

The opening of the electricity market in EU

Mr. Spyros Vassos MSc.Eng
Director of transmission planning & performance



Electricity market in Europe

- One of the most important economic measures taken by the European Union in recent years was the creation of a single market for electricity and gas, based on the principles of **transparency** and open **competition**.
- With a combined annual turnover of about Euro **170** billion, investments of more than Euro **25** billion per year, and an installed capacity of almost **650** GW, the Electricity sector is one of the largest sectors in the European Union.



Power Market Structure

Historical developments

Electricity:

- Is not a primary source of energy
- Cannot be stored economically in large quantities
- Transmission over long distances requires capital-intensive infrastructure
- Is a clean form of energy at the final point

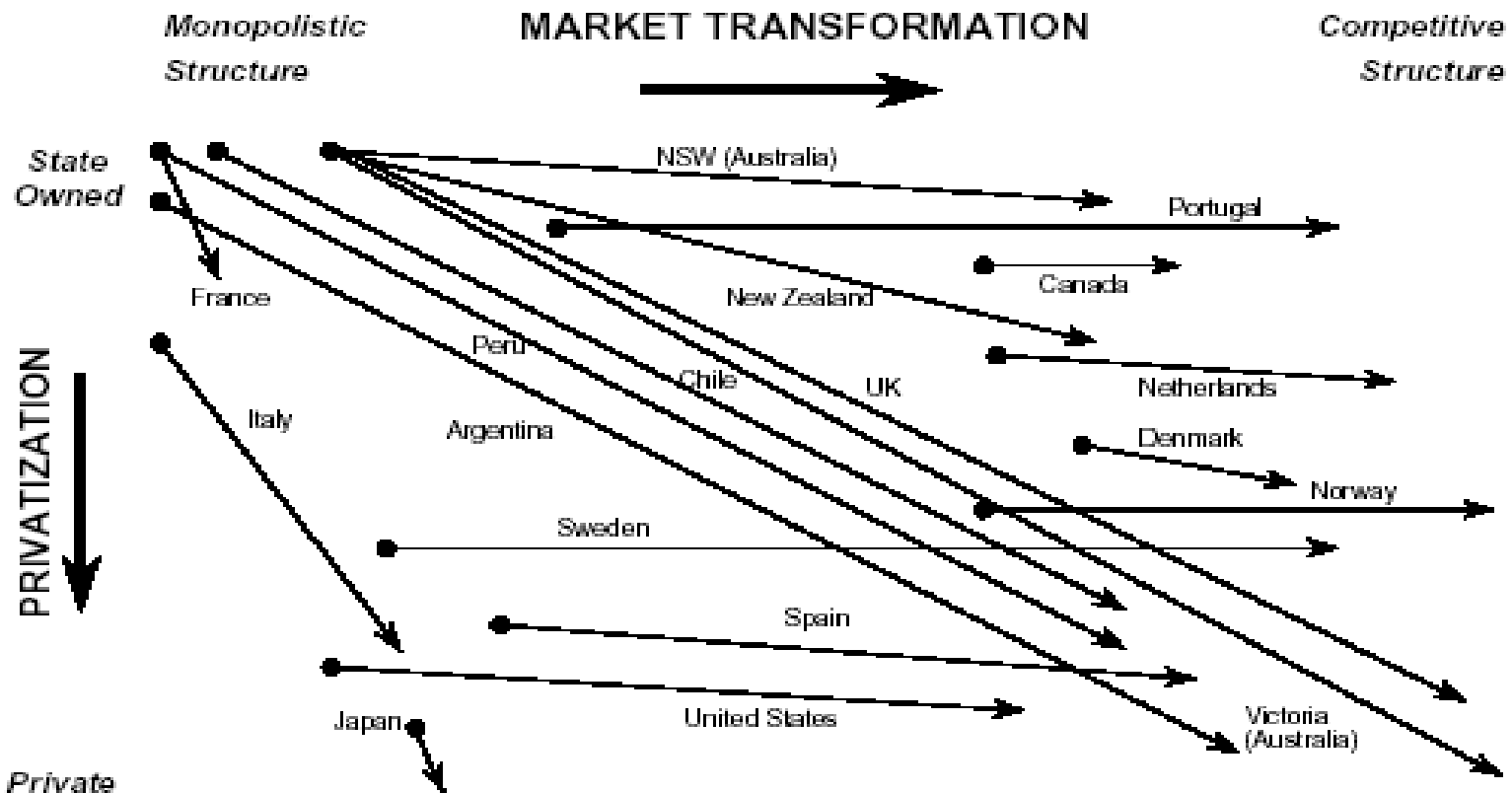


Global trends in electricity sector

- Private Sector Investment and Monopolistic Market Behaviour
- Public Sector Intervention and Inefficiency
- Unbundling, Competition, Regulation and Privatization
- Industry Convergence and Globalization



Global reform trends in the power sector



Source: Hagler Bailly.



