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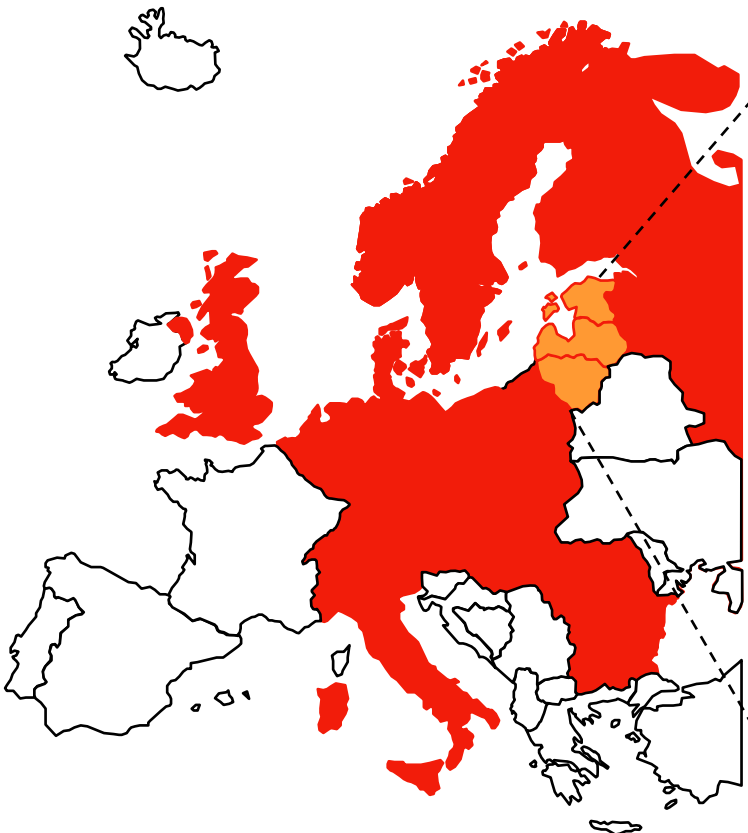
Ruhrgas

The Energy/Gas Market of the Baltic States – status quo and further development

Baltic Sea Forum
Riga, 3rd of June , 2008

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Head of the Representative Office for the Baltic States

The Baltic Energy Market: Relatively small with strong interaction with the East and increasingly with the Nordic and Central European region



- Energy markets are relatively small
- Strong ties between Finland and Estonia, as well as Lithuania and Poland, increasing interaction as well with Sweden
- E.ON Ruhrgas International has got a strong presence in gas across the region and a minority stake in Lithuanian's National Champion Leo Lt
- New energy links between the Baltic States and the Nordic region under investigation
- Stronger interactions between the Baltic energy companies and beyond it with other European Union member states could optimize their own business portfolio and value chain

Baltic Energy markets: less aggressive but still growing

Market today

Power:

- Different primary energy mix depending mainly on oil shale, nuclear and hydro generation
- Total gross electricity generation ~ 31 TWh and final electricity consumption ~ 20 TWh
- Low market opening and low customer activities
- State owned companies in Estonia and Latvia will make liberalization difficult

Gas:

- Vertically integrated natural gas companies
- Market size 6.5 bn m³, 1.1m end consumers
- One large aquifer underground gas storage facility in Inchukalns/Latvia
- Oil/shale oil is the leading competitor among industrial fuels

Heat:

- Dominating central district heating networks in almost all large cities with still relatively high losses
- District heating companies mostly separated and in ownership of municipalities, main competitor to gas
- Generally decreasing demand, more and more local heating projects (gas fired, new trend - heat pumps)
- Natural gas versus HFO and increasing share of

Market future

Power :

- Nuclear phase out, still unclear future plans how to replace nuclear and old oil shale units
- Increasing share of renewable energy due to EU-targets (sharp cuts of CO2 certificates e.g. in Estonia)
- Increasing energy demand above energy efficiency measures due to less but still growing economies
- EU-Membership provides a much more reliable basis for investigations and investments from abroad as well as limited national financial capabilities

Gas:

