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**Analysis of the Electricity Sector  
Liberalisation in European Union Member  
States pursuant to Directive 96/92/EC on  
the Internal Market in Electricity**

Study realised for  
the EU-Japan Centre for Industrial Cooperation



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## Introduction

The 19 February 1997, the Directive 96/92/EC on the Internal Market in Electricity entered into force. Each country had 2 years to adapt it into national legislation. After the Directive on price transparency (90/377/EG) from 29.6.1990 (for electricity and gas) and the one on electricity transit (90/547/EG) from 20.10.1990, this Directive marks the last step to the liberalisation of the electricity sector in the European Union.

This Directive establishes common rules for the generation, transmission and distribution of electricity. It lays down the rules relating to the organisation and functioning of the electricity sector, notably :

- access to the market,
- the criteria and procedures applicable to calls for tender and the granting of authorisations
- the operation of systems.

The Directive indicates the minimum goal to be achieved :

- In February 1999, the national market share that should have been opened to competition was to be calculated on the basis of the Community share of electricity consumed by final customers<sup>1</sup> consuming more than 40 GWh per year (on a consumption site basis and including autoproduction<sup>2</sup>). The resulting average Community market opening, at that date, should have been approximately 23%.
- The share of the national market is increased progressively over a period of six years. In 2000 the Community consumption threshold is reduced from 40 GWh to 20 GWh annual electricity consumption and in 2003 it will be further reduced to 9 GWh.

Member States specify those customers inside their territory which have the legal capacity to contract electricity, given that all final consumers consuming more than 100 GWh per year (on a consumption site basis and including autoproduction) must be included in the above category. These customers are called "eligible customers".

Distribution companies, if not already specified as eligible customers, have the legal capacity to contract for the volume of electricity being consumed by their customers designated as eligible within their distribution system, in order to supply those customers.

In March 2000, four European Member States have opened up their electricity market fully : *Sweden, Finland, Germany and United Kingdom*. *Denmark* have almost entirely opened it (90%).

*Belgium, Greece and Ireland* have had, due to the specific technical characteristics of their electricity systems, an additional period of respectively 1, 2 and 1 year to apply the obligations ensuing from the Directive. *Greece* still has a closed electricity market, and *Belgium and Ireland* started to open up their market on 19<sup>th</sup> February 2000 by 33 and 30% respectively.

*France* has chosen for a minimal liberalisation, with almost a year of delay. It opened its market as late as in January 2000, to a rate of 30%.

The other Member States have different market opening levels ranging from 30 to 45%. (*Austria* : 30%, *Italy* 35%, *Portugal* 30%, *The Netherlands* 32%, *Spain* 42%).

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<sup>1</sup> "Final customer", meaning a customer buying electricity for his own use.

<sup>2</sup> "Autoproducer", meaning a natural or legal person generating electricity essentially for his own use.

# Evolution trends in the European Electricity Market

## ***Access to the network***

For the organisation of the network access, Member States can choose between three procedures :

- the negotiated access,
- the regulated access
- the Single buyer<sup>3</sup> procedure.

In the case of negotiated access to the network, Member States take the necessary measures to ensure that electricity producers and, where Member States authorise their existence, electricity suppliers, together with eligible customers either inside or outside the territory covered by the system, are able to negotiate access to the system so as to conclude supply contracts with each other on the basis of voluntary commercial agreements.

In order to promote transparency and facilitate negotiations for access to the network, system operators must publish an indicative range of prices for use of the transmission and distribution systems. As far as possible, the indicative prices published for subsequent years should be based on the average price agreed in negotiations in the previous 12-month period.

In the case of regulated access systems, Member States give eligible customers a right of access, on the basis of published tariffs for the use of transmission and distribution systems.

A negotiated third party network access only exist in *Germany, Greece and Denmark*<sup>4</sup>. All other European countries have chosen the regulated third party access system.

## ***Unbundling***

The Directive requires that, unless the transmission system is already independent from generation and distribution activities, the system operator has to be independent at least in management terms from other activities not relating to the transmission system.

If the company is vertically integrated<sup>5</sup>, Member States must insure that the transmission network managers do not transmit confidential information to the other sectors of the company (create a so called Chinese wall).

Two thirds of the Member States<sup>6</sup> have a transmission network that is a separate legal entity : *Spain, United-Kingdom* (England and Wales), *Sweden, Finland, Denmark* (Halbinsel Jütland), *Austria* (Österreich), *The Netherlands, Portugal, Ireland, Greece, Italy*. *Belgium* has not taken a definitive decision.

Only a minority of Countries confine themselves to a transmission network that is part of a vertically integrated company : *Denmark* (other than Jütland), *Germany, France, United Kingdom* (Scotland, Northern Ireland), *Austria* (Westösterreich).

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<sup>3</sup> "Single buyer" meaning any legal person who, within the system where he is established, is responsible for the unified management of the transmission system and/or for centralised electricity purchasing and selling.

<sup>4</sup> Regulated TPA will be introduced by law for transmission as well as for distribution

<sup>5</sup> "Vertically integrated undertaking" meaning an undertaking performing two or more of the functions of generation, transmission and distribution of electricity.

<sup>6</sup> In some countries, a part of the transmission network is still part of a vertically integrated company, although with its own management team.

In their internal accounting, integrated electricity undertakings have to keep separate accounts for their generation, transmission and distribution activities. They also have, where appropriate, to consolidate accounts for other, non-electricity activities, as they would be required to do if the activities in question were carried out by separate undertakings. This is required with a view to avoid discrimination, cross-subsidisation and distortion of competition. They have to include a balance sheet and a profit and loss account for each activity in notes to their accounts.

### ***Public service obligations***

Having full regard to the relevant provisions of the Treaty, in particular Article 90, Member States may impose on undertakings operating in the electricity sector, in the general economic interest, public service obligations which may relate to security, including security of supply, regularity, quality and price of supplies and to environmental protection. Such obligations must be clearly defined, transparent, non-discriminatory and verifiable; they, and any revision thereof, shall be published and notified to the Commission by Member States without delay.

Market limitations will only be accepted if they are absolutely necessary for the realisation of the public service.

### ***Independent regulatory authority***

Except in *Germany*, in *Austria* and in *Ireland*, the regulation function are – or will be in short term – delegated to an independent body.

### ***Opening of the Market***

Most Member States are opening their electricity market broader and faster than what is required by the Directive.

In average the market opening rate was already 60% at the “start-day” of the liberalisation, the 19<sup>th</sup> of February 1999.

### ***Authorisation for constructions of new power plants***

For the construction of new generating capacity, Member States may choose between an authorisation procedure and/or a tendering procedure. Authorisation and tendering must be conducted in accordance with objective, transparent and non-discriminatory criteria.

Most Member States are choosing the authorisation procedure.

### ***Reciprocity***

According to Article 19.5, reciprocity may be a reason for refusal of network access, but only during a transitional period of 9 years.

The case can apply when different levels of market opening are implemented by some Member States and an eligible customers that wants to contract electricity from a supplier from another Member State, would not have the status of an eligible customer in that other Member State.

The following states have overtaken in their national law a reciprocity clause : *Austria, Belgium, Germany, the Netherlands, Portugal, Spain and The United Kingdom.*

### ***Transitional regimes***

The Directive offers in Article 24 a transitional regime which allows, on an individual case by case approach based on a Commission decision, derogation from several provisions of the Directive. A key criterion for applying such a transitional regime is the existence of commitments that have been made prior to the entering into force of the Directive, and cannot be fulfilled because of the Directive.

