Español, S. A. (OMIE) through its subsidiary OMEL Diversificación, S.A.U. as the body in charge of organising said auctions.

Article 5 of ITC Order/1506/2010, which amends ITC



order/1660/2009, of 22 June, which lays down the methods for calculating the natural gas last resort rate, establishes that, in order to determine the cost of raw materials, two annual auctions of Base Gas product and one auction of Winter Gas product shall be held, and the second auction shall be held before 31 December and shall include the supply of Base Gas quantities for the period between 1 January and 30 June of the following year.

# Storage Gas Auctions

Auctions held under ITC Order/863/2009, of 2 April and under ITC Order/3862/2007, of 28 February, which lays down the mechanism for assigning the capacity of the underground storage of natural gas, and creates a capacity market. The former Order designated Operador del Mercado Ibérico de Energía - Polo Español, S. A. (OMEL) through its subsidiary OMEL Diversificación, S.A.U. as the body in charge of organising the auction for assigning the capacity for underground natural gas storage facilities.

A block of product corresponds to the right of capacity of underground storage for the quantity of 1 GWh for the period between 1 April and 31 March of the following year.

# **Auctions of Cushion Gas**

Auctions held pursuant to the provisions of Order IET/2812/2012, of 27 December, stipulating the tolls and canons involved in third-party access to gas facilities and the payment of regulated activities, and of Order ITC/863/2009, of 2 April, whereby the company Operador del Mercado Ibérico de Energía - Polo Español, S.A. (OMEL), through its subsidiary

OMEL Diversificación, S.A.U., has been nominated as the agent responsible for organising the auction for the purchase of the natural gas used for the operation and minimum filling of transport, regasification and underground storage facilities. This procedure is to be used for the purchase of the gas required for the development of the underground storage facilities in the basic network (cushion gas). The purchase of this gas will be made through an annual auction, whose rules are to be laid down by a resolution of the Secretary of State for Energy.

### **Operation Gas Auctions**

Auctions held pursuant to the provisions of Order IET/2812/2012, of 27 December, stipulating the tolls and canons involved in third-party access to gas facilities and the payment of regulated activities, and under ITC Order/863/2009, of 2 April, which designated Operador del Mercado Ibérico de Energía - Polo Español, S. A. (OMEL) through its subsidiary OMEL Diversificación, S.A.U. as the body in charge of organising the auction for the purchase of natural gas for operation and for the minimum level of transmission network and regasification and underground storage facilities.

The transmitters shall purchase on a yearly basis the necessary natural gas for their self-consumption (operation gas) and for the minimum level of the transmission grid gas pipelines and regasification plants (line pack gas). In addition, this procedure shall be used to acquire the necessary gas for developing underground storage facilities of the basic grid (cushion gas). An annual auction shall be held to acquire said gas, the rules of which shall be laid down in a ruling by the Secretary of State for Energy.

### Fconomic volume

The economic volume of a market within the scope of MIBEL is the financial value of the sales, including the energy imported by the Spanish electricity system through the interconnection with France. This amount is, in turn, equal to the financial value of the purchases, including the energy exported by the Spanish electricity system through the interconnection with France. These values likewise include the settlement corresponding to the congestion revenue generated at the various border crossings.

Within each zone, Spain or Portugal, we shall have to distinguish if we are referring to purchases or sales as, should there be exchanges between these zones, the economic values of sales is not the same as that of the purchases within each zone.

