Versions Index

30.June.2006

Initial Version

18.November.2008

Registration with The Portuguese Securities Market Commission (CMVM) on October 30th, 2008 as a MIBEL Derivatives Market Rule as a EU Regulated Market according to Directive 2004/39/EC of the European Parliament and of the Council of 21 April 2004 on markets in financial instruments (MiFID)

17.December.2013

Included the IFTR E-P and IFTR P-E indexes.

29.September.2015

Included the SPEL Solar Index.

13.May.2016

Adding DEEL Base Index and FREL Base Index. Change for Central European Time (CET). Adding backup methodology for determining Spot Reference Prices.

28.October.2019

Adjustment of the DEEL index definition following the entry in force of the German and Austrian unbundling. Improved drafting of the FREL index.

01.Feb.2022

Including PVB-ES Index

05.April.2022

Amendment of Article 13 regarding the PVB-ES

OMIP approves this Notice which sets the rules for determining the indices used as an underlying in the Contracts listed on the OMIP Derivatives Market.

General Definitions

1. For each calendar day, OMIP calculates and publish the following indexes:
   a) Electricity:
      - SPEL Base
      - PTEL Base
      - SPEL Peak
      - PTEL Peak
      - IFTR E-P Base
      - IFTR P-E Base
      - SPEL Solar Index
      - DEEL Base
      - FREL Base
   b) Natural Gas:
      - PVB-ES

2. The indexes listed in the previous paragraph are calculated based on hour marginal prices formed on the daily market of the relevant Spot Market, to the Spanish and Portuguese zones of MIBEL, and also for the German/Austrian and French systems respectively:
   - Hour marginal price of the Spanish system
   - Hour marginal price of the Portuguese system
   - Hour marginal price of the German/Austrian system
   - Hour marginal price of the French system

3. The time references included in this Notice refer to the Central European Time, hereinafter referred to as CET.

SPEL Index Calculation Methodology

4. For each calendar day, the **"SPEL Base" index** corresponds to the arithmetic mean of hour marginal prices of the Spanish system for the 24 (23 or 25) hours of a day (CET), rounded two decimals. The respective calculation formula is the following:

$$\text{SPEL Base Index} = \frac{\sum_{i=1}^{n} \text{SMP(e)}^{i}}{n}$$

Where:

n = number of hours on a calendar day (24 hours, except on the last Sundays of March – 23 hours and October – 25 hours);

i = corresponds to each hour (CET) of a calendar day for which the SPEL Base index is being calculated;

$SMP(e)^j$ = hour marginal price of the Spanish system for the hour i, defined in € per MWh with two decimals.

5. For each week day – Monday to Friday[1] - the **"SPEL Peak" index** corresponds to the arithmetic mean of hour marginal prices of the Spanish system, for the period comprised between 8:00 and 20:00 (CET), and rounded to two decimals. The respective calculation formula is the following:

$$\text{SPEL Peak Index} = \frac{\sum_{j=1}^{n} \text{SMP}(e)^{j}}{n}$$

Where:

n = number of "peak" hours on a business day (period comprised between 8:00 and 20:00 (CET), equivalent to 12 hours);

j = corresponds to each "peak" hour (CET) for the day the SPEL Peak index is being calculated;

$SMP(e)^j$ = hour marginal price of the Spanish system for the hour j, defined in € per MWh with two decimals.

PTEL Index Calculation Methodology

6. For each calendar day, the **"PTEL Base" index** corresponds to the arithmetic mean of hour marginal prices of the Portuguese system, for the 24 (23 or 25) hours of a day (CET), rounded to two decimals, and with the following calculation formula:

$$\text{PTEL Base Index} = \frac{\sum_{i=1}^{n} \text{SMP}(p)^{i}}{n}$$

Considering that:

n = number of hours on a calendar day (24, except on the last Sundays of March - 23 and October - 25);

i = corresponds to each hour (CET) of a calendar day for which the PTEL Base index is being calculated;

$SMP(p)^i$ = hour marginal price of the Portuguese system for the hour i, defined in € per MWh with two decimals

7. For each week day – Monday to Friday[2] - the **"PTEL Peak" index** corresponds to the arithmetic mean of hour marginal prices of the Portuguese system, for the period comprised between 8:00

---

[1] This includes public holidays, from Monday to Friday.

and 20:00 (CET), and rounded to two decimals. The respective calculation formula is the following:

$$\text{PTEL Peak Index} = \frac{\sum_{j=1}^{n} \text{SMP(p)}^j}{n}$$

Where:

n = number of "peak" hours on a business day (period comprised between 8:00 and 20:00 (CET), equivalent to 12 hours);

j = corresponds to each "peak" hour (CET) of the calendar day, for which the PTEL Peak index is being calculated;

$SMP(p)^j$ = hour marginal price of the Portuguese system for the hour j, defined in € per MWh with two decimals.

