

# End-user tariffs in the Spanish electricity market

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*CEEM Workshop on  
Drifting apart: costs, prices and tariffs in eu electricity markets  
9 July 2014, Université Paris-Dauphine, Paris*

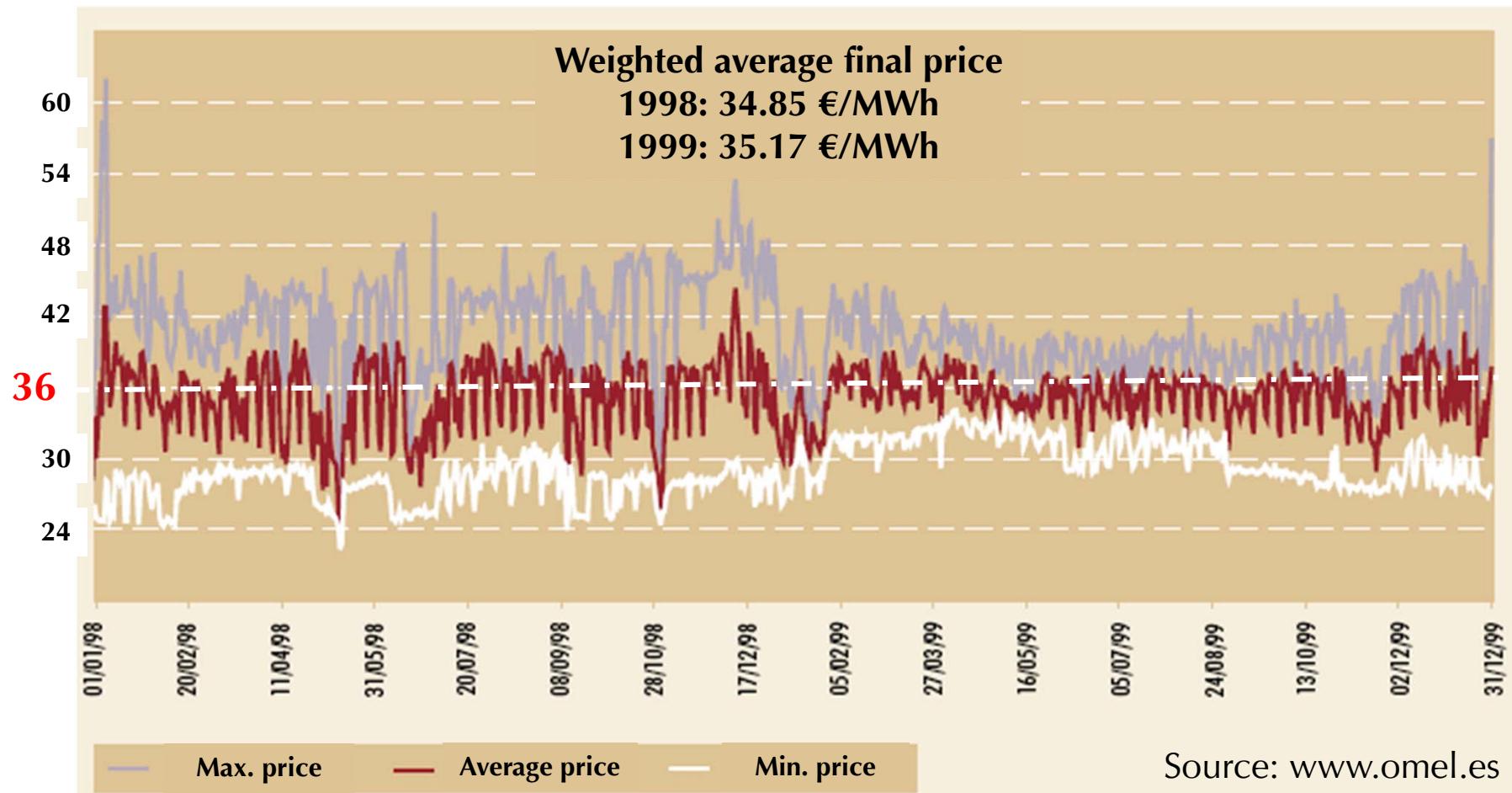


Massachusetts  
Institute of  
Technology

# Prelude (1998-2000)

## The anesthetized market

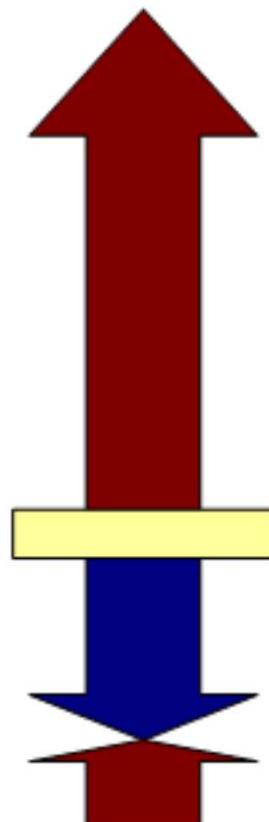
- Market results match up “pretty well” the CTC reference (36€/MWh) ...



