Consolidation in Electricity Markets in CEE: The Case of Hungary

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Gas and Power in Central & Eastern Europe Conference

Plan of the Talk

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London Economics

- Economic consultancy
- Regulation and competition policy issues
- Microeconomic approach and econometric analysis
- Communication, energy, finance and other regulated sectors

London Economics Study

- London Economics Study on the "Structure and Performance of Six European Wholesale Electricity Markets in 2003, 2004 & 2005" (with Global Energy Decisions)

  - A very detailed analysis of six European wholesale electricity markets, supporting two main results of the Energy Sector Inquiry:
    - high market concentration in national generation/wholesale markets
    - prices on spot and forward wholesale markets may not result from fair competition

  - Examines:
    - traditional structural measures of market concentration: concentration ratio, HH-index
    - electricity-specific measures of market structure: residual supply index (RSI) and pivotal supplier index (PSI)
    - market outcome measures: Lerner indices, Price-cost mark-ups
    - link between market structure and outcomes: regressing outcome measures on RSI

  - Scale of the study
    - hourly data for almost every generation unit of six countries over three years
    - 500 million data points, 75GB of input and output data

European Regulatory Framework

❑ Second Electricity Directive: 2003/54/EC

- Unbundling:
  - **legal unbundling:** distribution and transmission systems shall be operated by legally separate entities where vertically integrated undertakings exist
  - **functional unbundling:** network business and market activities of a vertically integrated energy company must be independent in terms of its organisation and decision making
  - **accounting unbundling:** separate accounts of transmission and distribution activities

- Third Party Access (TPA):
  - **regulated TPA (rTPA):** eligible customers can require access to the relevant facilities on the basis of approved published tariffs

- Liberalisation (trading):
  - 1 July 2004: all non-households free to choose their supplier
  - 1 July 2007: entire market opened up

European Regulatory Framework

❑Energy Sector Inquiry (10 January 2007)

- high market concentration (mainly in wholesale and generation markets)
- vertical integration of generation, supply and network activities in many national markets
- low level of cross-border trade, partly due to insufficient cross-border inter-connection capacity
- lack of, or delayed, investment by transmission companies with vertically integrated supply companies
- lack of transparency: little or no timely information on the markets (partly due to narrowly interpreted confidentiality rules)
- distrust in price formation mechanisms: opaque and ineffective price formation mechanisms

The Hungarian Electricity Market

- Market players:
  - Power plant owners: MVM, Electrabel, AES, ATEL, RWE, EdF, E-ON
  - Transmission system operator (TSO): MAVIR
  - Wholesaler: MVM
  - Distributors (DSO): six suppliers with exclusive rights in a given region
  - Traders
  - Customers:

    - eligible customers: entitled to go directly to the grid

    - public utility customers: those who can buy in the public utility market only

The Hungarian Electricity Market

- Regulators
  - Hungarian Energy Office: licensing, complaints, preparation of administrative prices and price regulation
  - Ministry of Economy and Transport: actual price regulation

- Capacity:
  - Installed generation capacity: 8.3GW
  - Net transfer capacity (NTC): 1.8GW (22%)

The Hungarian Electricity Market

❑ Regulation – Electricity Act (Act CX. of 2001)

- Amended in 2005 in order to comply with the Second Electricity Directive

- Two-market hybrid model: liberalised and public utility market

  - non-household electricity consumers (eligible consumers) can choose to cover their electricity needs on a liberalised market or in the public utility market
  - all the other customers (non-eligible consumers) can buy their electricity at regulated prices on the public utility market only
  - eligible consumers are allowed to switch between liberalised and public utility market segment (different from "dual market" model where they cannot)

The Hungarian Electricity Market

❑ Regulation – Electricity Act cont'd

- Trading contracts

  - long-term power purchase agreements (PPA): long-term (20-25 years) contracts concluded by MVM (the wholesaler) with the operators of the most significant power plants that were privatised in 1996/97

  - a power plant may sell on the liberalised market electricity generated in excess of electricity already committed to long-term PPAs

The Hungarian Electricity Market

❑ Regulation – Electricity Act cont'd

- Unbundling

  - legal unbundling has to be effected by 1 January 2007

  - MAVIR (the TSO) was legally separated by MVM (wholesaler) in 2002

  - MAVIR (the TSO) was integrated back into MVM (wholesaler) in 2006

The Hungarian Electricity Market

❑ Regulation – Electricity Act cont'd

- Third party access (TPA)
  - market participants can access the transmission/distribution system on equal terms without jeopardising the safety and quality of electricity supply
  - the TSO may refuse access under special circumstances

The Hungarian Electricity Market

❑ Regulation – Electricity Act cont'd

- Cross-border trade
  - cross-border transmission of electricity is subject to prior license by HEO
  - any cross-border trade must be notified to the system operator who can block any such transmission to prevent direct interferences with the operation of the electricity
  - available transfer capacities are sold through capacity auctions arranged by the TSO

Competition in the Hungarian Electricity Market

- The supply side – Domestic supply
  - Medium high market concentration in the generation market
  - PPAs between MVM (the wholesaler) and the power plant owners have an adverse effect on supply side competition

    - none of the two parties have an interest in ending them
    - comprise 75-80% of generators' sales
    - decrease liquidity in the market – eligible consumer face limited supply

Competition in the Hungarian Electricity Market

❑ The supply side – Import supply

- Cross-border trade is subject to TSO approval → TSO - key player
- TSO (MAVIR) not independent from wholesaler (MVM) !!!

  - MAVIR was integrated back into MVM in 2006
- TPA access to cross-border capacities not transparent

  - only 1/4-1/3 of cross-border capacities are awarded through auctions

Competition in the Hungarian Electricity Market

- Price regulation in the hybrid model
  - Low regulated prices make eligibile customers to stay with or go back to the public utility segment, where MVM is in a dominant position
  - Too few consumers opting to stay permanently in the liberalised segment, making supply side entry less attractive

Recent Review of the Electricity Act

- Passed by the Parliament last week
- Opens market to liberalisation: brings two-market hybrid model to an end – GOOD!!
- Does not terminate long-term PPAs between MVM (wholesaler) and the power plant owners – BAD!!
  - EU doesn't like them either: competition and state aid concerns
- Does not separate MAVIR (TSO) from MVM (wholesaler) – BAD!!
  - Contrary to the "ownership unbundling" solution suggested by the Energy Market Inquiry
  - Preserves the practice of intransparent cross-border capacity allocations

Recommendations for the Future

- Ownership separation of MAVIR (TSO) and MVM (wholesaler)
- Comprehensive and transparent cross-border capacity allocations
- Abolishing long-term PPAs
- Full liberalisation and abolishing of price regulation, except TPA prices to infrastructure
- If public utility prevails (at a smaller scale, to supply households), migration from liberalised to public utility market shall be forbidden
- Public utility service provision (or last resort supply) should be allocated through competitive tendering
- Full liberalisation must be accompanied by mandating low switching costs for customers

The End