Twelve Member States have notified a transitional regime.

### ***Electricity Pool***

For the organisation of the electricity market, pools have been set up.

Scandinavian countries are the best example at the present time. NordPool for *Norway / Sweden* and EI-Ex for *Finland*. NordPool and EI-EX collaborate. The East of *Denmark* have joined the NordPool on the 1<sup>st</sup> July 1999 and the Western part will also joining in spring 2000. In *The Netherlands, Spain and the United Kingdom*, pools have also appeared. They are in a earlier stage of maturity. APX, the Netherlands pool, has already encountered problems in January 2000, a few month after its creation on 25<sup>th</sup> May 1999. The mechanism of the English and Welsh pool will be reviewed.

The Milanese stock market is also planning to open a pool.

European Energy Exchange (EEX), a European pool mainly created by *Germany*, should start its activities in 2000.

In the beginning 10 to 12 pools are expected in the EU, but in a longer term competition will lead to a decrease in number.

### ***Trade with Third Countries***

From a geopolitical point of view, *Switzerland* and *Norway* have always be linked to the European electricity market.

*Switzerland* is located in the middle of Europe. It has always been a high spot of electricity transfer.

*Norway's* electricity generation relays mainly on hydroelectricity (dominant producer : Statkraft). Depending on the season, it has a large demand or a large offer in power. Very naturally it opened its market to Sweden to offset these imbalance in electricity.

Besides *Norway* has modified its electricity Law in the sense of the European Directive. The electricity market is fully opened<sup>7</sup>.

Regarding *other countries*, the European Commission came to the conclusion that all GATT-members or countries that have ratified the Energy Charter have a free entry to all eligible customers in the EU.

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<sup>7</sup> The market liberalisation was introduced the 1 January 1991. The 1 January 1996, the Norwegian and the Swedish electricity markets were unified. Statnet is the transmission System Operator. The Norwegian Water Resources and Energy Administration is the general regulator of the electricity market.



<b>Country</b>	<b>Third Party Access</b>	<b>Notifications to DG Competition</b>	<b>Regulator</b>	<b>TSO</b>
<b>Austria</b>	rTPA	8.7 billion ATS	Ministry of Economic Affairs	Concession
<b>Belgium</b>	- nTPA for international transit - rTPA for domestic transit	No	Comité de contrôle for captive customers. Regul. Commission for open market	Subsidiary of existing companies (ELIA)
<b>Denmark</b>	- nTPA international - rTPA for domestic transit	Yes	Danish Energy Agency and Danish Competition Authority	West: Eltra East: Elkraft
<b>Finland</b>	rTPA	No	Energy Market Authority	Fingrid
<b>France</b>	rTPA	No	Independent Electricity Commission	An independent part of EDF. State owned
<b>Germany</b>	- nTPA - Optional temporary SB until 2005 for <i>Stadtwerke</i>	Network access restrictions in East Germany as stranded costs	Ministry of Economics/ Cartel Office	Several
<b>Greece</b>	- rTPA - Single buyer for islands	No	Energy Regulatory Authority	Independent Body. 51% State owned
<b>Ireland</b>	- with purchase obligation : ESB's Power Procurer - Otherwise: rTPA	No	Independent body for electricity and gas	New state owned company
<b>Italy*</b>	- SB for franchised market - rTPA f. open market	15.000bn lire	Independent Authority for elec. and gas	Independent Body
<b>Luxembourg</b>	rTPA	No stranded costs accepted but derogation from article 14		
<b>Netherlands</b>	rTPA	Fl 2bn	Ministry of Economic Affairs and Competition Authority	TenneT
<b>Portugal</b>	- SB: REN for franchised mkt. - nTPA when grid reinforcements - rTPA: other cases	No	Entidade Reguladora ERSE	REN
<b>Spain*</b>	rTPA	1,700 Bio. Pta	Ministry of Industry Electric National Board	REE
<b>Sweden</b>	rTPA	No	STEM	Svenska Kraftnät: 100% state owned
<b>UK</b>	rTPA	Yes (Northern Ireland only)	OFGEM (England, Wales, Scotland) OFREG (Northern Ireland)	National Grid Company; Scottish Power; Scottish & Southern Energy; Northern Ireland Electricity

<b>Country</b>	<b>Threshold</b>	<b>Tender or Authorisation</b>	<b>Unbundling of TSO</b>	<b>Supply Unbundling</b>
<b>Austria</b>	20 GWh/year, in February 2000	- Authorisation	- Management	
<b>Belgium</b>	100 GWh/year	- Authorisation	- legal	
<b>Denmark</b>	10 GWh/year from 1 April 2000	- Authorisation	- ownership	
<b>Finland</b>	None	- Authorisation	- ownership	- Accounts
<b>France</b>	20 GWh/year	- Tender for RES - Authorisation	- management	
<b>Germany</b>	None	- Authorisation	- management	- Full
<b>Greece</b>	1.5 GWh/year in 2001	- Authorisation - Tender for islands	- ownership	- Accounts
<b>Ireland</b>	4 GWh/year	- Tender - Authorisation	- legal	
<b>Italy</b>	20 GWh/year Consortia: 1GWh/year participation	- Authorisation	- ownership	
<b>Luxembourg</b>	100 GWh/year	- Authorisation	- legal	
<b>Netherlands</b>	2 MW	- Authorisation for Distribution & Transmission	- ownership	
<b>Portugal</b>	30 GWh/year	- Tender - Authorisation	- legal	
<b>Spain</b>	Now: 1 GWh July 2000: 1 kV	- Tender for transport lines - Authorisation	- ownership	- Full
<b>Sweden</b>	None	- Authorisation	- ownership	- Full
<b>UK</b>	None	- Authorisation	- ownership	- Full

(Source : Eurelectric, 9 March 2000)

#### **Abbreviations:**

SB : Single Buyer;  
nTPA : negotiated Third Party Access;  
rTPA : regulated Third Party Access;  
PSO : Public Service Obligation;  
RES : Renewable Energy Sources;  
TSO : Transmission System Operator

## AUSTRIA

### ***State of legislation preparation***

Federal electricity law : Elektrizitätswirtschafts- und organisationsgesetz ("E1WOG), 18 August 1998 (BGB1. 143/1998), entered into force on 19 February 1999.

### ***Electricity generation***

The Austrian electricity industry is characterised by a remarkable share of hydro-power (67,5%) leaving the remaining third to thermal power stations (approx. 25% CHP).

### **Construction of new power plan**

Authorisation system.

Any party can build new power plants after fulfilling a set of criteria which has to respect Article 5 of the directive and is laid down in the 9 Länder laws.

### **Remarks**

The regional distributors (Landesgesellschaften) have to ensure that by 2005 a share of 3% of electricity consumption is fed in from electricity generation using biomass/biogas; geothermal, wind and solar sources.

### ***Opening of the market - Time schedule***

By 19 February 1999 :

Eligible = all distributors which have also a transmission system (criteria is an interconnected system of minimum 110kV), i.e. basically all 9 Landesgesellschaften, as well as all final consumers with yearly consumption >40 GWh.

By February 2000 :

Eligible = final consumers with yearly consumption >20 GWh

By February 2002 :

Eligible : further distributors (without transmission networks) with more than 40 GWh sales to final customers

By February 2003 :

Eligible = all final customers and all distributors above 9 GWh.