IFTR Indexes Calculation Methodology

8. For each calendar day, the **"IFTR E-P" index** corresponds to the arithmetic mean of the differences, if positive, between the hour marginal prices of the Spanish system and the hour marginal price of the Portuguese system, for 24 (23 or 25) hours of the day (CET), rounded to two decimals, and with the following calculation formula:

$$IFTR\ E - P\ BaseIndex = \frac{\sum_{i=1}^{n} \max((SMP(e)^i - SMP(p)^i);0)}{n}$$

Where:

n = number of hours on a calendar day (24, except on the last Sundays of March - 23 and October - 25);

i = corresponds to each hour (CET) of a calendar day for which the PTEL Base index is being calculated;

$SMP(e)^i$ = hour marginal price of the Spanish system for the hour i, defined in € per MWh with two decimals.

$SMP(p)^i$ = hour marginal price of the Portuguese system for the hour i, defined in € per MWh with two decimals.

9. For each calendar day, the **"IFTR P-E" index** corresponds to the arithmetic mean of the differences, if positive, between the hour marginal prices of the Portuguese system and the hour marginal price of the Spanish system, for 24 (23 or 25) hours of the day (CET), rounded to two decimals, and with the following calculation formula:

---

[2] This includes public holidays, from Monday to Friday.

$$IFTR\ P-E\ Base\ Index = \frac{\sum_{j=1}^{n} \max((SMP(p)^j - (SMP(e)^j);0)}{n}$$

Where:

n = number of hours on a calendar day (24, except on the last Sundays of March - 23 and October - 25);

j = corresponds to each hour (CET) of the calendar day, for which the PTEL Base index is being calculated;

$SMP(p)^j$ = hour marginal price of the Portuguese system for the hour j, defined in € per MWh with two decimals.

$SMP(e)^j$ = hour marginal price of the Spanish system for the hour j, defined in € per MWh with two decimals.

SPEL Solar Calculation Methodology

10. For each calendar day, the "SPEL Solar" Index corresponds to the weighted average of the hourly marginal prices of the Spanish system for the 24 (23 or 25) hours (CET), weighted by their respective photovoltaic productibility index, shown in the table "Productibility Index of Photovoltaic Energy" rounded by two decimal places. The respective formula is, as follows:

$$SPEL\ Solar\ Index = \frac{\sum_{j=1}^{n} SMP(e)^j \times IPEF_j}{\sum_{j=1}^{n} IPEF_j}$$

Where:

n = number of hours in a calendar day (24 hours, except in the last Sunday of March – 23 hours; and October – 25 hours);

j = corresponds to each hour (CET) of the calendar day, for which the SPEL Solar Index is being calculated;

SMP(e)j = hour marginal price of the Spanish system for the hour j, defined in € per MWh with two decimals.