# Prelude (1998-2000)

## The anesthetized market (ii)

- ... and the Government achieves the desired tariff reduction



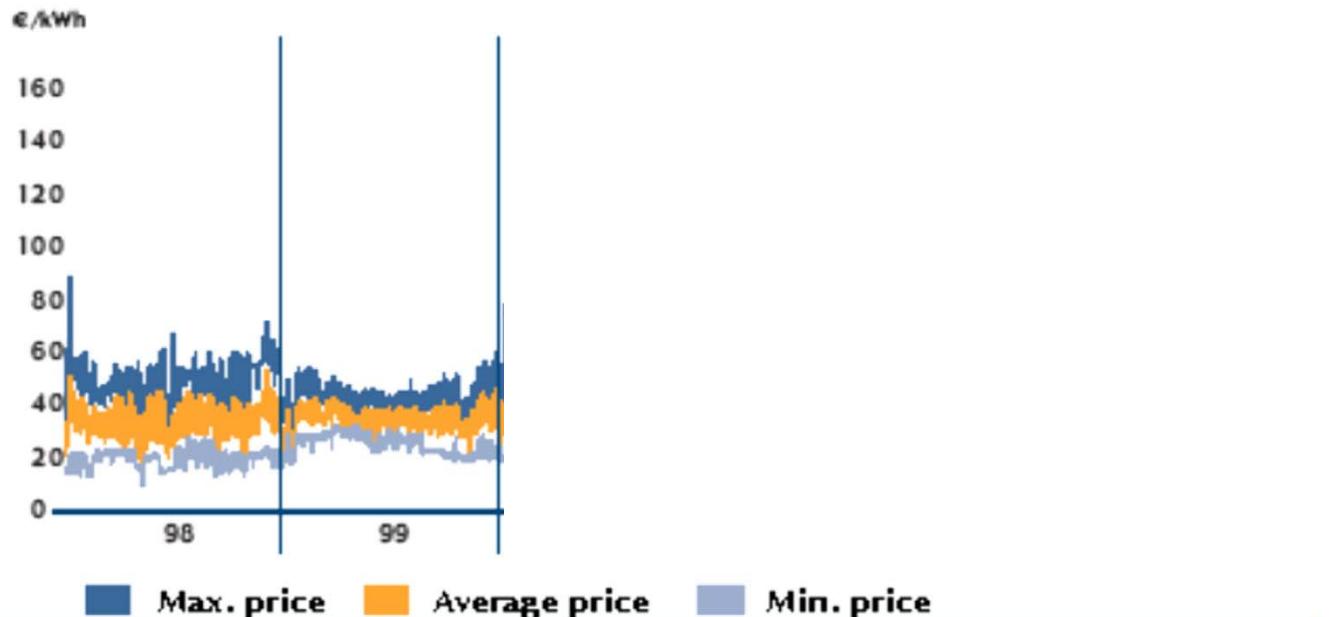
AÑO	R.D. TARIFAS Nº	INCREMENTO ANUAL	
		R.D. TARIFAS %	IPC %
1983	RD 69/83, RD 1486/83	13,95	12,20
1984	RD 774/84	8,75	9,00
1985	RD 153/85	6,80	8,20
1986	RD 441/86	7,25	8,30
1987	RD 162/87	4,01	4,60
1988	RD 36/88	5,50	5,80
1989	RD 61/89	4,10	6,90
1990	RD 58/90	5,50	6,50
1991	RD 1678/90	6,80	5,50
1992	RD 1821/91	3,20	5,30
1993	RD 1594/92	2,90	4,90
1994	RD 2320/93	2,06	4,30
1995	RD 2550/94	1,48	4,30
1996	RD 2204/95	0,00	3,20
1997	RD 2657/96	-3,00	2,00
1998	RD 2016/97	-3,63	1,40
1999	RD 2821/98, RD-L 6/99	-5,57	2,90
2000	RD 2066/99	-4,85	4,00
2001	RD 3490/00	-1,52	2,70
2002 (*)	RD 1483/01	0,32	3,50
2003 (*)	RD xxxx/02	1,65	2,00

Source: Ministry of Economy (2003)

## The original sin (2000-2002)

### The start of the tariff deficit and the CTCs

- Deficit comes from the difference between the regulated tariff and real cost of the energy, i.e.
  - between the energy price implicit in the tariff (the “supposedly” expected wholesale market price) and the resulting prices
    - For instance, in 2006: 37.8 €/MWh vs. 62.4 €/MWh
  - between expected and actual Special Regime (RES-E & CHP) extra-costs

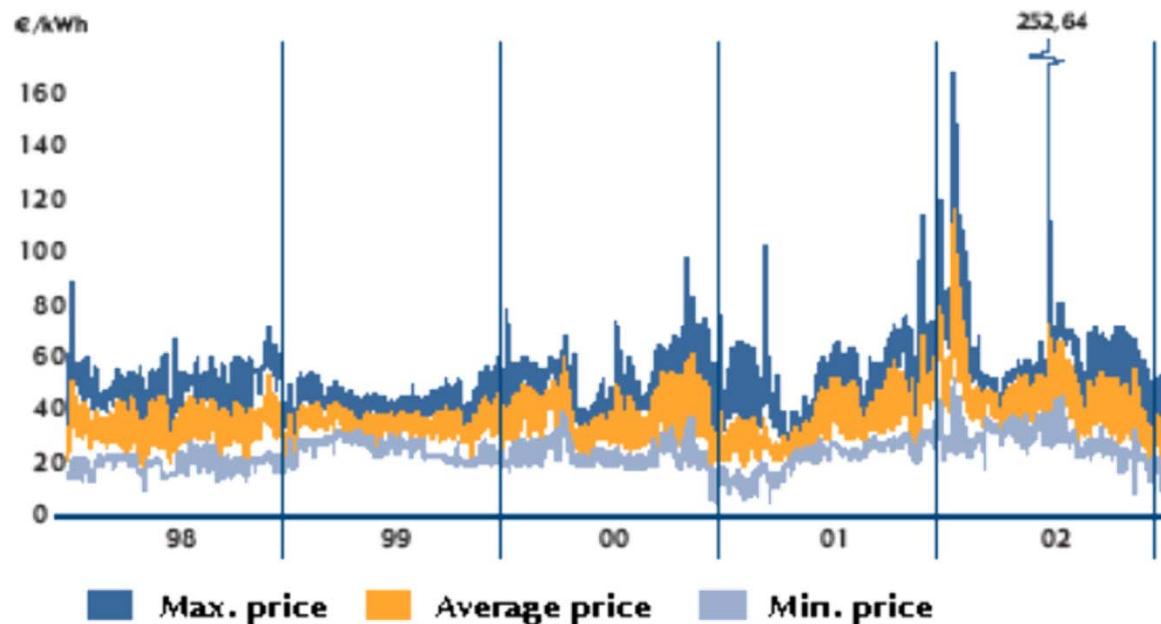


Source: [www.omel.es](http://www.omel.es)