### ***Access to the network***

System of regulated network access

Main transmission system operators (TSO) per geographical area, as already designated in the transit directive 90/547/EC, are the four companies Verbundgesellschaft, TIWAG, VKW and Illwerke.

The distribution system consists of the 9 Landesgesellschaften as well as several local, municipal or private distributors.

Access can be refused on the ground of lack of network capacity, reciprocity and in case where electricity production from renewable or CHP sources would be prevented and a selling of this electricity to third parties would not be possible even if the prices are lowered to market level.

## ***Unbundling***

### **Management unbundling**

Management unbundling is implemented, separate legal entities are not necessary.

### **Unbundling of accounts**

The separation of accounts is fully implemented in §8 of the Austrian E1WOG.

## ***Regulatory Authorities***

Minister of Economic Affairs : authority for refusal of access cases, determines all regulated access and electricity tariffs

Consultative committee (Elektricitätsbeirat) : proposes tariffs structures and calculation principles.

Authorities of the Länder : responsible for the authorisation of new generation capacity.

Kartellgericht : handle cases of abuse of dominant position and concerning other competition law aspects.

## ***Public service obligation***

6 explicit public service obligations (PSO) (§4 of the E1WOG).

- no discrimination and equal treatment
- obligation to connect and supply final customers at tariffs and general conditions
- ensuring that legally imposed obligations can be honoured
- priority dispatch for generation on the basis of renewable, waste and CHP
- purchase of electricity only from generators, which respect the environmental standards of the EU.
- Insofar as not in contradiction with international obligations, energy imports from third countries should be reduced.

## ***Transitional regimes***

Austria has notified a transitional regime.

The scheme concerns guarantees of operation in relation to three hydro power plants and a lignite fuelled plant, which committed to a long term offtake of indigenous lignite. The proposed method provides for the operating aid to be granted to these companies for a period of over 10 years. The transitional regime envisages that the payments will be financed by the imposition of a levy per kWh of electricity purchased by eligible customers. Captive customers would pay their proportional part within the regulated electricity tariff.

## ***Open Issues***

- the hydro-thermal system

the price of the hydroelectricity has to be "higher" in the summer as it could be, to recover the costs of the expensive under-supplied winter periods.

In order to guarantee security of supply and to operate economically, the 3 hydropower plants need to be combined with thermal or non-climate related sources in an approximately 70:30 proportion.

- High electricity trade exposure based on geographical situation

## BELGIUM

### ***State of legislation preparation***

Law relative to the organisation of the electricity market from 29 April 1999  
The Directive 96/92/EC gave an extra year within which to effect the transposition.

### ***Electricity generation***

The market is shared for 96% of the production between Electrabel (93%) and SPE (7%)  
The production is for 60% of nuclear origin, renewable energy accounts for less than 1%.

The Electricity Regulation Commission have to draw up an indicative programme of means of production subject to ministerial approval. The programme is for ten years, renewed every three years for following ten years. It estimates medium- and long-term demand and new needs in terms of means of production, and establishes policy on the choice of primary sources and generating systems and the need for public service obligations in the field of power generation.

### **Construction of new power plan**

Authorisation procedure

The criteria for the concession, deadlines and administrative costs of decisions are to be established by decree.

### **Remarks**

With regard to the development of renewable energy sources, the legislation provides for a mechanism to be set up guaranteeing the sale of a minimum quantity of electricity generated from these sources at a minimum price and an equalisation fund to compensate the additional costs thus incurred. The fund is to be financed by means of a levy on all energy consumers or a surcharge on transmission rates.

### ***Opening of the market - Time schedule***

1<sup>st</sup> June 2000 :

Eligible = all consumers with a consumption  $\geq$  20 GWh/year.

31<sup>st</sup> December 2002 :

Eligible = all consumers with a consumption  $\geq$  10 GWh/year

At least the 31<sup>st</sup> December 2006, all final consumers will be eligible.

The distributors are eligible for the volume of electricity consumed by their clients declared eligible. The distributors will be fully eligible from the 1 January 2007.

The eligibility of final consumers connected to the distribution network will be decided by the Regions.

### ***Access to the network***

Regulated third-party access.

Access may be refused only on ground of lack of capacity or breach of the technical regulations. The tariffs for transmission, connection and ancillary services are fixed by the operator.

## ***Unbundling***

### **Management unbundling**

The network operator is appointed for 20 years and is responsible for network operation, maintenance and development. It must take the form of a commercial enterprise and may not undertake any other commercial activities or services other than those needed to perform its functions. It may not have any direct or indirect interest in electricity producers, distributors or intermediaries.

### **Unbundling of accounts**

Network operators, producers, distributors and intermediaries keep separate account for their activities, including those which are not electricity-related, and these accounts are published in accordance with the Directive.

### ***Regulatory Authorities***

An Electricity Regulation Commission (CREG) with legal status has been established. It is an independent collegiate body composed of a chairman and four other members appointed for a renewable period of six years by the Council of ministers.

It has a general advisory role in the drafting of laws and supervising and monitoring their application. It is assisted by a General Advisory Council composed of Federal and Regional Government representatives and representatives of the sector's socio-economic interests.

The Commission runs a conciliation and arbitration service for any disputes in connection with access to the transmission network.

Among the CREG, an Appeals Tribunal has been set up.

### ***Public service obligations***

Public service obligations in terms of regularity and quantity of supply for non-eligible customers may be imposed on producers and on the network operator.

For supply of electricity to final customers not classed as eligible, the Economic Affairs Minister sets maximum prices valid for the whole country, the aim being to distribute productivity gains and progressively align prices with those of neighbouring countries.

### ***Transitional regimes***

Belgium has set up transitional regimes for charges in connection with the nuclear subsidiary, the gas contract with Statoil and pensions.

# DENMARK

## ***State of legislation preparation***

Electricity Supply Act (ESA)

## ***Electricity generation***

### **Construction of new power plan**

Authorisation principle, combined with a tendering procedure in specific cases.

## ***Opening of the market - Time schedule***

1st January 1998:

eligible = companies with an annual supply of electricity above 100GWh and final consumers with an annual electricity consumption above 100 GWh per consumption site.

Before 1 April 2000:

eligibility threshold will be reduced from the current 100GWh to 10 GWh.

Before en 2000:

eligibility threshold will be reduced from 10GWh to 1 GWh.

End of 2002:

100% opening

## ***Access to the network***

Eltra : network operator which covers the Western part of Denmark (Jutland and Funen), linked to the UCPTTE net.

Elkraft System : network operator which covers the Eastern part, linked to the Nordel net.

Principle = Negotiated third party access

The prices follow the postage stamp principle.

The agreement of 3 March 1999 implies, however, that regulated TPA will be introduced by law for transmission as well as for distribution. For transit of electricity, the principle of negotiated access will be maintained.

## ***Unbundling***

### **Management unbundling**

The operation of the transmission system in the Western part of Denmark has been separated from the production part, Elsam and is now organised in a separate legal entity named Eltra. The owners of the two entities remain however the same, the distribution companies in the area.

In the Eastern part of Denmark the transmission system has been separated from Elkraft into Elkraft System and it has its own management. However, it remains a part of the vertically integrated undertaking as they have the same board of directors and the same owners.

### **Unbundling of accounts**

The present legislation does not require integrated electricity undertakings to keep separate accounts.

Activities not related to electricity may only be carried out via independent companies organised as limited liability companies.

