LESSONS LEARNT FROM THE EUROPEAN ENLARGEMENT PROCESS

Péter Kaderják

The INOGATE Programme
EU HISTORICAL BACKGROUND (1)

- Coal and Steel Community (ECSC Treaty 1951, expired 2002)
- Euratom Treaty 1957
- EC Treaty 1957
- Single European Act -> target: internal market until 1992
- European Commission submitted recommendations to eliminate the obstacles to an internal energy market
- Energy sector remained highly segmented under MS control
• Consolidation “Directives:
  • Price Transparency Directive 90/377/EEC
  • Electricity Transit Directive 90/547/EEC
  • Gas Transit Directive 91/296/EEC
• Energy Charter Treaty 1994 (some 50 States and the EC): “...to establish a legal framework in order to promote long-term co-operation in the energy field...“
• Electricity Directive 1996/92/EC
• Gas Directive 1998/30/EC
EU HISTORICAL BACKGROUND (3)

- Renewables Directive 2001/77/EC
- Electricity Directive 2003/54/EC
- Gas Directive 2003/55/EC
- Cross Border Trade Regulation 1228/2003/EC and for gas

- … and the recent 3rd package!
THE 2004 EU ENLARGEMENT COUNTRIES

DIFFERENT TECHNICAL AND HISTORICAL BACKGROUND

EU5: CENTREL + Slovenia
EU3: Baltic states
EU2: Cyprus and Malta
+ 2007: Bulgaria, Romania

Note: Dark blue EU-15 countries are part of UCTE
COMPONENTS OF THE ENLARGEMENT PROCESS

- Energy sector reform: part of a complete transformation from a planned to a market economy. Included:
  - Technical integration (partial)
  - Price reform
  - Establishment of regulator
  - Corporatisation and unbundling
  - Private involvement
  - Environmental cleanup
  - Market opening and price liberalisation
  - Compliance with the *acquis*
### Milestones of the 5th enlargement of the European Union by May 1, 2004

<table>
<thead>
<tr>
<th>5th Enlargement Countries</th>
<th>Association (Europe) Agreements</th>
<th>Application</th>
<th>Accession negotiation opened</th>
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<td></td>
<td>Concluded</td>
<td>entry into force</td>
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* In 1991 as Czechoslovakia
The development of interconnection capacities between old and new MSs and within new MSs
TRADE INTEGRATION – ELECTRICITY FLOWS BETWEEN EU15 AND EU5

Proportion of Physical Flows to EU-20 Generation (%)

Net EU-15 Imports (GWh)

Source: EUROSTAT, UCTE, 2007

Source: UCTE, 2007
• Successful technical and institutional network integration process for EU5 (CENTREL – UCTE).

• The same missing for the Baltic states and in the case of gas network operation.

• Consequent electricity trade reorientation from Russia to EU15.

• CEE is at present the most open region regarding internal and external cross border electricity exchanges.
REMOVAL OF PRICE (CROSS-) SUBSIDIES

Ratio of Industry/Household Electricity Prices

Note: Using PPPS, the prices include tax and were measured in $/kWh

Source: IEA (2005), Eurostat
CONVERGENCE IN ENERGY INTENSITY

Final energy intensity adjusted for industry, economic structure and climate (PPP, 2000): years 1996-2004

Source: Enerdata. Note: Energy intensity is expressed in Euro at year 2000 prices and 2000 purchasing power parities (EC00p)
CONVERGENCE IN ENVIRONMENTAL PERFORMANCE

Narrowing gap of air pollution by power sector in EU-15 and EU-10, 1990-2004, tonnes per GWh

Source: EEA, EUROSTAT
RENEWABLE ENERGY REMAINS A SIGNIFICANT BUSINESS OPPORTUNITY

Electricity from Hydro and Other Renewable Energy Sources in New Member States in 2005 and 2010 targets (% of Gross Electricity Consumption)

Source: EUROSTAT and Accession Treaties
“We have three developments, first the privatization in the enlargement countries… privatisation on one side means growth potential on the other. Second…we have privatization falling together with liberalization procedure, and [third this is] promoted by the market opening by the [EU] Commission.”

German CEO in Hungary
**ACQUISITIONS AND DIVESTITURES**

- **E.ON acquisitions:** 1995-1997/ 2001-2003
- **RWE acquisitions:** 1995/ 2001-2003
- **2004 and after:** consolidation period
- **Notable:** EON/RWE gas share swap 2006
ACQUISITIONS AND DIVESTITURES

Comparison of Company Acquisition and Divesture Transactions (1994 to 2007)

Companies acquired and divested

Company

CEZ  EON  EDF  RWE  ENI  Gaz de France

Acquisition and Divestiture Transactions in New Member State
Acquisitions and Divesture Transactions outside new Member States
GEOGRAPHY OF DISTRIBUTION COMPANIES

Ownership/Key Shareholder
Electricity Distribution Companies

Ownership/Key Shareholder
Gas Distribution Companies

LaBelle, 2008
EDF, ENBW & RWE CROSS SHARE HOLDINGS

Hungarian Holdings
- BERt (95.6% EDF)
- DEMASZ (100% EDF)

Polish Holdings
- MATRAI (GEN) (51% RWE, 21.7% EnBW)
- ELMU (DIS) (56% RWE, 27% EnBW)
- EMASZ (DIS) (55% RWE, 27% EnBW)
- EnBW (45.01% EDF, 45.01% OEW)
- OEW

Key International Holding
- DALKIA INTERNATIONAL (50% EDF)
- DALKIA POLSKA (51% EDF, 49% EnBW)
- EDF POLSKA (100% EDF)
- EL RYBNIK (GEN) (51% EDF Polska, 49% EnBW)
- KOGENERACJA (51% EDF, 49% EnBW)