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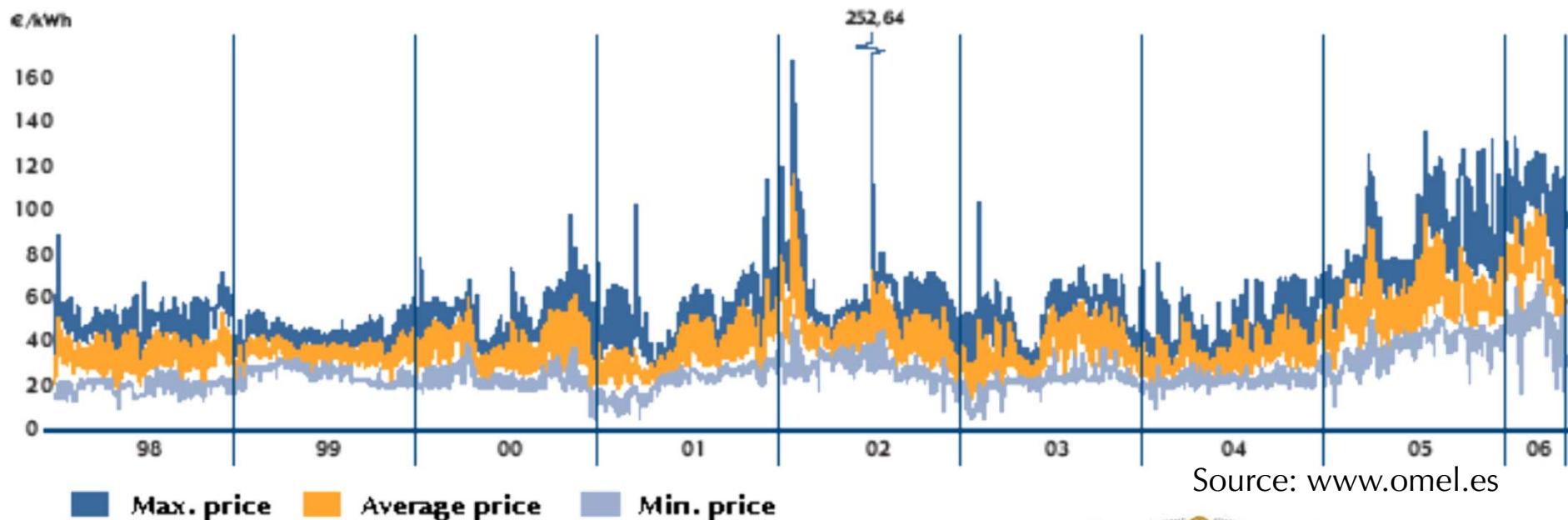
## The original sin (2000-2002) The tariff deficit & the CTCs

- The first deficits appear in years 2000, 2001 & 2002
  - 2000@250 M€, 2001@80M€, 2002@1149M€
  - After a bitter dispute, in Royal Decree 1432/2002 the Government accepts to defray the deficits...
    - Securitized and recovered through the regulated access tariff for 15 years: customers end up paying the market price, though with delay
  - ... but caps the future tariff increases until 2010 ...
    - Sets the path of evolution of default end-use tariffs (max. 2% increase)
  - ... allocating it among the generators under the CTC regime
  - Companies appeal against the RD (Spanish Supreme & EU Courts)

## The original sin (2000-2002)

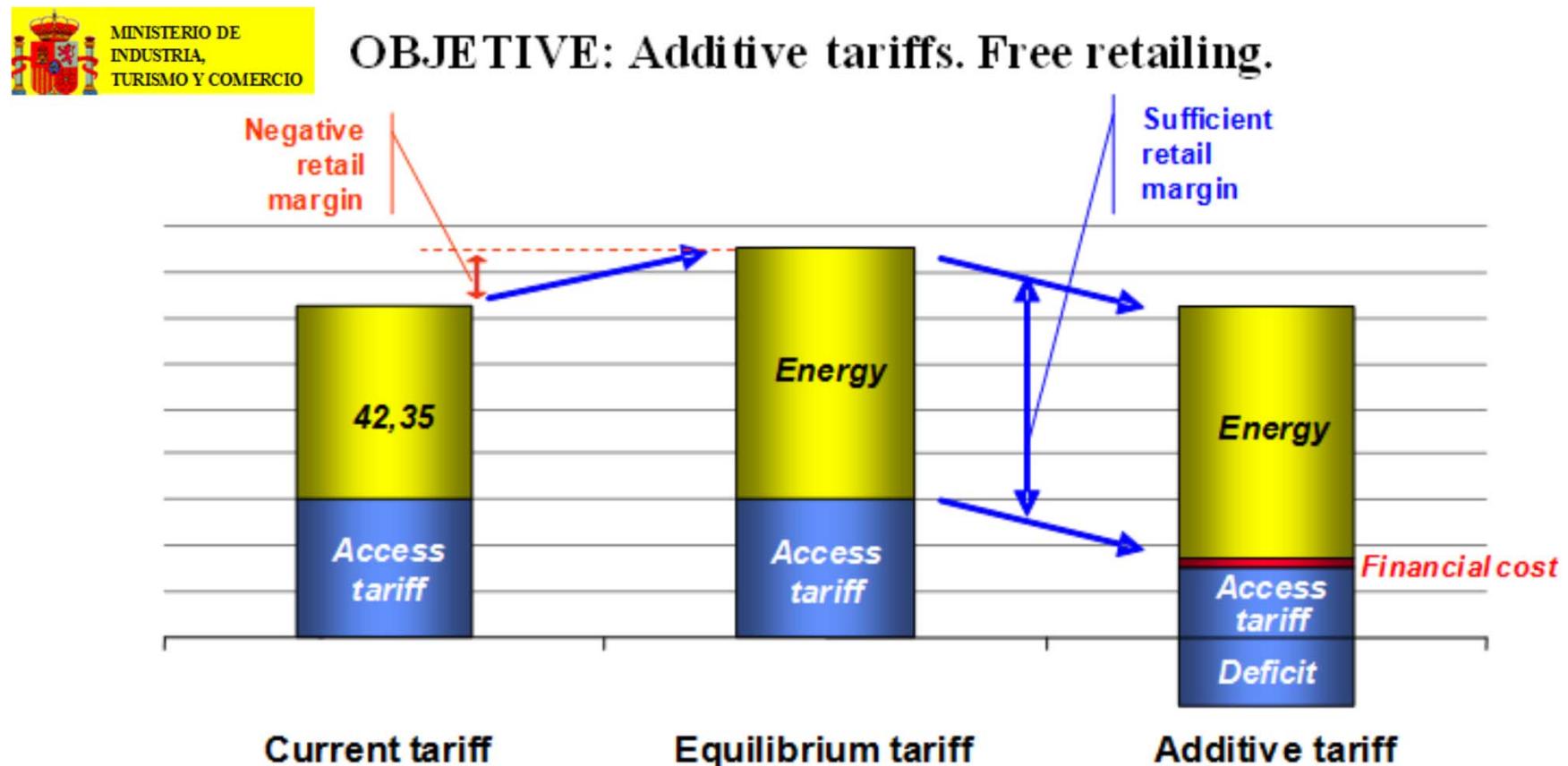
### The start of the tariff deficit and the CTCs

