

# UNBUNDLING VS VERTICAL INTEGRATION IN THE ELECTRICITY SECTOR

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presented at the NARUC/ERRA Training in Public Utility  
Regulation and Tariff Development

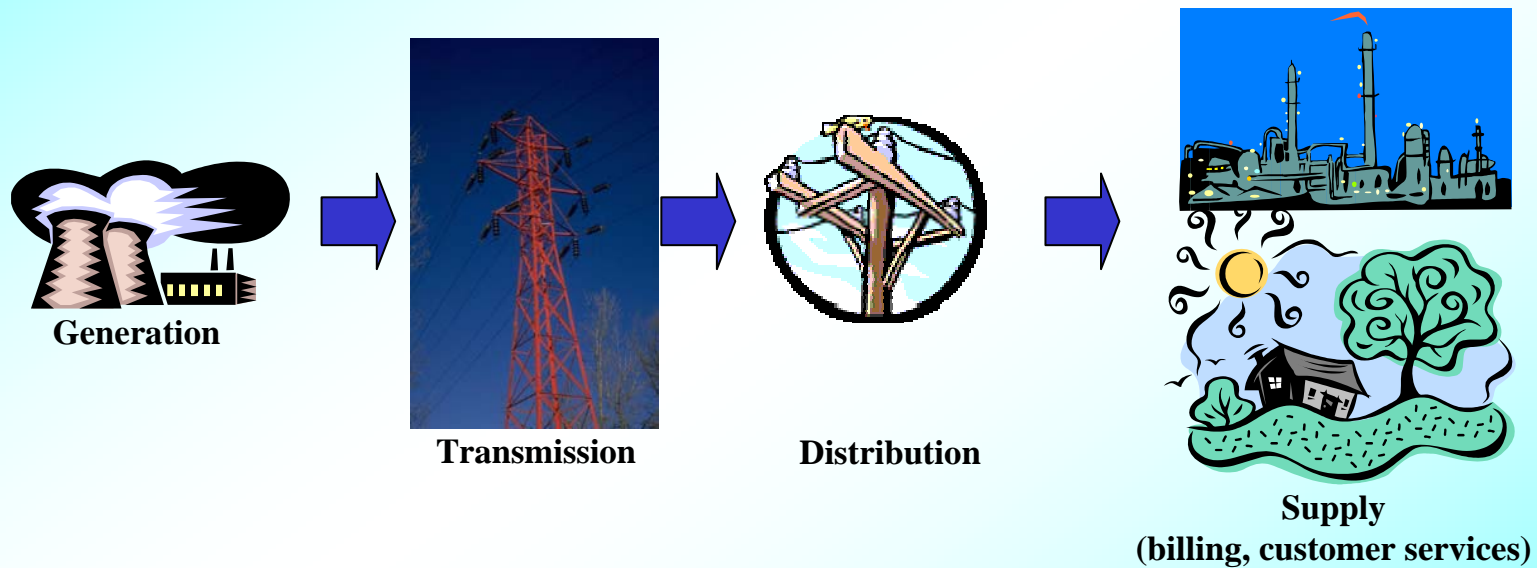
November 5-8, 2007, Pristina, UNMIK/Kosovo

# Overview

- Unbundle: why and how?
- Cross-subsidies and ways to avoid them
- EU third package
- Eurelectric's proposal

**Why and how?**

# The power industry: from plant to wall socket



# Vertically integrated utility model

- Central dispatch of generation
- IPPs cannot enter the market
- Costs are recovered at utility level and revenue is distributed
- Centrally planned investments
- Risk of investments are passed through to consumers
- Regulator is the Ministry
- Public ownership