### ***Regulatory Authorities***

Electricity Price Committee (Elprisudvalget) : body responsible for dispute settlement concerning prices and other terms, also in the event of third party access.

### ***Public service obligations***

- security of supply
- consumer protection
- securing environmentally benign electricity production (a green certificate system will gradually be introduced)

### ***Developments***

In the current legislation, a zero profit principle has been imposed on the undertakings operating in the electricity sector. In the future generating companies will be allowed to earn a profit.

Introduction of a CO<sub>2</sub>-quotas for the electricity sector. The intention is to prepare a system of tradable emission quotas.

A levy on the use of the distribution network will be introduced. The levy will be differentiated between large industry, industry and households.

## FINLAND

### **State of legislation preparation**

Framework : Electricity Market Act of 17.3.95, which entered into force in June 1995.

### **Electricity generation, 1998**

	TWh
Combined heat and power	25.1
Nuclear power	21.0
Hydro power	14.6
Condensing power	6.5
Total production	67.2
Net import	9.3
<b>Total use</b>	<b>76.5</b>

Thermal energy fuels : Coal 27.3%, Natural gas 23.8%, Biomass and peat 43.8%, Oil 5.1%

### **Construction of new power plan**

Authorisation procedure, no specific criteria for energy generation.

### **Opening of the market - Time schedule**

1 June 1995

The Electricity Market Act enters into force

1 June 1995

The Electricity Market Authority is set up

1 November 1995

All users with a power demand exceeding 500 kW come within the scope of competition

16 August 1996

The Electricity Exchange EL-EX starts operation

1 January 1997

All electricity users are brought within the scope of competition.

1 September 1997

A national grid company, Finnish Power Grid plc (Fingrid plc), is set up

15 June 1998

The Nordic electricity exchange, Nord Pool, starts operation in Finland

1 September 1998

Small-scale users (with a main fuse over 3x63 A and a power demand of 45 kW), excluding leisure- time residences and agricultural users, are allowed to avail of competition without an obligation to use hourly metering

1 November 1998

All small-scale users are allowed to avail of competition without the obligation to use hourly metering

### **Remarks**

The Finnish market is integrated in the Nordic market via the merging of EL-EX with Nordpool.

### **Access to the network**

Regulated third party access

The transmission system is owned and operates by Fingrid.

The regional and the local distribution networks are owned and operated by the regional and local distributors (about 110 of them).

The non-distance postage stamp principle is applied for the use of both the transmission grid and the distribution grid. The prices are published. Cross-border tariffs to Sweden and Norway were abolished mostly in November 1998 and fully regarding sport trade in March 1999.

### **Unbundling**

#### **Management unbundling**

Fingrid Plc. Is organised as a separate legal entity, which is not involved in production or distribution activities. It may, however, purchase electricity to compensate for losses.

#### **Unbundling of accounts**

Unbundling of account is ensured.

### **Regulatory Authorities**

The electricity market is regulated by the Electricity Market Authority (Sähkömarkkinakeskus in Finnish or Elmarknadscentralen in Swedish). It monitors the implementation of the Electricity Market Act. It also act in case of disputes.

The Ministry of Trade and Industry is responsible for issuing licences for the construction of high voltage trans-border lines.

### **Public service obligation**

a net operator

- must maintain, operate and develop the network and the connection to other network in accordance with the reasonable needs of the customers;
- is obliged to connect consumption sites and generating installations against reasonable compensation;
- is obliged to apply a tariff system which do not depend on where in its area the customer is located geographically;
- must ensure that equal types of customers pay the same tariffs for the transport of electricity
- has the sole right to construct a distribution network within its area;

an electric retailer in a dominant position has an obligation to deliver electricity at reasonable prices to customers without any other economically opportunities to buy electricity vie the market.

### **Transitional regimes**

Finland has not applied for a transitional regime.

### **Further information:**

<http://www.sahkomarkkinakeskus.fi/> (The Electricity Market Authority)

<http://www.fingrid.fi/> (Finnish power grid)

<http://nordpool.no>

## FRANCE

### ***State of legislation preparation***

On 9 December 1998, the Government approved and presented to the Parliament a bill on the modernisation and development of the public electricity service. The bill was adopted on 2 March 1999.

### ***Electricity generation, 1998***

75% nuclear  
15% hydroelectric  
2% cogeneration  
2,2% renewable energy

### **Construction of new power plan**

Authorisation system supplemented by a tendering procedure when production capacities fail to meet the objectives of the multiannual investment programming (sets the objectives in terms of the distribution of production means by primary energy source and, where appropriate, by production technique and geographical zone).

### **Remarks**

Purchase of electricity produced from renewable energy sources or waste, or using highly energy-efficient techniques, is compulsory (under 12 MW) where it is not possible to sell the electricity produced in this way in reasonable economic conditions.

### ***Opening of the market - Time schedule***

Final consumers are eligible above a certain threshold set by decree (around 40 GWh per site) within the limits to the minimum degree of opening of the market set by the Directive (26% in 1999).

Also eligible are independent producers, authorised suppliers and non nationalised distributors, to ensure that supplies to their eligible customers are guaranteed.

The faculty for a producer to buy electricity to sell it at an eligible customers will be reduced to a percentage of its production.

### ***Access to the network***

Regulated network access with published tariff.

The construction of direct lines is subject to authorisation, the criteria for which are already laid down in existing legislation.

EDF and the non-nationalised distributors have been appointed as operators of the distribution networks for which they hold the franchise. The distribution network operates to a large extent take on the same responsibilities as the transmission network operator.

## ***Unbundling***

### **Management unbundling**

Within EDF, the department managing the transmission network is to be independent of the management of EDF's other activities. Its director is appointed for six years by the Minister of Energy, at the proposal of EDF's Chairman, after consulting the Regulation Commission. The department has its own budget, use of which is monitored by the Regulation Commission.

### **Unbundling of accounts**

The undertaking carrying out public service activities in the electricity sector keep separate accounts as stipulated in the Directive, under the supervision of the Regulation Commission and the Competition Board, in order to prevent discrimination, cross-subsidies and distortion of competition.

### ***Regulatory Authorities***

Government : drawing up and applying energy policy, defining public service responsibilities and ensuring that they are properly implemented,  
Electricity Regulation Commission : ensure that the user access to the public electricity network is fair and transparent, it has the power to impose penalties.

### ***Public service obligation***

Three major public service obligations :

- supply of electricity, including selecting the primary energy sources and production technique to safeguard supply, competitiveness and environmental protection; this is implemented via the multiannual programme;
- development and operation of the networks as a universal service;
- guarantee supply to all consumers throughout the country through geographical equalisation of tariffs and assistance for cases of hardship.

### ***Transitional regimes***

The new bill includes a transitional regimes the EDF's commitments in respect of purchase of electricity from small independent producers and the shutdown and decommissioning of Superphénix. These costs are to be financed from the Fund for expenditure in the public interest.

## GERMANY

### **State of legislation preparation**

#### Framework:

Gesetz zur Neureglung des Energiewirtschaftsrechts, entered into force on 29 April 1998.

### **Electricity generation, 1998**

30% nuclear  
30% lignite (13% East German lignite)  
25% coal  
15% Fuel/gas  
5% renewables

### **Construction of new power plan**

No energy specific authorisation or tendering procedure. The responsible approval authorities are mostly the Länder authorities.