- In 2005 the tariff deficit re-appears
  - Energy price implicit in the tariff: 37.8 €/MWh
  - Wholesale electricity price: 62.4 €/MWh
  - 3800M€ (20% of the total cost of service)
- Full eligibility starts in 2003, but the insufficient and non-additive regulated tariff interference prevents retail market from starting



## The sticking-paster (2007) Ex ante deficit

- RDL 3/2006 price cap is abolished
- Though not yet sufficient, finally an additive tariff: ex ante deficit



Source: Ministry of Industry, Tourism & Commerce 2007

## The sticking-paster (2007) CESUR auctions

- Energy auctions for tariff supply
  - Distributors acquire its demand in auctions, through forward contracts instead of the spot market
  - Aimed to provide a credible price signal for designing the tariff
  - Auction characteristics
    - Quarterly
    - X% of regulated demand
    - Base load and fixed profile (no load following)
      - From Dec. 2008 Base and Peak product
    - Multi-round auction process

# The shepherd boy and the wolf (2008-2009) Royal Decree 6/2009: the “conditional” regulation

The screenshot shows a news article from the MITYC website. The header features the Spanish flag and the text "GOBIERNO DE ESPAÑA" and "MINISTERIO DE INDUSTRIA, TURISMO Y COMERCIO". The main title of the article is "Propuesta de tarifas óptima en los neumáticos". The navigation bar includes links for Home, Tourism, Trade, Telecommunications, Information Society, Undersecretary, Industry, and Energy. The sidebar on the left contains links for "The Ministry", "Services", "Online procedures", "Answer your queries", and "Information" (Press Office, Aid, grants and awards, Contractor profile, Calendar and Events, Documentation and publications, Statistics and reports, Competitions and contests). The main content area displays the press release text, which includes a red box highlighting a specific sentence: "In the chapter on electricity tariff increase is conditioned to subscribe the agreement that have been working throughout the autumn, the Ministry of Industry, Tourism and Trade and utilities". Below this, there is additional text about proposed increases for electricity and decreases for gas.

You are in: [MITYC](#) » [Press Office](#) » [Press Releases](#) » Industry sent to the National Commission d...

## Industry sent to the National Energy Commission its proposed rates for electricity and gas for 2009, calculated on the basis primarily to consumers

The proposal sets a rise of 1.1 € / month for electricity and a drop of 1.5 € / month for gas for domestic consumers

**10/12/2008**

In the chapter on electricity tariff increase is conditioned to subscribe the agreement that have been working throughout the autumn, the Ministry of Industry, Tourism and Trade and utilities

The average proposed increase for electricity is 1.1 € / month for domestic consumers (tariffs 2.0.X) and 4.2 € / month for the total low voltage (including fees for large domestic consumers and SMEs)

In the case of gas, industry proposes a decrease of 1.5 € / month in fees last resort of natural gas for domestic consumers (tariffs T1 and T2) and 6 € / month in fees T3 and T4 ( small and medium industries sector and collective consumption ) in the draft proposal tolls are relaxed to favor intensive industries gas consumption, highly affected by the crisis (manufacturers of bricks and ceramics)

## The shepherd boy and the wolf (2008-2009) Royal Decree 6/2009: the end of the tariff deficit (sic!)

- Commitment of gradual abolition of the tariff deficit by 2013
- Rights to recover the historical deficit are to be transferred to a structured fund which will issue debt (backed by a state guarantee)
- It abolishes the claw-back mechanism related to costs for freely-obtained CO2 permits



Source: Gas Natural

## The shepherd boy and the wolf (2008-2009) Royal Decree 6/2009: Last resort tariff

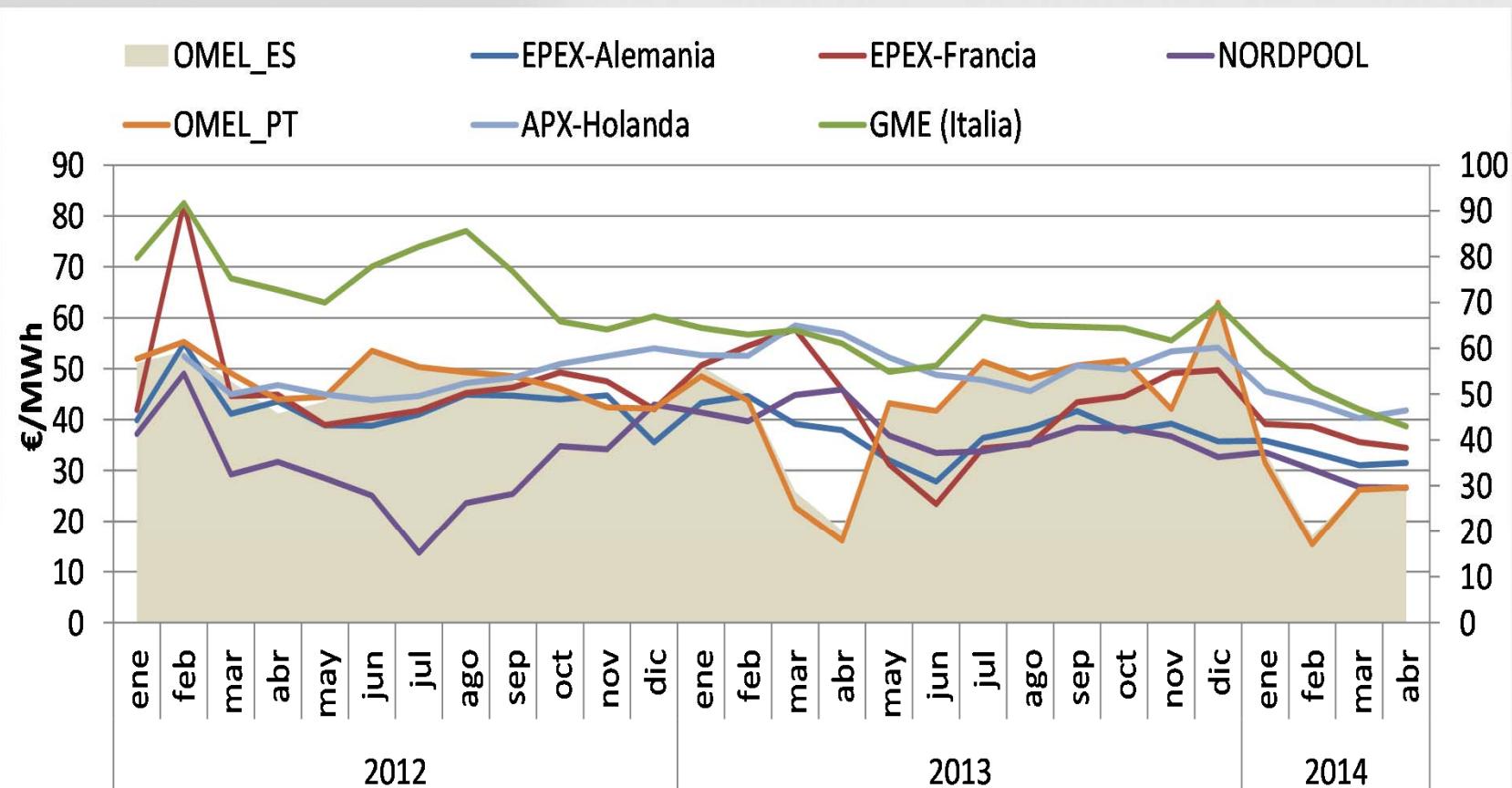
- From 1 July 2009: Low voltage (small customers, less than 10 kW)
- The last resort supply obligation is assumed by retailers which belong to the same business group to which the customer is connected
- Social bonus
  - Until end 2012, electricity generators are obliged to fund a 'social bonus' for vulnerable customers (~5 million customers)
    - Customers with a contracted capacity of less than 3 kW
    - Pensioners
    - Families in which all members are unemployed
    - Large families (heroes of the nation, i.e. more than 2 children)