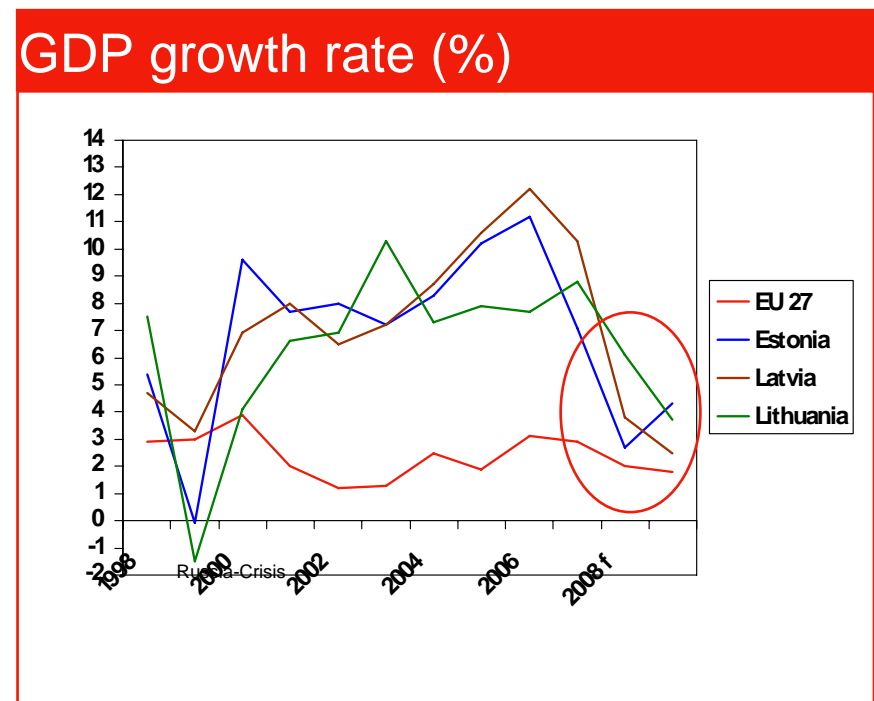
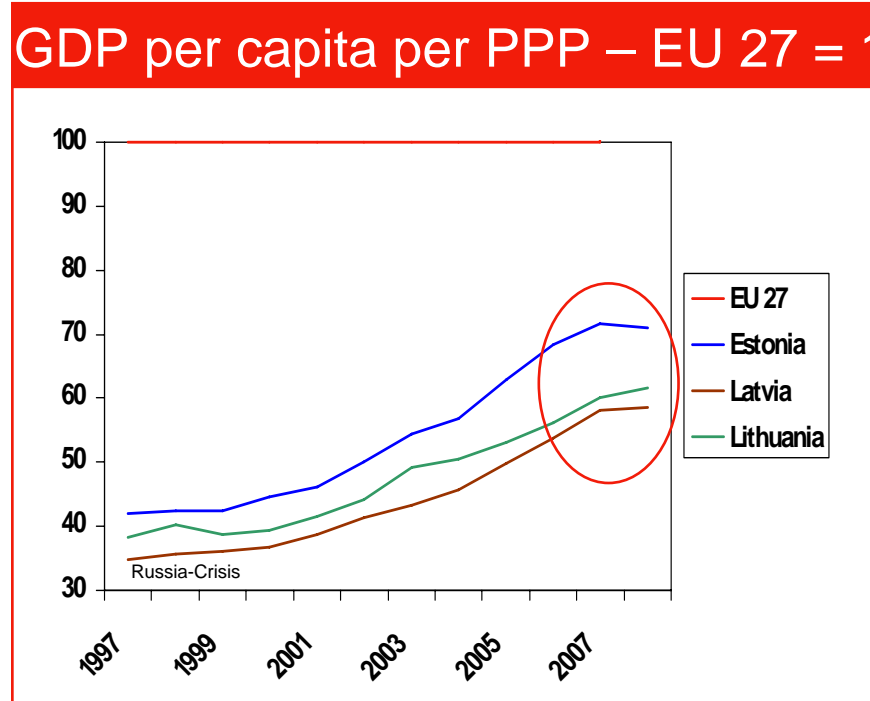
- Investments in gas network reliability, extension of existing network
- Customer growth and diversification
- Significant growth of gas consumption mainly depends on power and heat market development
- Increase of the role of Latvian underground gas storage Inchukalns