Priority is given for renewable (guarantee purchase at a regulated minimum price)

### **Opening of the market - Time schedule**

Immediately 100% of the market

### **Access to the network**

Germany has no significant national pooling mechanism. On the highest network level the country is fully covered by 9 supra-regional transmission companies, which control also most of the generation in their area.

Every transmission and distribution system operator is responsible for the dispatching in its area. There is no nation-wide co-ordinated dispatch as there is no national pool or a national grid company, just a co-ordinating association of the 8 large TSOs, namely the Deutsche Verbundgesellschaft.

The standards systems of system access in Germany is negotiated TPA. The access conditions offered by network operators to third parties may not be less favourable than those actually or implicitly charged in comparable cases for services within their company or to affiliated or associated companies.

Until 2005, there is a temporary Single Buyer option for *Stadtwerke*.

Framework for the calculation of access or transmission fees has been agreed between the electricity industry and the consuming industry in the so called "Verbändevereinbarung". The price principles foresee a combination of postage stamps for the different voltage levels as well as a distance related element if high voltage lines over more than 100km are used.

Possibility for the distributors to apply the Single Buyer system with purchasing obligation according to Article 18(2) of the Directive during a transitional period until 2005. Distributors that wish to do so have to apply for the Single Buyer status. (condition : the system has to have the same economic results)

## ***Unbundling***

### **Management unbundling**

Management unbundling is required by the German energy law. The law does not change the ownership structure of the German electricity industry nor does it impose unbundling into different legal entities.

Most of the large TSO are vertically integrated.

### **Unbundling of accounts**

The separation of accounts is fully implemented in §9 of the German energy law.

## ***Regulatory Authorities***

The Minister of Economy is general authority in the context of the German energy law.

The Cartel authorities is responsible for dispute settlement concerning network access and for issues of competition law.

The authorities of the Länder are responsible for authorisations concerning new generation capacities.

## ***Public service obligations***

No specific or explicit provisions concerning public service obligations. However :

- general obligation for electricity supply undertakings to connect and supply final customers;
- possibility to refuse network access in order to protect production based on CHP and renewables;
- obligation for distributors to purchase electricity from renewable sources according to regulated feed in tariffs.

## ***Transitional regimes***

Germany has applied for a transitional regime with the objective of honouring the investment commitment of VEAG for the new construction and modernisation of lignite based power plants within the Neue Länder.

## ***Open issues – problems***

The German market has a high degree of fragmentation. As a consequence, until present there is no liquid spot market or power pool where eligible customers could purchase eventual short term electricity, e.g. for reserve capacity.

The combination of vertically integrated electricity companies with the system of negotiated TPA might lead to abuse of dominant position as incumbents endeavour to retain share.

## ***Developments***

- key issue : development of effective and transparent tariffs and access conditions.
- The creation of a German pool is under discussion, possible location are Frankfurt, Düsseldorf, Hannover and Leipzig.

## GREECE

### ***State of legislation preparation***

Greece has notified its intention to benefit from two years extra transposition period envisaged for Greece pursuant to article 27(2) of the Directive.

A preliminary draft law

### **Electricity generation**

#### **Construction of new power plan**

Authorisation system for the construction of new generations capacity in the mainland and in the interconnected islands.

### ***Opening of the market - Time schedule***

19 February 2001 :

with the exception of non-interconnected islands, following type of customers will be eligible :

- consumers of 100 GWh annual consumption on a consumption site basis including auto-production;
- other consumers, which will be qualified as eligible by a decision of the Regulatory Authority according to the conditions laid down by the Minister of Development, which will be published in the Official Journal of the Government and the Official Journal of the EC.

The eligible customers will represent the minimum market openings as defined in the Directive 96/92/EC.

The supply of electricity to eligible customers and concerning PPC to non-eligible customers will be permitted only to those who have been granted a supply license. The licence will be granted by the minister for Development in consultation with the Regulatory authority pursuant to the conditions provided in the Code for authorisations, under the following preconditions :

- the supplier must own sufficient production capacity established in a Member State of the EU;
- there is sufficient capacity of the transmission network for the transmission of electricity.

To the non-interconnected islands a supply license will be granted exclusively to PPC.

### ***Access to the network***

Negotiated third party access.

The transmission network will continue to be owned by PPC. Pursuant to a Presidential Decree, a new company will be established as the transmission system operator.

The TSO will draw up and publish every two years regular estimate of the generating and transmission capacity which is likely to be connected to the system, the need for interconnectors with other systems and the demand for electricity.

### ***Unbundling***

#### **Management unbundling**

PPC will remain a vertically integrated undertaking and it will continue to own the transmission system. The transmission system operator will be a separate company which will be responsible for the management of the system. The system operator has the

obligation to preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its business.

### **Unbundling of accounts**

Integrated electricity undertakings will be obliged to keep separate accounts for the production, transmission and distribution of electricity and for other activities pursuant to the preliminary draft law.

### **Regulatory Authorities**

An “Electricity Regulatory Authority” will be established. The Authority will have administrative and economic autonomy and will be supervised by the Minister of Development.

### **Public service obligation**

The Minister for Development can issue decisions on the imposition of public service obligations in the general economic interest, for ensuring security of supply, the protection of consumers, and environmental protection. Such obligations can be imposed on license holders. The decisions of the Minister will be published to the Official Journal of the Government.

### **Transitional regimes**

Greece has made a provisional notification on 18.02.98 for a transitional regime after 19.02.2001 pursuant to articles 24(1) and 24(2) of the Directive.

### **Open issues – problems**

The preliminary draft law is the object of consultations before it reaches its final form and will be adopted. The provisions of the draft seem in general compatible with the Directive, however, Greece needs to draft further legislation to include several still missing points.

## IRELAND

### ***State of legislation preparation***

Framework : Electricity Regulation Act published in December 1999

### ***Electricity generation, 1998***

97 % thermal (44% coal/peat, 29% natural gas, 24% oil)  
3 % hydro & other renewables

### **Construction of new power plan**

Authorisation procedure.

An appeal procedure is foreseen in the Act.

### ***Opening of the market - Time schedule***

Market opened on the 19 February 2000:

*For 'green' electricity*, the market is fully open - all consumers can choose their supplier if the supply is from a renewable electricity source.

*For fossil fuels*, eligible customers = consumption at any single premises in any 12 months period is estimated and calculated to be or likely to be > 4GWh. Market for fossil fuel generators to be fully open by 2005.

### ***Access to the network***

Regulated third party access, access to the networks is on the basis of regulated tariffs.

An independent operator operates the transmission system. The transmission system is owned by ESB, the existing electricity monopoly. The regional and local distribution networks are owned and operated by ESB.

When access to the transmission or distribution system is refused due to lack of capacity the Regulatory Authority may permit the person to whom such refusal is made to construct a direct line not connected to the transmission or distribution system.

### ***Unbundling***

#### **Management unbundling**

Independent transmission system operator will be organised as a separate state company.

#### **Unbundling of accounts**

Unbundling of accounts is ensured by the Commission for Electricity Regulation

### ***Regulatory Authorities***

Commission for Electricity Regulation [[www.cer.ie](http://www.cer.ie)]

### ***Public service obligation***

The minister may by order issue directions to the Regulatory Authority requiring the imposition of public service obligations related to the categories laid down in the Directive.

An order made by the minister, may require ESB to make such arrangements as will secure that, in a calendar year, there will be available to the Board an amount of electricity from generating installations which use as their primary source, peat sources within the state (not exceeding 15%) and generating installations which use as their primary fuel source renewables or alternative forms of energy as specified in the order.