# Electricity prices (2010-2013)

## Wholesale (spot) prices

**CNMC** COMISIÓN NACIONAL DE LOS  
MERCADOS Y LA COMPETENCIA

**Comparación del mercado al contado con respecto a la UE**  
*Precio de la energía en el mercado al diario*



Fuente: CNMC

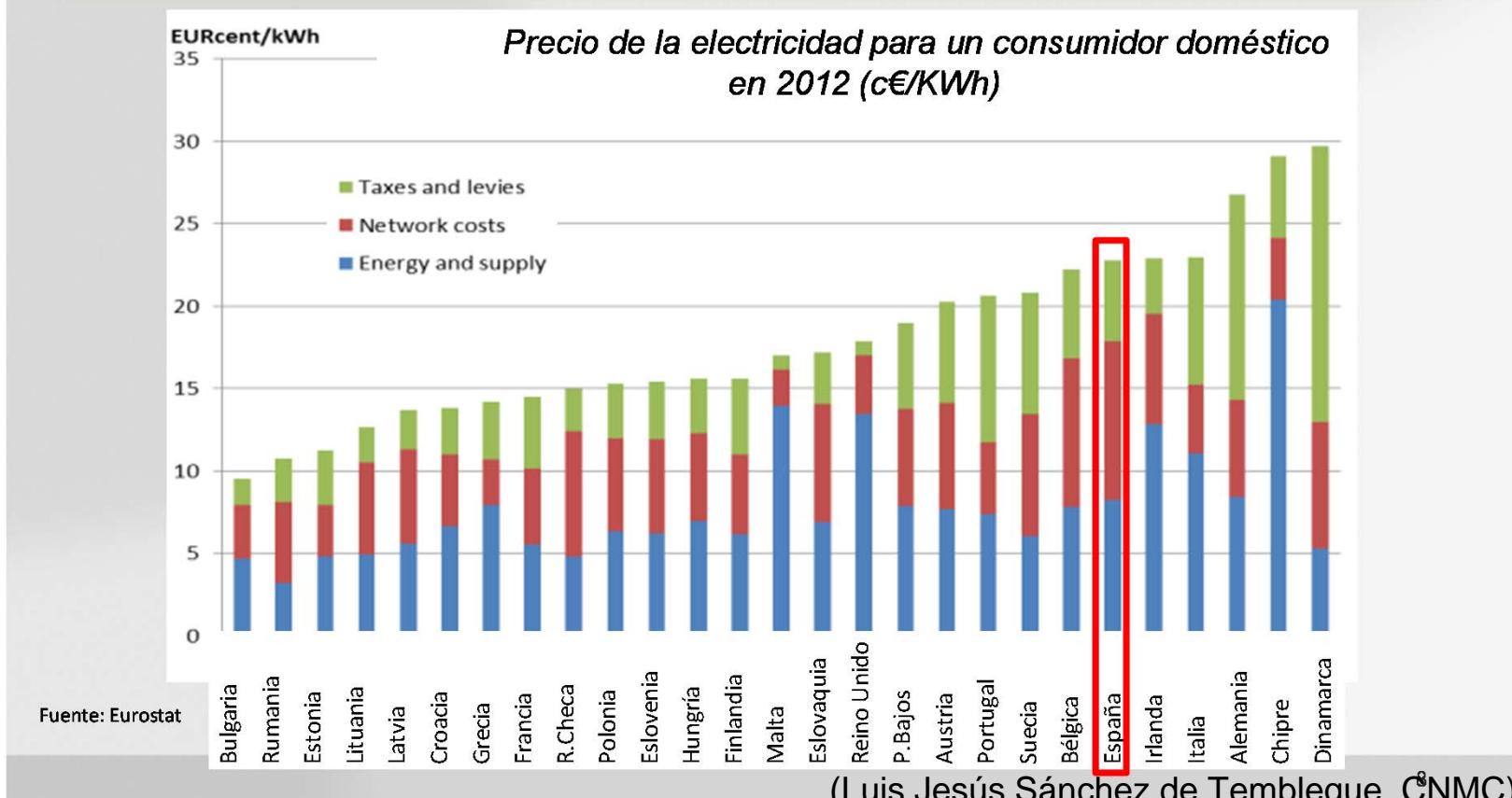
El 13 de mayo de 2014 el MIBEL se acopló con el mercado NWE  
(Luis Jesús Sánchez de Tembleque, CNMC)