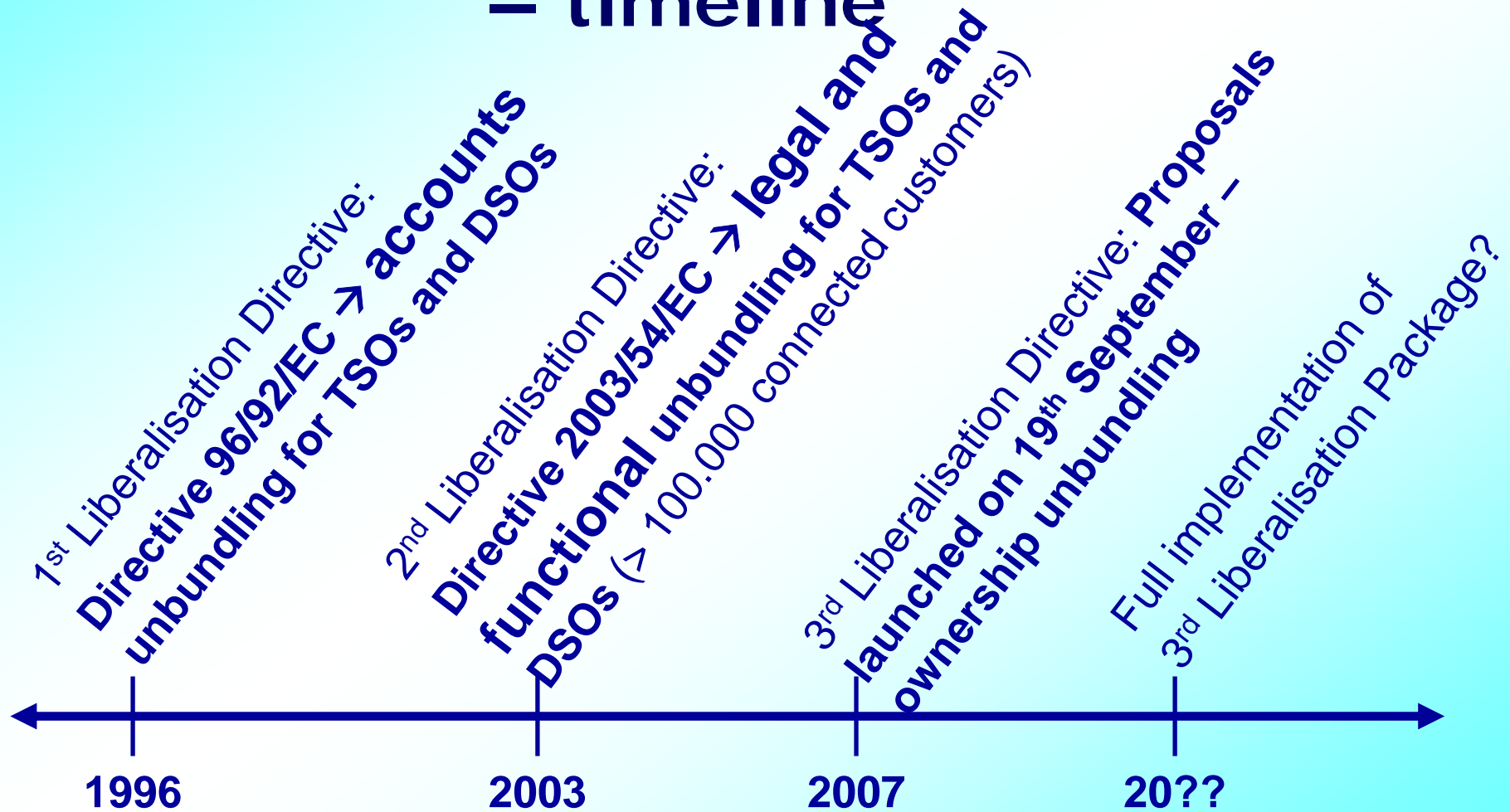
# Why to change it?

- Political will (liberal economy ideology) in Great Britain (M. Thatcher), Australia, Chile, Norway, EU, etc.
- Global competition challenge for manufacturing industries
- Significant price differences in Europe
- New technologies (CCGT)

# Why to unbundle?

- The main idea that underlines the new world of competition and choice in electricity is that it is possible and desirable to separate the transportation from the goods transported
- Electric energy as a **product** can be separated commercially from transmission/distribution as a **service**
- Electricity bill to be split into an electricity (commodity) and system (transportation) charges

# Legal requirements on unbundling – timeline



# Functional unbundling

- **Objective:** To ensure the independence of the TSO or DSO functions within a vertically integrated utility\*
- Transmission and distribution must be independent in terms of organization and decision-making from other activities not related to the networks

