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Insights into Energy Market Unbundling in Great Britain, Germany and the Netherlands

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(presented in Amsterdam on 9 May at 2-day IIR conference “Energie Marketing & Sales 2007”)

Comparative Analysis of the Unbundling Processes in the Electricity and Gas Industries of Great Britain, Germany and the Netherlands – European, Constitutional and Public Law Aspects

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OWNERSHIP UNBUNDLING OF ENERGY COMPANIES – WILL IT BE WORTH IT?

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Central research questions

1. **Will the benefits of further (ownership) unbundling measures outweigh the cost?**

2. **Which measures of further (ownership) unbundling work and which not?**

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Selection of key questions (I)

- **Social cost benefit analysis (one weakness in NL)**
- **Relationship unbundling and investment**
- **Incentives and coordination of unbundled players**
- **Corporate governance of ISOs (network investment!)**

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Selection of key questions (II)

- **Corporate law: management conflicts**
- **Public and constitutional law aspects of unbundling**
- **Complex technical systems, coordination problems within energy supply chain**

- **European background of debate**
- **Current state of energy network unbundling in Great Britain (GB)**
- **Current state of electricity network unbundling in Germany (GER)**
- **Current state of energy network unbundling in the Netherlands (NL)**
- **Renewed discussion about splitsing in NL and the New Zealand experience**
- **Indicative comments on future developments**

European Commission's aims

Full ownership unbundling of TSOs, which would both own and operate the transmission network assets: „They would be independently owned i.e. supply/generation companies could no longer hold a significant stake in the TSOs."

Otherwise:

Separating system operation from network ownership: „Supply/generation companies could no longer hold a significant stake in the independent system operator (ISO)" but „the transmission assets themselves could remain within a vertically integrated group."

National (Regional) System Operator

(**without** network ownership)

Shareholders

(private (Scotland), public (Netherlands))

Holding

(**network owner**)

Generation

Supply

Network operator

NationalGrid

(listed – owner in E & W)

TenneT

(state-owned – owns large parts of networks ≥ 110 kV)

ISOs/RTOs (U.S.)

- (non-) profit
- independent or network owners as minority shareholders (*club ownership*)
- regulator controls or also „on board“

Energy Network Unbundling in GB (I)

- **The Pioneer**
- **British Gas privatized vertically integrated**
- **Thereafter, electricity sector unbundled before privatization (into generation, transmission, and distribution & supply)**
- **Competition Commission’s pressure and tight regulation let British Gas to split voluntarily into upstream BG and downstream Centrica**

Energy Network Unbundling in GB (II)

- (Eventually) gas transmission & most of distribution in GB, and electricity transmission in England & Wales owned privately by NationalGrid (listed at LSE)
- Electricity transmission in Scotland owned by two vertically integrated energy suppliers but operated by NationalGrid under BETTA
- (Specific) licences required for all stages of energy supply individualizing all obligations prescribed by law

Electricity Network Unbundling in GER (I)

- **The laggard**
- **4 TSOs owning and operating the electricity transmission networks (share ownership dispersed but RWE, E.On & EnBW substantially owned by provinces/municipalities)**
- **Several 100s of regional and local DSOs (> 850 for electricity and > 780 for gas), usually vertically integrated**

Electricity Network Unbundling in GER (II)

- **DSOs often owned and operated in combination by municipalities (*Stadtwerke* / *de minimis* exception from current (legal/operational) unbundling require-ments)**
- **(Institutional) guarantee (constitutional protection) of local self-government according to Art. 28 *Grund-gesetz***

Energy Network Unbundling in NL (I)

- The Eager
- 4 vertically integrated energy suppliers (owning and operating the energy distribution networks), owned by provincies/municipalities
- TenneT (state-owned TSO) operates and partly owns electricity transmission
- Gas Unie/GTS (state-owned) owns and operates gas transmission

Energy Network Unbundling in NL (II)

- ***Splitsingswet*: besides New Zealand furthest reaching unbundling of distribution network ownership from vertically integrated energy supply**