# Electricity prices (2010-2013)

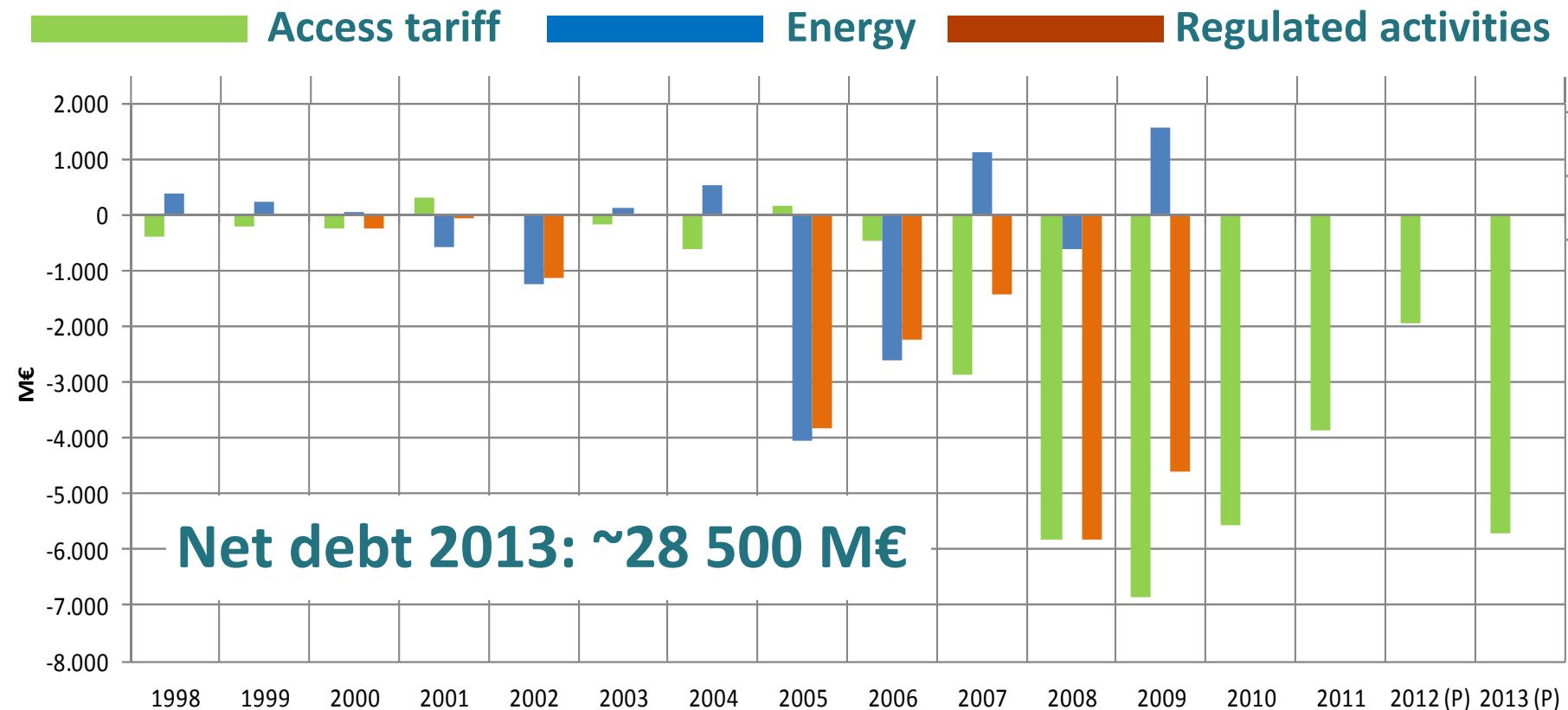
## Retail (end-user) prices

Comparación del mercado minorista respecto a la UE  
Precio consumidor doméstico:  
precio energía mercado +tarifa acceso +impuestos

*El coste producir la electricidad es similar al del resto de la UE, sin embargo los costes regulados son un 40% superiores al de países de nuestro entorno*



# The perennially unsustainable situation The unstoppable metastasis



## Access tariff

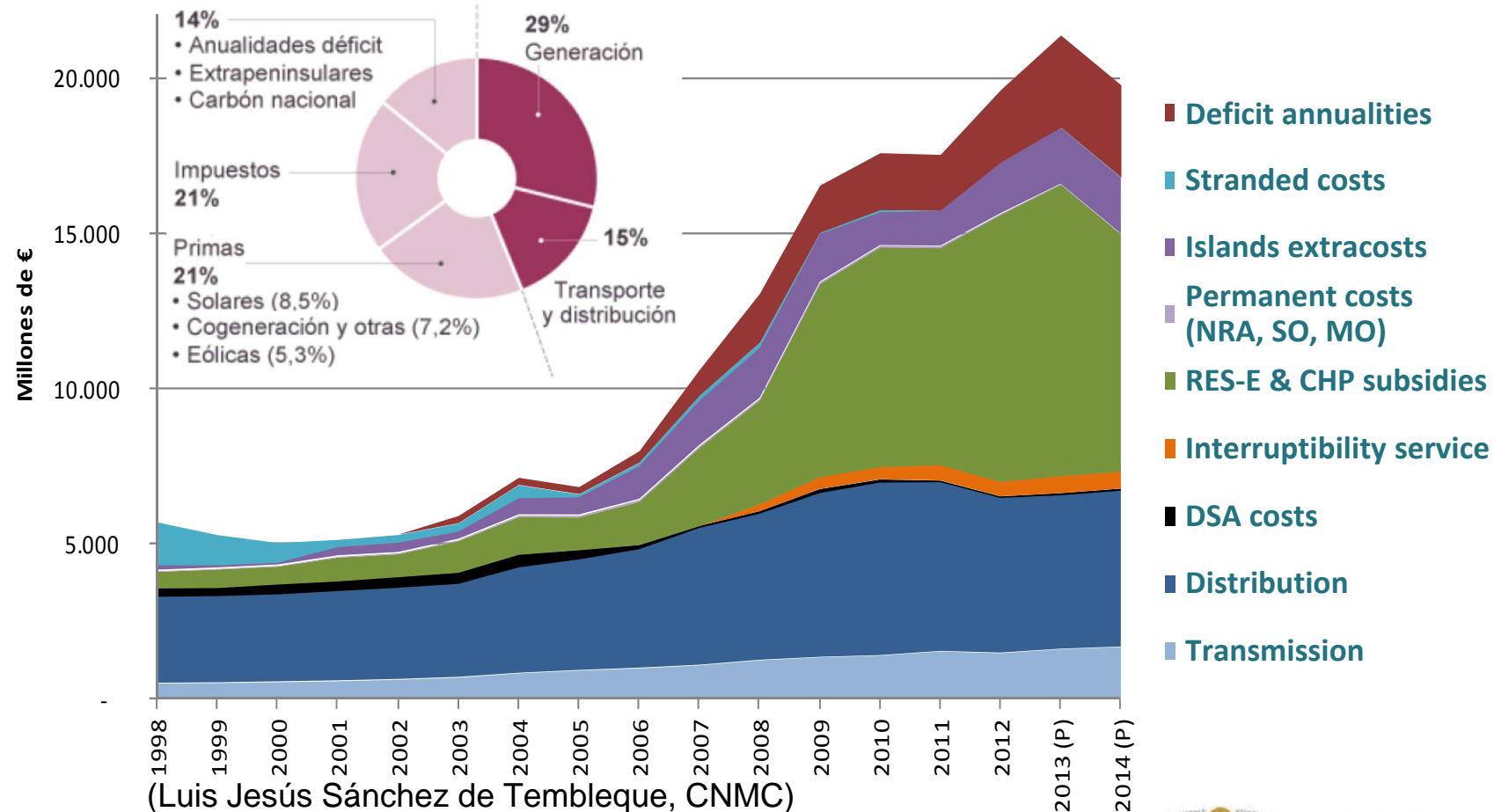
- **2001: Costs: 5000 M€ - Income: 5 600 M€**
- **2013: Costs: 21 700 M€ - Income: 14 400 M€**