\*'Vertically Integrated Utility': A utility or a group of utilities performing at least one of the functions of transmission or distribution and at least one of the functions of generation/production or supply

# The following minimum criteria apply:

- Those responsible for the management of the TSO/ DSO may not participate in company structures of the integrated undertaking responsible directly or indirectly for the day to day operation of the other interests.
- Appropriate measures must be taken to ensure that the management of the TSO/ DSO is capable of acting independently.
- The TSO/ DSO shall have effective decision-making rights, independent from the VIU, with respect to assets necessary to operate, maintain or develop the network.
- The TSO/ DSO shall establish a compliance programme with measures to ensure that a discriminatory conduct is excluded and to ensure its respect is adequately monitored.

# Legal unbundling

- **Objective:** To make a distinction between the performance of TSO and DSO functions as separated from other activities not related to transmission and distribution
- In principle, legal unbundling means that transmission and distribution are to be done by a *separate “network” company*

# Ownership unbundling

- **Objective:** To separate the TSO and DSO functions from other activities not related to transmission or distribution by transferring the ownership of the networks to a different entity
- Transmission and distribution networks are operated under different ownership than generation/production and supply

# **Cross-subsidies and how to remove them**

# Cross-subsidization

In general, cross-subsidization has the shape of transferring revenues earned from regulated services to unregulated services.

- The objective is to make the unregulated service more competitive...
- ... as the costs may be recovered from the regulated services (whose prices are based on accounting instead of competitiveness)

# Undesirable effects of cross-subsidies

- After the introduction of competition, cross-subsidies may continue to exist
  - Some may be beneficial, e.g. when they are in line with social policies and abuse is limited.
  - However, some may be detrimental, e.g. when these originate from a company's strategy to benefit from its market position.
- Such is especially the case when competitive (unregulated) business is subsidized from regulated activities.

# Therefore

**Competition functions and monopoly functions should be organized in separate companies (corporate unbundling) in order to avoid cross-subsidization and distortion of competition**

# Policy approaches (1)

- The strongest possible approach would be to prohibit the transmission utility from participating in generation business and distribution utility from participating in the unregulated retail market
  - This would remove the opportunity to engage in the kind of cross-subsidization and discrimination discussed above.
  - But this prohibition also would prevent the realization of any economies of scope that otherwise might exist.

## Policy approaches (2)

- Another possible, but softer approach would be to allow transmission companies to take part in generation business and distribution companies to participate in the retail electricity market, but only through requiring separate operations of the utility and its unregulated affiliate(s)
- Such separation can entail requirements that the utility not share employees or assets with its affiliate, and may even require financial and management separation

# Comparison of different unbundling methods

Type of separation	Description	Possible cross-subsidies	How to avoid
Accounting	Separate accounts	Yes	Very strong regulatory oversight
Functional/ management	Different divisions with different management	Yes	-”-
Legal	Legally separate bodies owned by the same company	Yes	Strong regulatory oversight
Ownership	Separate ownership of companies	eliminated	avoided

# Problems of improper unbundling

- TSO/DSO bundled with generation
  - Incentive to restrict available transmission capacity for independent players at borders to prevent from import competition
  - Incentive to cross-finance generation
- TSO/DSO bundled with trader
  - Incentive to provide a trader with superior information about customer related data
  - Incentive to cross-finance predatory practices of a trader

# EU third package

# Unbundling proposals published by the European Commission

- 3<sup>rd</sup> liberalisation package
  - **Launched 19 September 2007**
- For TSOs
  - **Ownership unbundling OR**
  - **Independent System Operator (“Deep ISO+”)**
- For DSOs
  - **Existing unbundling framework remains almost unchanged**

# Why ownership unbundling?

- TSO may treat its affiliated companies better than competing third parties
- Integrated companies may use network assets to make entry more difficult for competitors
- Non-discriminatory access to information cannot be guaranteed as there are no effective measures of preventing TSO releasing market sensitive information to its generation and supply affiliates
- Investment incentives within an integrated company are distorted

# Pros and cons of TSO ownership unbundling

- Pros
  - Clear cut solution
  - Full independence of network and competitive business
- Cons
  - Does not necessary solve the current regional market problems, i.e. further market integration, more investments
  - Would take too long, long legal battles might follow
  - alternative proposal – ISO has its weaknesses also