## ITALY

### ***State of legislation preparation***

Legislative decree of 16 March 1999 : Gazzetta Ufficiale, nr. 75 of 31 March 1999

### ***Electricity generation***

Main actor : ENEL, vertically-integrated public company responsible also for import (14% of the domestic demand), transmission and distribution

### ***Construction of new power plan***

Normal procedures until specific regulations governing authorisations to build and operate new power plants

### ***Remarks***

ENEL shall cede 15.000 MW of its own generating capacity by 1 January 2003.

### ***Opening of the market - Time schedule***

Step 1 : from the beginning => market opening of 30%

- customers with minimum consumption of 30 GWh
- consortium and groups of customers located in the same municipality of at least 30 GWh (at least 2 GWh for each member of the consortium)

Step 2 : 1st January 2000 => market opening of 35%

- all final customers >20GWh
- consortium and groups of customers located in the same municipality of at least 20 GWh (at least 1 GWh for each member of the consortium)

Step 3 : 1st January 2002 => market opening of 40%

- final customers and consortium >9 GWh (at least 1 GWh for each member of the consortium)

### ***Access to the network***

Organised around a Single Buyer and a Market Operator, with a regulated Third Party Access for the eligible customers.

- Single Buyer : responsible of guaranteeing the supply of electricity to the captive customers, on the basis of supply contracts.
- Mandatory Pool system manage by a market operator responsible to apply the merit order for the dispatching of electricity. The pool shall enter by 1st January 2001, but the exact date of the establishment of this new structure will be fixed by the further provisions regulating its functioning.
- Eligible customers who do not want to participate to the pool system may sign a bilateral contract with an electricity producer. The tariffs for the connection to the transmission and distribution network has been fixed by the Autorità per l'Energia Elettrica e il Gas with "Deliberazione n.13/99" of 18 February 1999

Remark : the separation between transmission lines and distribution lines is made according to their function. Part of 150kV lines are included in the transmission network.

## ***Unbundling***

### **Management unbundling**

The Decree establishes that a new utility company (transmission system operator) be created to be owned by the Ministry of Treasury : activities of transmission, dispatching and management of the national transmission network, without discrimination between users. The ownership of the network will remain to ENEL

The different activities of ENEL (production, distribution, supply, ownership and maintenance of the network) will be re-allocated to separate companies, under the control of the ENEL S.p.A.

### **Unbundling of accounts**

will be defined by the Autorità per l'Energia Elettrica e il Gas immediately after the publication of the Decree on the Gazzetta Ufficiale.

### ***Regulatory Authorities***

Autorità per l'Energia Elettrica e il Gas: created in 1995, independent from the Government and from the industry, define tariffs system (access to the network, captive customers, renewable), responsible for establishing the conditions for the unbundling of accounts for electricity and gas undertakings.

### ***Public service obligations***

Electricity supply = public service

obligation in matter of managing of the network, of supply to captive customers and of environment (Operator which produce and import more than 100 GWh are obliged, from 2001, to feed into the network at least 2% of the electricity produced and imports on the basis of renewable plants built or re-powered after the entry into force of the Decree).

### ***Transitional regimes***

Italy has asked for a transitional regime on 16 October 1998.

### ***Developments***

The Decree establishes only the general framework of the future Italian electricity system. Specific measures are still to be taken by the Ministry, the Autorità per l'Energia Elettrica e il Gas and by the other new companies created (Transmission System Operator, Pool)



### **Unbundling of accounts**

The Regulator has access to the accounts of all the electricity companies for the performance of its functions.

### **Regulatory Authorities**

The Télécom (Luxembourg Telecommunication Institute) Regulator also acts as Regulator for the electricity sector

The Regulator's operating costs are paid for out the "electricity" tax. This tax on electricity consumption is charged to the final customers, including autoproduction, with the exception of consumers of over 100 million kWh. It is collected by the network operators at a rate of 6% on the net amounts paid to the suppliers.

### **Public service obligation**

- implementation of the regime applicable to electricity generation based on renewable energy sources or cogeneration;
- implementation of the energy conservation programmes or measures;
- charging of fair and equalised tariffs for captive customers;
- connection and supply obligation towards captive customers.

### **Transitional regimes**

Luxembourg has made an application to the Commission in respect of compensation for losses in connection with the exclusive supply contract with RWE, in anticipation of a potential change in suppliers of eligible customers.

## PORTUGAL

### ***State of legislation preparation***

Framework law : Decree Law nr. 182/95 of 27 July, modified by Decree Law nr. 56/97 of 14 March.

Production : Decree Law nr. 183/95 of 27 July, modified by Decree Law nr. 56/97 of 14 March.

Distribution : Decree Law nr. 184/95 of 27 July, modified by Decree Law nr. 56/97 of 14 March.

Transport : Decree Law nr. 185/95 of 27 July, modified by Decree Law nr. 56/97 of 14 March.

Regulations on the access to the network, commercial relations and tariffs: Attachments to "Diário da República" (The Portuguese O.J.) nr. 213/98 of 15 September.

Minimum annual consumption and 'prior notice period' : ERSE's Deliberation nr. 92-A/99 of 15 February.

Legislation only applicable in continental Portugal.

### ***Outline of the structure of the Portuguese electricity system***

The Portuguese electricity system is divided into two parts :

- SEP (Sistema Eléctrico de Serviço Público) : public system composed of producers and distributors subject to "grid dispatch" (bound).
- SEI (Sistema Eléctrico Independente) independent system (without the public service obligations) composed of SENV (non-bound producers linked to the SEP grids, they supply eligible customers) and independent power producers from renewable energy sources (hydropower plants with an installed capacity of <10 MW) and co-generation plants.

### ***Construction of new power plant***

- tendering procedure for the construction of new capacity within the SEP.
- in the SEI a procedure of authorisation applies, granted by the Directorate-General for Energy (DGE).

### ***Remarks***

Directorate-General for Energy (DGE) establishes expansion plans for the SEP every two years.

### ***Opening of the market - Time schedule***

Since 1995 :

Eligible : consumers with annual consumption >100 GWh and distributors for 8% of their consumption.

ERSE annually sets the percentage of eligibility for the distributors after hearing DGE.

Since 15 February 1999 :

Eligible : consumers with annual consumption > 9 GWh (fixed in 1999 by ERSE for the period 1999-2001) and distributors for 8% of their power needs and energy consumption.

The schedule for market opening takes into account the 'prior notice period' set in the legislation, which client have to give before they can become eligible customers.

### ***Access to the network***

Transmission:

The national transmission network consists of the high voltage network (>110kV), the interconnection network and the national dispatch installations. REN (Rede Electrica Nacional), part of the SEP, is the operator. Access to the network is on the basis of regulated tariffs to the producers in the SENV, eligible customers, distributors for their eligible part of the consumption. The tariffs are set by the regulator, ERSE.

Distribution :

Access to the network is on the basis of regulated tariffs, set by ERSE.

### ***Unbundling***

#### **Management unbundling**

The TSO, REN, is a separate undertaking, therefore, it is structurally unbundled of generation and distribution/supply and non-electricity activities.

#### **Unbundling of accounts**

Decree law nr.13/94 of 19 May established the split of EDP in production, transmission and distribution companies.