(Luis Jesús Sánchez de Tembleque, CNMC)

# The perennially unsustainable situation

## Evolution of the tariff components

- 2013 demand  $\cong$  2005
- 2003-2012
  - $\Delta$  regulated tariffs  $\cong$  82% -  $\Delta$  regulated costs  $\cong$  203%



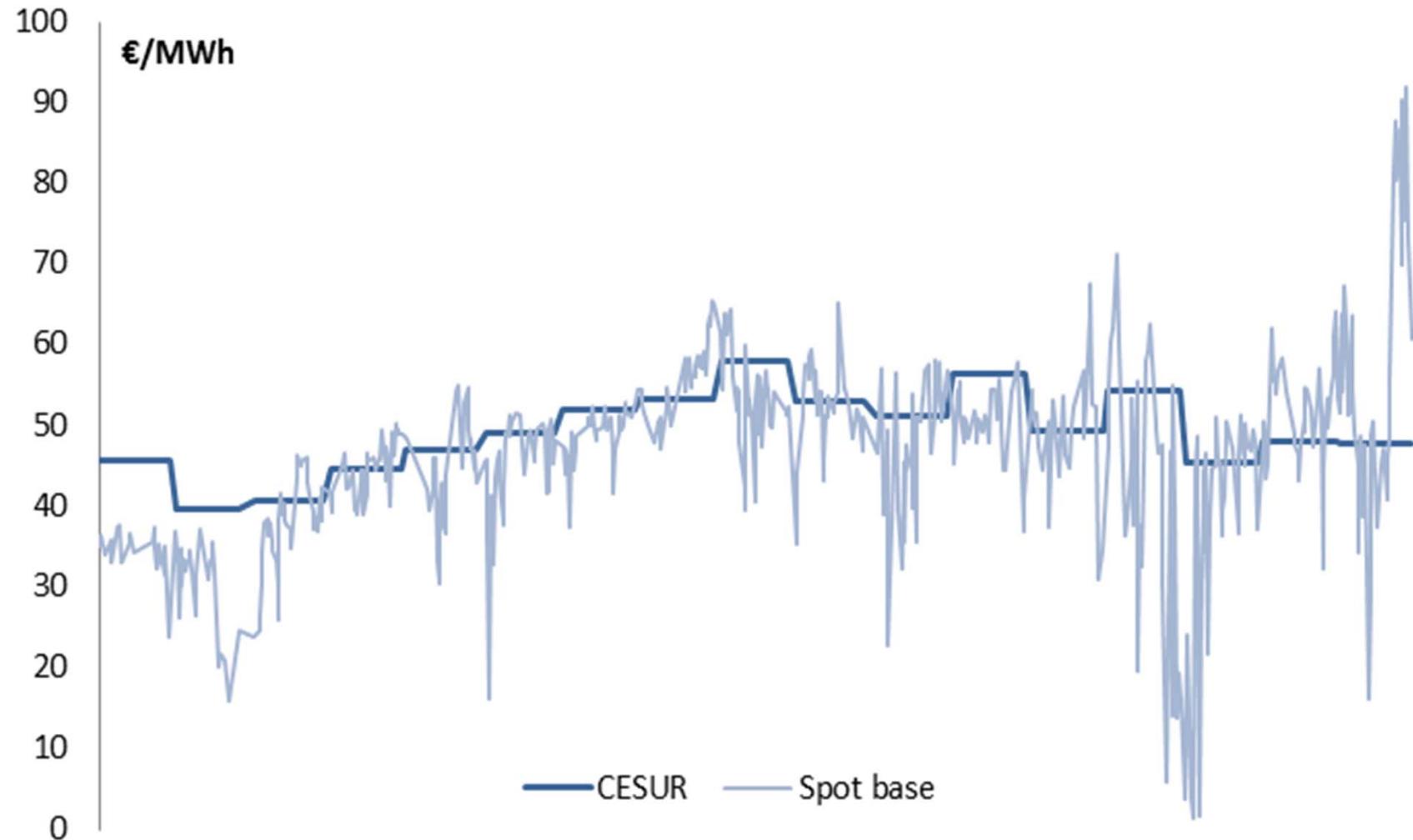
# The new shock treatment (2013-...) Ley 24/2013 del Sector Eléctrico



- *Financial stability for the system (tariff deficit end)*
- *New remuneration regime for regulated investments*
  - RES-E turns into regulated
  - Reasonable return
- *Self-consumers connected to the system should help cover the costs and services of the electrical system on the same terms as the energy consumed by other agents in the system*
  - Back-up toll
    - (Previous) Tariffs capacity charge increase
- *Increases consumer protection*
  - PVPC: Small customer selling price

## The CESUR auction crash

# Base load CESUR and spot electricity prices



Carlos Tomás de la Peña (MIT Sloan)