# Transmission vs. distribution

- Common goal of unbundling:
  - Non-discriminatory access to networks
  - No cross-subsidisation between regulated and non-regulated business

## **BUT**

- Different treatment re. ownership unbundling because
  - Ownership unbundling for DSOs is much too far reaching financially. Difficult to find competent investors
  - DSOs provide lesser risk of discriminatory behaviour
  - Investment decisions are made purely to serve the customer and not driven by political interests

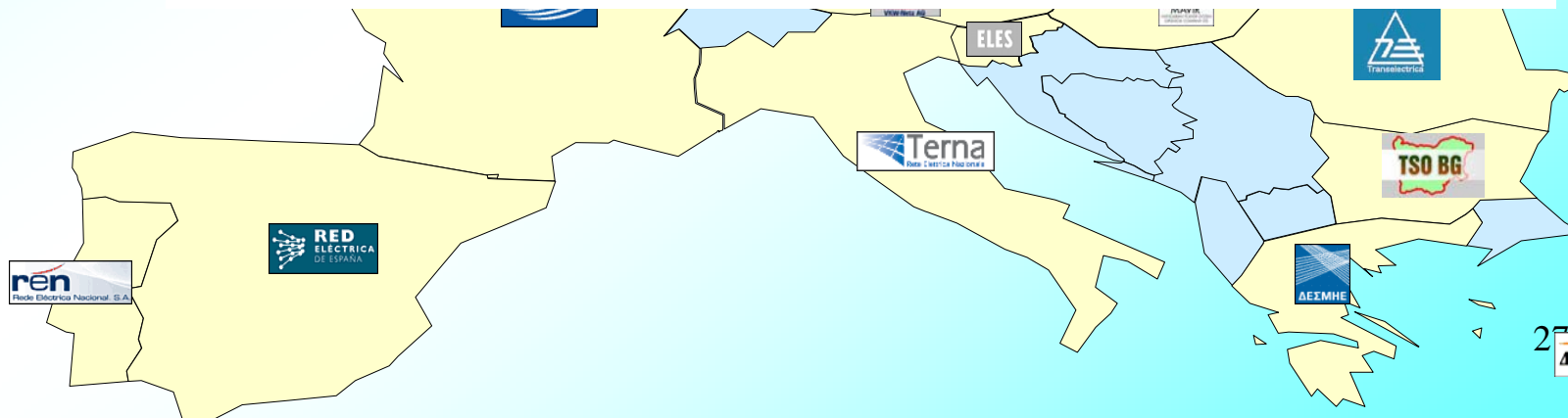
# **Eurelectric's proposal**

# Overview of TSOs in the EU



**EU requirements on TSO unbundling fully implemented in all Member States**

**Approximately half of the TSOs are ownership unbundled, other half have legal and functional unbundling**



# Independent System Operators

- EC proposes ISOs as alternative (second best) to the TSO ownership unbundling (“Deep ISO+”)
  - ISO in charge also for maintenance and network investment
  - Asset owner reduced to mere capital ownership
- ISOs are currently already in place in the US with varied success
- There are some doubts if ISOs on national level will help to market integration and not delay the process

# Regional Independent Operator – Eurelectric's proposal

- Electricity industry discussion proposal: **Go regional!**
- Establishment of Regional ISOs (= RIO) covering several Member States/ control areas
- Integration of TSO functions into a regional entity
- RIO will guarantee fair and non-discriminatory access to the networks, and at the same time is conducive to market integration
- RIO would provide regional viewpoint also for investment planning

# Role of TSOs

- Provide non-discriminatory and fair access to the transmission network
- Facilitate market development and market integration
  - Seamless cooperation of TSOs or integration of tasks in a regional entity (*“Regional Independent Operator”*)
- Develop the transmission network from a regional and ultimately European viewpoint
  - Investment decision to be taken for a “regional grid”
- Provide security of energy supply

# Conclusions

- Ownership unbundling is the best way to have competitive electricity market, avoid cross-subsidies and other distortions
- But some large countries and many companies are against it, so independent system operator is proposed by the European Commission as the second best
- Union of the electricity industry *Eurelectric* proposes the third option – regional independent system operator

**Thank you for your attention**