RWE Energy Hungária
- MATRAI (GEN) (51% RWE, 21.7% EnBW)
- ELMU (DIS) (56% RWE, 27% EnBW)
- EMASZ (DIS) (55% RWE, 27% EnBW)

Other Polish EDF direct and indirect holdings: Direct: EC Wybrzeze (77.51%), EC Krakow (66.26%); Indirect: Cergia, Even, Energokrak, EC Zielona Gora, PEC Tarnobrzeg, Fenice SPA, Fenice Poland
LIBERALIZATION AND REGIONAL MARKET INTEGRATION

Madrid 21.1.2005
London 15.2.2005
Brussels 17.12.2004
Milan 25.1.2005
Vienna 27.1.2005
Helsinki 19.1.2005
Riga 14.2.2005

Source: European Commission DG-TREN
The major issue for New EU is their very high and unilateral gas import dependence on Russian gas supplies.
NEW EU AND GAS
NET IMPORTS / TOTAL CONSUMPTION OF PRIMARY FUELS IN NMSs, 2006
NATURAL GAS DEPENDENCY OF EU8 ECONOMIES

*in year 2000 euro
THE SHARE OF GAS IN ELECTRICITY GENERATION, EU8
GAS IMPORT DIVERSITY: COMPARISON OF EU 25 AND EU8

**EU 25 Gas Imports, 2006**
- Russia 31%
- Algeria 15%
- Norway 22%
- Netherlands 13%
- UK 2%
- Libya 2%
- Denmark 1%
- Nigeria 2%
- Oman 0%
- Quatar 1%
- Others 5%

**New EU-8 Gas Imports, 2006**
- Russia 77%
- Others 11%
- Norway 8%
- Algeria 1%
- Germany 3%
Reduction in gas supply in %

Source: DG TREN
GAS INFRASTRUCTURE NEW EU: ISOLATION AND MISSING COOPERATION
GÁZIMPORT DIVERZIFIKÁCIÓ
Új infrastruktúra és új források
GAS INFRASTRUCTURE IN EUROPE (2000)
<table>
<thead>
<tr>
<th>Country</th>
<th>National Gas Company</th>
<th>Selected Ownership (partial list: Gazprom, RWE, E.ON)</th>
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</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>Eesti Gaas</td>
<td>Gazprom (37%)</td>
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<tr>
<td></td>
<td></td>
<td>E.ON (33%)</td>
</tr>
<tr>
<td>Latvia</td>
<td>Latvijas Gaze</td>
<td>E.ON (47%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gazprom (34%)</td>
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<tr>
<td>Lithuania</td>
<td>Lietuvos Dujos AB</td>
<td>Gazprom/E.ON (36 %)</td>
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<td></td>
<td>Dujotekana UAB</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>RWE Transgas Net</td>
<td>RWE (100%)</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>Slovensky Plynarensky Priemysel (SPP)</td>
<td>E.ON (24.5%); GdF (24.5%); Option to Gazprom</td>
</tr>
<tr>
<td>Hungary</td>
<td>TSO: Földgázszállító Rt</td>
<td>MOL (100% private)</td>
</tr>
<tr>
<td></td>
<td>Dominant wholesale &amp; Storage: E.ON</td>
<td>E.ON (100%)</td>
</tr>
<tr>
<td>Poland</td>
<td>PGNiG</td>
<td>PGNiG (Polish State)</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Geoplin</td>
<td>Geoplin (Slovenian)</td>
</tr>
</tbody>
</table>
GAS INFRASTRUCTURE

- East-West transit lines, no regional cooperation
- Sharp contrast to electricity network integration with UCTE
- Russian-German tandem in infrastructure take-over
  - Risk of foreclosure
  - Interest in conserving CEE gas market segmentation
- Russian efforts (sometimes with western allies) to block major new investments to diversify:
  - Germany, Italy
NEW PIPELINES: CONSERVE OR FIGHT UNILATERAL DEPENDENCE?

Russian – German Pact
(Nord Stream)

South Stream
EXISTING INFRASTRUCTURE AND THE CONCEPT OF THE EC GAS RING

Figure 6  Energy Community Ring concept

Source: base map from WinGas GmbH. © Verlag Glückhauf GmbH, Essen 2006, with Energy Community gas transmission ring pipeline indicative route overlay by ECA.
THE NEW EUROPE TRANSMISSION SYSTEM (NETS) PROJECT
SOME CONSEQUENCES
UNILATERAL DEPENDENCE: SERIOUS PRICE RISK

- Russian lead on GASPEC
• Long history of gas supply disruptions between Russia and CIS countries: a CIS country is more likely to be cut off by Gazprom in the winter than not.

### Numbers of CIS Gas Disputes per Russian President (1991–2006)

<table>
<thead>
<tr>
<th>Type of Incident</th>
<th>President Yeltsin</th>
<th>President Putin</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Incidents</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Gas Supply Cuts</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>45</td>
</tr>
</tbody>
</table>


• Insufficient upstream investments
• Russian ambition to restore political influence in former empire:
  ▶ Ukraine: ‘pricing-in’ election outcomes…
  ▶ CIS: Georgia, Azerbaijan, Ukraine
• New EU members: Lithuania, Estonia, Hungary, Poland, Bulgaria
• Balkans: Serbia *versus* Energy Community
• Insufficient solidarity from old members will reduce EU cohesion
• Russian operations on Balkans is to undermine EC efforts
“Getting prices right” is a must
Well targeted and simple schemes to help the poor
Private participation frees up public funds and motivate increased efficiency
Independent regulation: key for private investment
Autonomy, authority and accountability: key for independent regulation
Energy sector market opening and regional cooperation should go hand-in-hand
Diversification is key in providing for supply security