# The CESUR auction crash Q4 2013



## What happened in the last auction?

High average prices in the day-ahead market

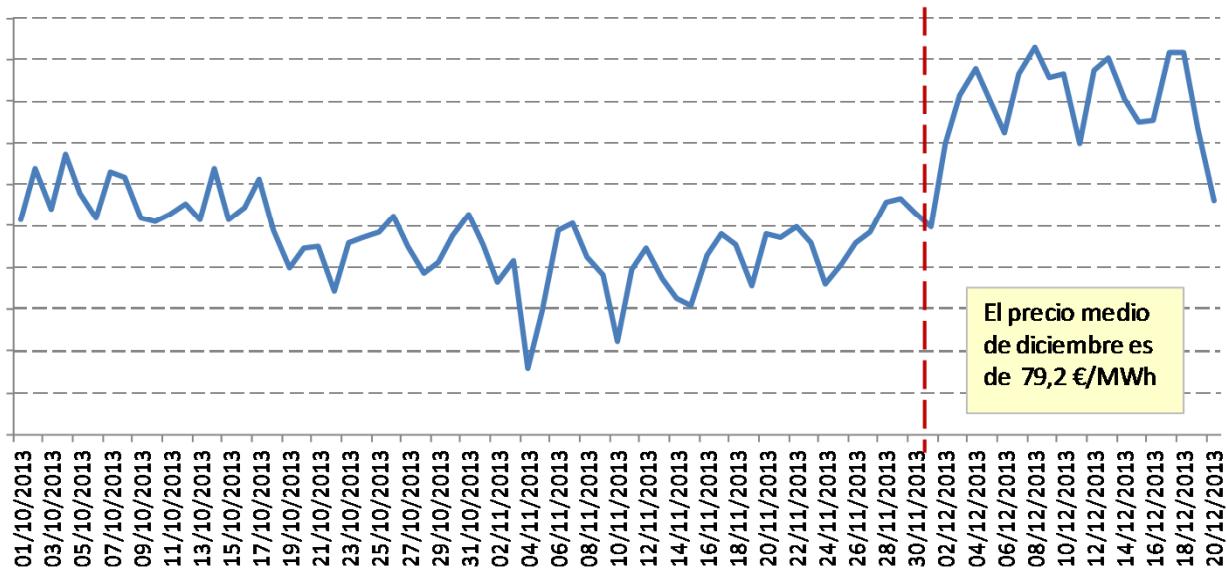
The futures market anticipates that the situation can be extended in the first weeks of 2014

In the previous auction the price has been below the daily market

Regulatory uncertainty

- Low wind production
- Some days with 3 unemployed nuclear groups (2 per maintenance)
- Increased demand
- Coal plant (Compostilla) save situation because suppliers
- Cycles must buy gas "spot" expensive
- Reduced gas supply from Algeria

Precio del Pool durante el Q4 2013



# The new tariff design PVPC: Small customer selling price

**Ministry Draft**

The Ministry has proposed a model based on hourly prices and production

Hourly Market Price (CMIE chart) + Smart meter = Hourly Real Measure

Hourly Market Price (CMIE chart) + Traditional device = Standard Profile

Description	Ministry purpose
Hourly Price	<ul style="list-style-type: none"><li>Based on day and intraday price weighted by volume traded in each market</li></ul>
Billing based on hourly measure	<ul style="list-style-type: none"><li>Price reduction because of saving the implied risk premium needed to ensure a fixed price ex-ante</li><li>Hourly real measure for clients with smart metering and management device</li><li>Standard consumption profile published by the System Operator for customers without smart meters</li></ul>
Fixed price tariff as alternative	<ul style="list-style-type: none"><li>Bill the energy consumption to the day ahead market price</li><li>Remove Government involvement in setting tariffs</li><li>Incorporate incentives for efficient consumption, affecting consumer habits</li><li>To create a stable price alternative, though probably more expensive due to incorporate the cost of hedging</li></ul>

6

# The new tariff design PVPC et al.

**Bajate la Potencia**

- Si utilizas menos... ¿por qué pagas y contratas más?
- 0008989 personas que piden sus compañías bajar la potencia
- Solicita a tu compañía eléctrica que baje tu potencia contratada
- ¿Te sumas?

**CONTROLS TU ENERGÍA**

- Tipos de contrato
- TARIFA REGULARA PVPC (PRECIO VOLUNTARIO PEQUEÑO CONSUMIDOR)
- PRECIO FIJO ANUAL DEL kWh CONSUMIDO
- CONTRATACIÓN BILATERAL
- Nueva factura
- CLAVES DEL CAMBIO
- ENTENDER TU FACTURA
- ¿SABES POR LO QUE PAGAS?
- Glosario
- Preguntas frecuentes
- Herramientas

The electricity companies will return 153 million in the bills for the next semester

**EL PAÍS**

**ECONOMÍA**

DIRECTO Sesión de control. Sigue en directo las preguntas de la oposición

Las eléctricas devolverán 153 millones de la factura del segundo trimestre

■ La restitución será de alrededor de 10 euros para un consumidor tipo  
■ El reintegro se producirá en la primera factura que se emita después del 1 de julio

MIGUEL ÁNGEL NOCEDA | Madrid | 9 JUL 2014 - 00:00 CET

Archivado en: Reforma energética CNMC Legislación energía Tarifas eléctricas Precio energía Política energética Mercado energético Energía

Las eléctricas deberán devolver a los consumidores 153 millones de euros por haber cobrado de más en el segundo trimestre de este año, según los cálculos que maneja el sector. El Gobierno estableció un mecanismo de compensación que fijó el [precio de la luz](#) para el primer trimestre en 48,48 euros por megavatio/hora (MWh) y que luego se amplió al segundo, de manera que las eléctricas tendrían que devolver lo facturado de más en caso de que el precio en el mercado resultara inferior.

# Thank you very much and excuses

Comillas University Massachusetts Institute of Technology Electricity Systems (COMITES) Program  
For more information on COMITES or to explore how you can help support it, please contact:

**Rob Stoner**

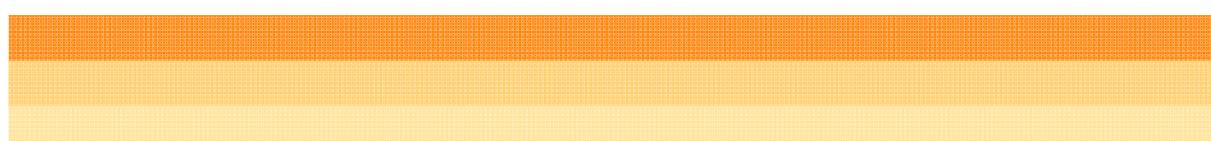
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