IPEFj = Productibility Index of Photovoltaic Energy for the hour j, shown in the following table of hourly values for each respective month.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Enero	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,10	0,23	0,34	0,43	0,46	0,43	0,34	0,23	0,10	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
Febrero	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,04	0,19	0,34	0,48	0,58	0,61	0,58	0,48	0,34	0,19	0,04	0,00	0,00	0,00	0,00	0,00	0,00	
Marzo_Inv	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,11	0,26	0,42	0,55	0,64	0,67	0,64	0,55	0,42	0,26	0,11	0,00	0,00	0,00	0,00	0,00	0,00	
Marzo_Camb	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,11	0,26	0,42	0,55	0,64	0,67	0,64	0,55	0,42	0,26	0,11	0,00	0,00	0,00	0,00		
Marzo_Ver	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,11	0,26	0,42	0,55	0,64	0,67	0,64	0,55	0,42	0,26	0,11	0,00	0,00	0,00	0,00	0,00	
Abril	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,06	0,19	0,35	0,50	0,63	0,72	0,75	0,72	0,63	0,50	0,35	0,19	0,06	0,00	0,00	0,00	
Mayo	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,13	0,28	0,44	0,60	0,74	0,83	0,86	0,83	0,74	0,60	0,44	0,28	0,13	0,00	0,00	0,00	
Junio	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,03	0,16	0,31	0,47	0,63	0,76	0,85	0,88	0,85	0,76	0,63	0,47	0,31	0,16	0,03	0,00	0,00	
Julio	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,16	0,33	0,51	0,69	0,83	0,93	0,97	0,93	0,83	0,69	0,51	0,33	0,16	0,02	0,00	0,00	
Agosto	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,09	0,25	0,43	0,60	0,74	0,84	0,88	0,84	0,74	0,60	0,43	0,25	0,09	0,00	0,00	0,00	
Septiembre	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,16	0,32	0,49	0,63	0,73	0,76	0,73	0,63	0,49	0,32	0,16	0,02	0,00	0,00	0,00	0,00	
Octubre_Ver	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,06	0,20	0,35	0,49	0,58	0,61	0,58	0,49	0,35	0,20	0,06	0,00	0,00	0,00	0,00	0,00	
Octubre_Camb	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,06	0,20	0,35	0,49	0,58	0,61	0,58	0,49	0,35	0,20	0,06	0,00	0,00	0,00	0,00	0,00	0,00
Octubre_Inv	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,06	0,20	0,35	0,49	0,58	0,61	0,58	0,49	0,35	0,20	0,06	0,00	0,00	0,00	0,00	0,00	
Noviembre	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,11	0,24	0,35	0,43	0,46	0,43	0,35	0,24	0,11	0,00	0,00	0,00	0,00	0,00	0,00	0,00	
Diciembre	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,08	0,20	0,31	0,38	0,41	0,38	0,31	0,20	0,08	0,00	0,00	0,00	0,00	0,00	0,00	0,00	

Table obtained based on the Annex IV to the Royal Decree 413/2014 of 6th of June, by which the production activity of electric energy from renewable energy sources, cogeneration and waste is regulated, using the following modifications:

a) Zone IV is selected;
b) Time reference is modified to the Spanish time (CET).

DEEL Index Calculation Methodology

12. For each calendar day, the index " DEEL Base" is the arithmetic average of the hourly marginal prices for 24 (23 or 25) hours of the day (CET), rounded to two decimal places:
   a) German/Austrian, corresponding to the Phelix-DE / AT Base index as defined by the European Energy Exchange (EEX), as long as it is determined by the spot market for the single price zone Germany/Austria;
   b) Germany, corresponding to the Phelix-DE Base index defined by the European Energy Exchange (EEX), in the absence of the previous value.

FREL Index Calculation Methodology

13. For each calendar day, the index " FREL Base" is the arithmetic average of the hourly marginal prices of the French system for 24 (23 or 25) hours of the day (CET), rounded to two decimal places, corresponding to the Index "France Day Base" defined by the European Energy Exchange (EEX).

PVB-ES Index Calculation Methodology

14. For each calendar gas-day (D), the index "PVB-ES" corresponds:

   a) to the Index "Precio de Referencia Diario" published by "Mercado Iberico de Energia" (MIBGAS) on D-1 rounded to three decimal places.
   b) In its absence to the "Precio de Referencia Diario" published by the Iberian Gas Market (MIBGAS) on day D-2 for day D, rounded to three decimal places.
   c) In its absence to the "Precio de Referencia Diario" Price published by the Iberian Gas Market (MIBGAS) on day D-2 for day D-1, rounded to three decimal places.

Backup Methodologies

15. If, due to exceptional circumstances, are not available some of the hourly marginal prices used in determining the index referred to in the preceding paragraphs, or the value of the index itself, OMIP may:

   a) adopt approximate values of the prices missing, based on:

   i. Interpolation of hourly marginal prices for other hours in the same session in the relevant daily market;

   ii. Extrapolation of hourly marginal prices or daily prices formed in previous days in the relevant daily market;

   iii. Using the hourly marginal prices formed in the relevant intra-daily markets;

   iv. Extrapolation of marginal price times or daily prices the same day, formed in other European markets, taking into account historical values of spreads formed with the relevant daily market;

   v. To consider prices published by specialized entities.

   b) Determine the value of the index based on numerical models according to the definition of the respective indexes using their hourly marginal prices or daily prices or adopting approximate values based on the previous point.

Entry into Effect

16. This Notice has been registered with CMVM on March, 15th 2022 and enters into effect on April, 05th 2022.

The Board of Directors