### ***Regulatory Authorities***

Entidade Reguladora do Sector Electrico (ERSE) (Decree Law nr. 44/97 of 20 February, President of the Board appointed (5 years) by the Council of Ministers, financial independence, the Minister of Economic Affairs cannot repeal its decisions) regulates SEP and relations between SEP and SENV.

Issues subject to regulation :

- setting of the tariffs.
- commercial relations between SEP and SENV.
- rules for the access to the SENV.
- quality of the service rendered.

### ***Public service obligations***

Formal notification of the public service obligations to the Commission has not been done. However, obligations of the same kind do exist :

- provisions concerning quality of service.
- obligation on REN to buy renewable electricity.
- distributors are obliged to supply consumers in their area.

### ***Transitional regimes***

Portugal have notified transitional regimes to the Commission in February 1998.

### ***Reciprocity***

The law contains a reciprocity clause.

### ***Developments***

Future framework for electricity trade between Portugal and Spain is being developed at ministerial level.

## SPAIN

### ***State of legislation preparation***

Electricity Act 54/1997 of November 1997 which entered into force on 1 January 1998.

Secondary legislation have already been adopted : Special regime 2818/1998 of December 1998 on electricity production based on renewable energy sources, wastes and cogeneration.

### ***Electricity generation***

In 1998, based on approximately :

52% thermal

34% nuclear

15% hydroelectric

All the main electricity generation companies are privately owned.

### **Construction of new power plants**

Authorisation procedure

### **Remarks**

The Spanish system distinguishes between the general and the special generation regime :

- General system : a pool based system is organised. All producers above 50 MW capacity are obliged to bind into the pool, except the quantity which they sell on the basis of bilateral contracts.
- Special regime : electricity generators with production of equal or less than 50MW, auto-producers using cogeneration or other forms of electricity generation associated with non-electricity operations and renewable energy producers are granted authorisation for electricity production under the so-called "special regime". "The installation authorised for this type of electricity production shall be given differentiated treatment according to their particular conditions, albeit without any type of discrimination or privileges between them" (Art. 28§1 of the Act). Thus, these generators are not obliged to submit bids to the pool. They benefit from a takeoff guarantee for their surplus electricity by the system.

### ***Opening of the market - Time schedule***

1 January 1998 : threshold for eligibility : 15 GWh/year consumption;

1 January 1999 : threshold for eligibility : 5 GWh/year consumption;

End 1999 : threshold for eligibility : 1 GWh/year consumption;

July 2000 : threshold for eligibility : 1 kV.

### ***Access to the network***

Regulated third party access.

The Act provides for the creation of two different legal entities:

- the Market Operator : responsible for the economic operation of the physical daily spot market, the financial futures market as well as the determination of the dispatch merit order.
- The System Operator : Red Eléctrica de Espana (REE) : responsible for the technical operation of the grid as well as for monitoring and co-ordinating production and

transmission, in particular for the short term intra-daily management of technical constraints and redispatch.

The access fees for transmission and distribution system are regulated. Secondary legislation provides for “postage stamp” flat rated, determined on the basis of voltage levels and use of the network.

The distribution systems are defined as the grid systems below 220 kV. Distribution is a regulated activity, and the supply of electricity is a totally liberalised activity. The distribution companies will be privatised.

## ***Unbundling***

### **Management unbundling**

The Electricity Act provides in article 14 for a complete legal separation of the entities which are engaged in the three regulated activities, system management, transmission, and distribution.

The complete separation of the companies must have been achieved by the end of the year 2000.

### **Unbundling of accounts**

All electricity companies are obliged to disclose to the Administration all information required and especially the relevant financial statements, which must be checked annually by means of the external audits.

## ***Regulatory Authorities***

Ministry of Industry and Energy

National Electric Regulatory Commission (Comision Nacional del Sistema Electrico – CNSE), independent body newly established by the Electricity Act. It exercises a broad range of function, such as making proposals for tariff structures.

Regional Departments of Industry and Energy : Responsible for Authorisation procedures of new power plants (cogeneration and hydropower plants under 50 MW, all solar, wind, biomass and other RES plants)

## ***Public service obligation***

Obligations pursuing objectives as security and quality of electricity supply, safeguarding of safety conditions, promotion of the universal service and protection of the environment through supporting renewables and CHP plants.

## ***Transitional regimes***

The Spanish Act provides in its 6<sup>th</sup> transitional disposition for a transitional regime referred to as “cost of transition to competition” (CTC)

The objective of the CTC regime is to provide over a maximum of 10 years a partial compensation to each electricity generating plant due to an expected decrease of the electricity price in the wholesale spot market.

## ***Open issues – problems***

The crossborder transactions are point of concern in particular in the context of the lack of sufficient physical interconnection capacity between Spain and France; moreover, due to the slower liberalisation schedule in France, Spain is concerned on reciprocity ground.

## SWEDEN

### ***State of legislation preparation***

Electricity market liberalised since 1 January 1996.

A new Electricity Trade Act, consolidating and adapting existing legislation in this area entered into force on 1 January 1998.

### ***Electricity generation***

300 electricity generating companies. 8 companies are producing more than 90% of the total Swedish production.

### ***Construction of new power plan***

Authorisation procedure. There are no directly related procedures.

In case of refusal the applicant can appeal the decision to the Supreme Administrative Court.

### ***Opening of the market - Time schedule***

The Swedish electricity market is in principle open for all customers.

Approximately 20% of the trade occurs through sales on the Nordpool Exchange.

### ***Access to the network***

Regulated third party access.

The system operator is obliged to connect all who wish to be connected. Access to the network can only be refused when there is lack of capacity. Once a customer is connected to the network he cannot be refused access.

Postage stamp principle is applied.

### ***Unbundling***

#### ***Management unbundling***

The Electricity Act stipulate that net operators (transmission and distribution networks) are not allowed to be involved in generation or trade of electricity.

The transmission system operator, Svenska Kraftnät, is a state agency and organised as a separate legal entity with own management.

#### ***Unbundling of accounts***

The separation of all net operation from generation and trade implies that the accounts are unbundled.

### ***Regulatory Authorities***

The Network Authority (nätmyndigheten vid Statens energimyndighet) which forms a part of the Swedish National Energy Administration is the general regulator of the electricity market. Its decisions can be appealed to the public administrative court.

### ***Public service obligation***

- Network tariffs (same ones for similar customers)
- All final customers, including industrial customers, must be connected to the national electricity system.
- Holders of the concession are obliged to supply electricity to all consumers in its area if the customers do not want to be supplied from third parties.

The holder is also obliged to purchase electricity from small electricity generating plants with an effect up to 1,5 MW at fair prices.

All concessions expire by the end of year 2000.

### ***Transitional regimes***

Sweden has not applied for transitional regimes.

### ***Developments***

A political decision has been taken to close down one nuclear reactor. Sweden is instead expected to increase the production from natural gas and renewable energy sources.

## THE NETHERLANDS

### ***State of legislation preparation***

#### Framework :

Dutch Electricity Act 1998 'Rules relating to the production, transport and supply of electricity'  
1st January 1999 : application of the point tariff system.

### ***Electricity generation***

Sep enjoyed a statutory monopoly over imports.

Nowadays everybody can import, as long as there is enough transmission capacity. This is handled by TenneT, the Dutch national Transmission System Operator. A large part of the import capacity is reserved to long-term contracts that stem from the Sep-period. That means that at the moment often there is not enough import capacity for all requests.

The role of the Sep in the current system is unclear. Probably it will disappear.