- **Operation of distribution grids & pipes legally un-bundled, economic “ownership“ must be shifted to such unbundled entities**

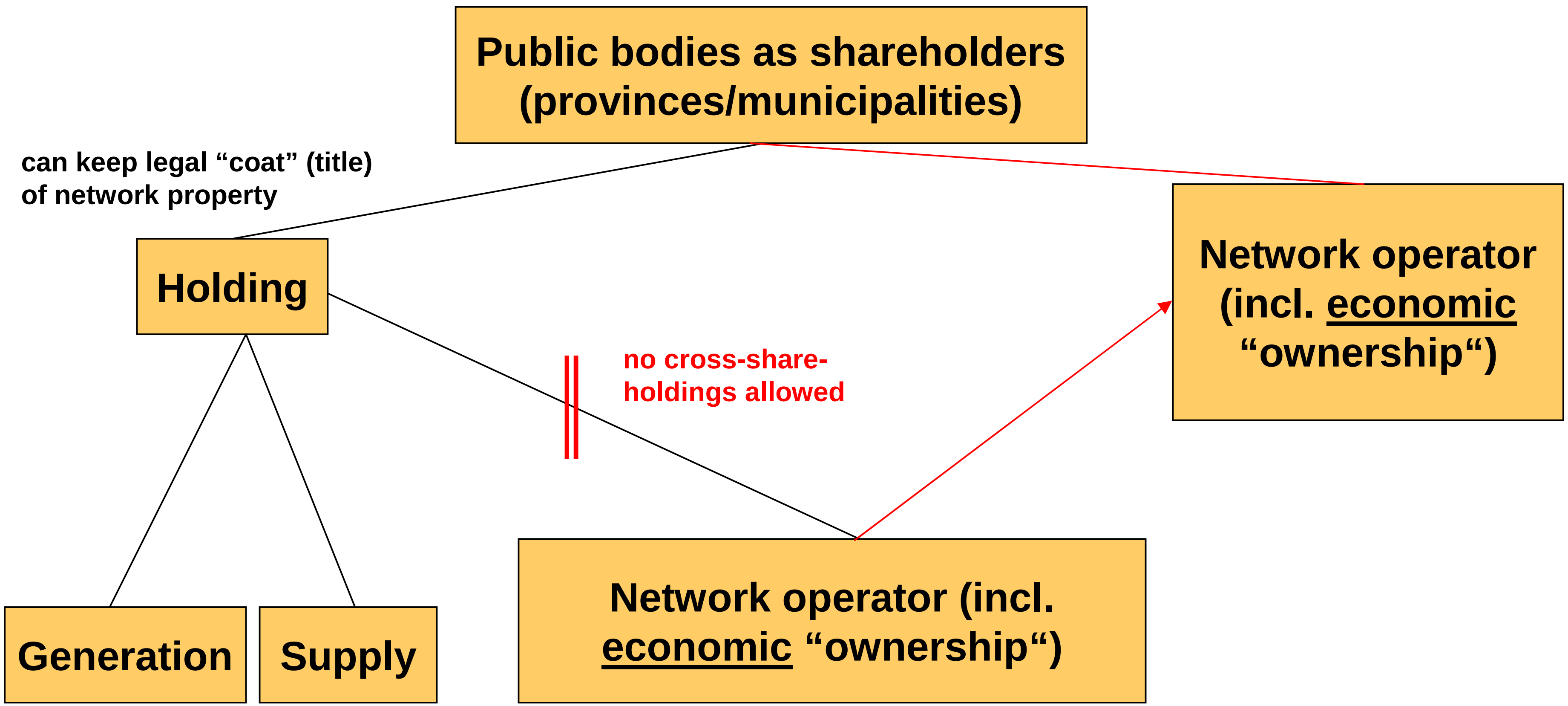
- **Pecularity: owners = public bodies (provinces/munici-palities (<u>no</u> (institutional) protection of local self-go-vernment comparable to GER‘s Art. 28 *Grundgesetz*)** à **“economisch eigendom”:**

entitlement based on a legal relationship to all rights and competences with respect to a good, with the exception of the right to deliver, and the responsibility for all obligations with respect to that good including the assumption of the full risk of change in value or total loss of the good, with-out the good having been delivered.