Power Market Structure

Vertical Integration

- An electricity company is said to be Vertical Integrated if at least two of the main functions of the electricity undertaking, namely generation, transmission, distribution and supply of electricity to the end-users fall under the responsibility of the same company
- Loose Vertical Integration types are:
 - Generation and Transmission
 - Generation and Distribution
 - Transmission and Distribution



Internal Electricity Market in EU (I)

- Main provisions of the **IEM** Directive are:
 - Full competition in new generation capacity has been introduced
 - Gradual opening of the generation market to Eligible Customers
 - Creation of an independent Transmission System Operator (TSO)
 - Third Part Access (TPA) to the network can be Negotiated, Regulated and, as far as non-eligible customers are concerned, through a Single Buyer



Internal Electricity Market in EU (II)

- The electricity undertakings are required to provide, at least, a Management Unbundling of TSO from the other activities
- The set up of an Independent Dispute-settlement Authority in order of assuring equal and fair application of the new market rules
- Transitional measures of Reciprocity between member states
- Public Service Obligations (PSO)
- Stranded costs claims



Internal Electricity Market in EU (III)

Framework of the provisions (1)

1. New generation capacity

- For the construction of new generating capacity
Member States may choose between two approaches:
 - Authorisation
 - Tendering procedures
- Both approaches are to be objective, transparent, and non discriminatory



Internal Electricity Market in EU (IV)

Framework of the provisions (2)

2. Methods of system access

- The Directive allows two approaches to system access:
 - Negotiated access
 - Single buyer procedure
- Whichever approach is adopted, it must lead to equivalent economic results and a directly comparable level of opening up of markets and a directly comparable degree of access to electricity markets



Internal Electricity Market in EU (V)

Framework of the provisions (3)

3. The extent of market opening

- The Directive provides that Member States shall:
 - Ensure that electricity undertakings operate in accordance with the Directive with a view to achieving a competitive market in electricity
 - Not discriminate between undertakings as regards their rights or obligations



Internal Electricity Market in EU (VI)

Other supporting provisions

1. **Transmission System Operator (Article 7)**
 - Member States shall designate a system operator responsible for operating, maintaining, and developing the transmission system
2. **Distribution System Operator (Article 11)**
 - Member States shall designate a distribution system operator responsible for maintaining a secure, reliable and efficient system
3. **Unbundling (Article 14)**
 - Integrated utilities are required to keep separate accounts for generation, transmission and distribution activities, as if they were separate activities



Implementation of the Electricity Directive

	Declared market opening	Full opening date	Unbundling of TSO ¹	Regulator	Network tariffs	Balancing market	Biggest three generator share (%)	Obstacles to competition responses mentioning: ²
Austria	100%	2001	L	ex-ante	high	Y	68	X
Belgium	35%	2007	L	ex-ante	medium	N	97 (2)	D, B, R, X
Denmark	90%	2003	L	ex-post	low	Y	75 (2)	D, X
Finland	100%	1997	O	ex-post	low	Y	54	U (for DSOs)
France	30%	none	M ³	ex-ante	medium	planned	98 (1)	D, B, U, X, R
Germany	100%	1999	M	nTPA	high	only 2/6 TSO	63	U, R, X, T
Greece	30%	none	M	ex-ante	n.a.	N	100 (1)	no responses
Ireland	30%	2005	L	ex-ante	medium	N	97 (1)	D, B, U, X
Italy	45%	none	L	ex-ante	medium	planned	79 (2)	D, B, X
Neth	33%	2003	L	ex-ante	medium	Y	64	X, D
Portugal	30%	none	L	ex-ante	high	N	85	D, X
Spain	45%	2003	L	ex-ante	high	Y	79	D, X, R
Sweden	100%	1998	O	ex-post	low	Y	77	D, B
UK	100%	1998	O	ex-ante	low	Y	44	D,U (Scot), X (NI)



Electricity prices in EU (1.1.2001)

(EUROc/kWh)

	RESIDENTIAL	INDUSTRIAL	IND TO RES RATIO
AUSTRIA	12.36	-	-
BELGIUM	13.20	6.73	50.98
FINLAND	7.06	4.82	68.27
FRANCE	10.81	5.67	52.45
DENMARK	17.71	5.70	32.19
GERMANY	12.52	5.78	46.17
HELLAS	6.81	5.67	83.26
IRELAND	8.08	6.18	76.49
ITALY	18.48	8.66	46.86
LUXEMBOURG	10.86	5.43	50
NETHERLANDS	13.30	-	-
PORTUGAL	11.17	6.44	57.65
SPAIN	10.01	6.26	62.54
SWEDEN	-	-	-
UK	10.92	7.50	68.68
AVERAGE EU	10.89	6.24	