Electricity generation = free economic activity, not subject to specific regulation.

### **Construction of new power plan**

Normal procedures

### **Remarks**

There is no provision in the Dutch law for the notification to the Commission of any refusal to grant authorisation.

### ***Opening of the market - Time schedule***

#### 1st January 2000:

Eligible = customers with an available electrical capacity > 2MW per connection; customers of over 20 GWh

#### 1<sup>st</sup> January 2001

The green electricity market it intends to open

#### 1st January 2002:

Eligible = customers with a total maximum transmission value of more than 3.80 A

#### 1st January 2004:

Eligible = all electricity consumers

### ***Access to the network***

Distinction is between the national and the regional networks (not between transmission and distribution)

Access to network on basis of published tariffs- Regulated Third Party Access.

The transmission tariff is a non-distance related 'postage stamp' tariff - a point tariff. The tariffs are set by the Director of the Dienst Toezicht en Uitvoering Elektriciteitswet (DTE - the regulator)

The tariff depends on the voltage level the electricity is supplied to and consumed at. It is fairly complicated but the principle is the lower the feed-in/consumption voltage, the higher the tariff. This is according to the 'cascade' – philosophy, i.e. that lower levels will need higher voltage levels in case of emergencies, but not the other way around.

## ***Unbundling***

### **Management unbundling**

Complete legal separation of the activities of the managers of the network and of producers/suppliers.

TenneT = Transmission System Operator responsible for the national high-voltage network of > 220kV.

### **Unbundling of accounts**

guaranteed by the fact that the network managers are separate legal entities with an obligation to publish their accounts.

Remark : there are no provisions concerning unbundling of accounts of production, distribution, supply and non-electricity activities in the Dutch legislation.

Note: Since the electricity act of 1989 supply and generation have been separated from each other. There are currently 4 production companies and 15 or so supply companies (5 of which have more than 90% of the market). Of these 4 production companies, 3 have been bought by foreign companies (Reliant (US) PreussenElektra and Electrabel).

### ***Regulatory Authorities***

Dienst Toezicht en Uitvoering Electriciteitswet - DTE

DTE operates as a chamber of the Dutch Competition Authority (Nma), under the authority however, of the minister of economic Affairs.

### ***Public service obligation***

The concept of 'public service obligations' as such does not exist in the Electricity Act. However, there are duties and obligations contained in this Act concerning the managing of the network (safety, reliability and efficiency are required), the supply of captive customers and the environment (The Act provides the possibility of introducing a green certificate scheme with purchase obligation of a percentage of green electricity for consumers).

### ***Transitional regimes***

The Dutch authorities have applied for a transitional regime.

The propose measures relate to stranded costs in the production sector.

### ***Reciprocity***

The minister has to agree on imports to consumers under 20 GWh.

### ***Developments***

The Electricity Pool, Amsterdam Power Exchange (APX) is operational since May 1999. Trade are in MW capacity in every hour.

Foreign producers, consumers, traders and suppliers are allowed to buy and sell, but the reciprocity clause is applied to consumers under 20 GWh.

## THE UNITED KINGDOM

### ***State of legislation preparation***

The UK consists mainly of 3 separate and different organised electricity markets :

- 1) England and Wales
- 2) Scotland
- 3) Northern Ireland : no physical connection to Great Britain and a not yet achieved market opening.

The electricity market system of England, Wales and Scotland was created by the entry into force of the Electricity Act in 1990.

The implementation of at least the minimum requirement of the Electricity Directive in Northern Ireland was expected in 1999.

### ***Electricity generation***

- 1) England and Wales : 71% thermal; 27% nuclear; 2% renewable.

### **Construction of new power plan**

- 1) England and Wales : subject to an authorisation procedure with the Department of Trade and Industry as the competent body for a plant >50 MW, and the local planning authorities for plan of <50MW.

### **Remarks**

- 1) England and Wales : Any generator dispatching more than 10MW into the system is obliged to trade electricity solely via the Pool. The pool is a price-setting mechanism which establishes an economic merit order of offers of generation and it is used, in order of determine which generating plant is dispatched. The offers to generate are received one day in advance and the prices are set on a half-hourly basis. Scottish producers as well as Electricité de France are also bidding into the Pool via interconnectors.

Certain producers using renewable sources benefit from a regime called Non Fossil Fuel Obligation. Distributors are obliged to purchase electricity from renewable based producers which succeeded in obtaining a contract within a tendering system. The surplus price of this electricity in relation to the pool price is refunded to the distributors. A Fossil-Fuel-Levy on electricity consumption is designed to recover this refund payments.

### ***Opening of the market - Time schedule***

June 1999 : 100% liberalised market in England, Wales and Scotland.

### ***Access to the network***

- 1) England and Wales : regulated TPA system based on a common price setting mechanism (pool) since 1990;

The pool is an agreement among its participants concerning the bidding rules, market clearance and settlement. The transmission system operator is the National Grid Company (NGC), in 1990 initially owned by 12 Regional Electricity Companies and now floating on the stock exchange.

The NGC is technically responsible for electricity dispatching. It is also the owner and the manager of the high voltage network in England and Wales.

Transmission and distribution tariffs are regulated by OFFER (Office of Electricity Regulation) and published.

2) Scotland : regulated TPA covered by two fully vertically integrated electricity companies that also supply to the pool of England and Wales via one interconnector. The licence granted to the two vertically integrated companies give them the rights of generation, transmission, distribution and supply of electricity. Competition in supply is made possible through TPA to the transmission and distribution network on a non-discriminatory basis. Use-of-the-system charges are regulated by OFFER and published annually while the companies are obliged to charge their own separate supply business and third parties accessing the grid at the same prices.

3) Northern Ireland : no physical connection to Great Britain and a not yet achieved market opening

## ***Unbundling***

### **Management unbundling**

1) England and Wales : the system is unbundled not only in management terms but also into separate legal entities.

The NGC is an entirely separate and privately owned legal entity, which operates exclusively in the area of transmission and dispatching.

2) Scotland : there are two vertically integrated companies which have to ensure only proper management unbundling.

3) Northern Ireland : generation has been organised in 4 main generation companies which have been privatised; Transmission, distribution and supply are carried out by the Northern Ireland Electricity, a public company.

### **Unbundling of accounts**

Unbundling of accounts is for the most part implemented.

## ***Regulatory Authorities***

Office of Electricity Regulation (OFFER) : main regulatory authority for England, Wales and Scotland; in particular responsible for all price regulation.

Monopolies and Mergers Commission (MMC)

Office of Fair Trading (OFT)

The Director General of Electricity : mostly competent for the issuing and monitoring of licences.

The Department of Trade and Industry (DTI) : responsible Ministry with overall supervisory and executive functions.

## ***Public service obligation***

Public service obligations (PSO) appear mostly in the supply and also on distribution licences. They reach following sectors : Universal service and obligation to supply; pricing; customers service; environmental protection.

## ***Transitional regimes***

The UK notified a transitional regime limited to Northern Ireland in relation to power purchase agreements concluded after restructuring and privatisation in April 1992 between Northern Ireland Electricity plc (NIE, the exclusive transmission and distribution system operator as well as the main supplier) and 4 electricity generating companies.

## ***Developments***

The amendment of the Pool Agreement : the introduction of demand side elements into the bidding mechanism is considered. Central dispatching and the obligation to sell to the pool are in question. The possibility of concluding bilateral electricity contracts is being examined.