à **“ownership” unbundling:**

expropriation of networks (also forced sale) OR regulation of networks (use – control – disposal)

NL: *splitsing* (current & discussed)



Energy Network Unbundling in NL (III)

Splitsingswet in force but actual economic "ownership" unbundling not put into effect until

- **European legislation prescribes similar measures**
- **public & independent network operation in danger, e.g. if consequence of Dutch energy undertakings pursuing commercial activities abroad or entering into cross-border alliances**
- **market conditions become unbalanced OR financial conduct is intransparent and discriminatory OR lack of equal network access occurs (i.e. when one indivi-dual undertaking abuses its dominant position)**

Energy Network Unbundling in NL (IV)

- **Delta takes over Belgian waste disposal company: public & independent network operation endangered (through, e.g. intransparent financial conduct)?**
  - à **legal unbundling the cure?**
- **Nuon/Essent merger to forge international alliance (or “to decorate the bride“)?**
  - à **(planned) investment abroad risk for public & independent network operation?**

à **power struggle because of “hurt feelings“?**

à **politicians capable of playing entrepreneur?**

Energy Network Unbundling in NL (New Zealand I)

- Originally rather light-handed regulation leaving it to industry to self-regulate
- Compulsory distribution network separation by April 1999
- Unbundling requirements loosened since 2001 (to allow network companies to own some commercial generation)
- Current concerns about adequate investment and competition in generation

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Energy Network Unbundling in NL (New Zealand II)

- **Nillesen & Pollitt (2006) found inter alia that**
  - **substantial one-off transaction costs**
  - **structural cost reductions do not outweigh these costs**
  - **prices are above pre-unbundling levels (although largely hydro-based and thus normally stabile, prices increased between 1998 and 2004 by 1,1% p.a.)**
  - **market concentration: no independent retailer left in market (large generators & regional energy companies acquired smaller retailers à by Sept. 1999 ten retailers with over 97% market share and 6 major vertically integrated generation/retail combinations with approx. 50% market share)**
- **Earlier introduction of sector-specific regulator might have let to more positive results**

  à BUT: since regulation of networks necessary in any event natural monopoly!) why pursuing ownership unbundling without having fully explored its long-term dynamic effects?

Future of Dutch energy supply undertakings?

- **In NL:** growth obviously limited (see DTe reservations with regard to Essent/Nuon merger)
- **In EU:** see size of other European (in particular German & French) players (E.ON Ruhrgas (GER), E.ON & Powergen (GB), E.ON/ENI & Endesa (Spain), RWE & Npower (GB), EDF & EnBW (GER), EDF & EDF Energy (GB), GdF & Suez (France/Belgium), Iberdrola & ScottishPower (Scotland)) and those knocking at the door (Gazprom & Centrica)
- **(added during presentation):** Dutch energy companies might be able to grow by picking up assets divested in course of complying with merger/take-over remedies imposed by competition authorities

"One Size Fits All": model for internal energy market?

- **One thing in common (more or less): legal unbundling**
- **Comparing differences in network ownership structure (private/listed or public) and how this came about (historic dimension), number of players in national markets and state of unbundling, one should be careful with lumping everything together**
- **Special problem GER: hundreds of local/regional energy suppliers & Art. 28 *Grundgesetz* (apart obviously from (fundamental) property rights issues)**

“One Size Fits All”? (II)

- **Legal (ownership) unbundling has led to accelerated vertical concentration process in generation/supply (see in particular UK and NZ)**
- **Regional TSO (e.g. North-Western European market incl. UK) interesting but national TSO in UK private, in NL public and no national TSO in GER (4 private TSOs)**
- **Even though suppliers without networks are impatient and rightly so, in order to structure market adequately alternatives must be assessed thoroughly first (UNECOM!)**
- **Deadlines based on Lisbon Agenda & short-term political desires no adequate cure for restructuring sector of such strategic importance**

Thank you for your attention!

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