Heat:

- Projects strengthen the heat network, reduction of losses
- Slowly increase of local heat demand as an first prediction
- Focus on energy efficiency measures, loss

reduction new construction standards

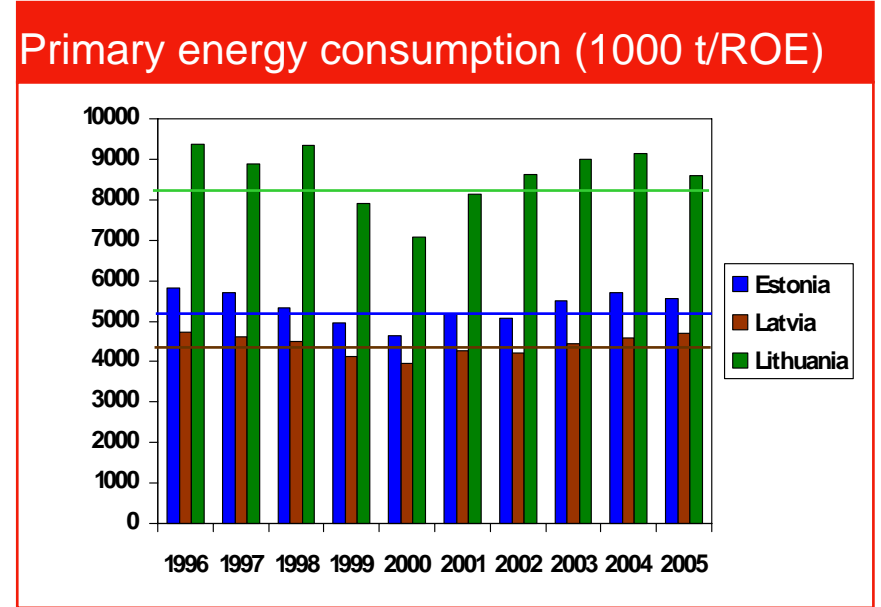
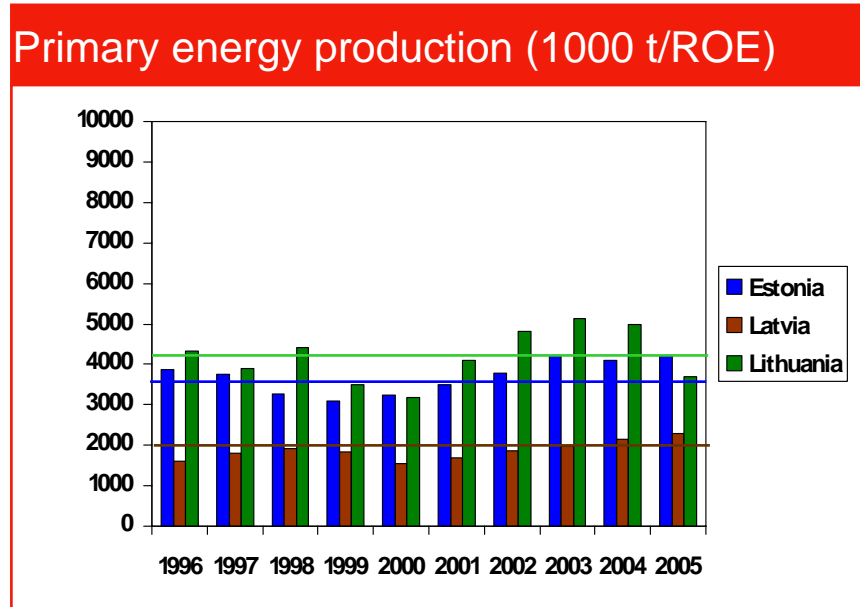
Strong development of a positive investment climate (I) – GDP development per capita and growth rate



Convergence Process:

Poor economies are able to grow faster than wealth economies, but how long?

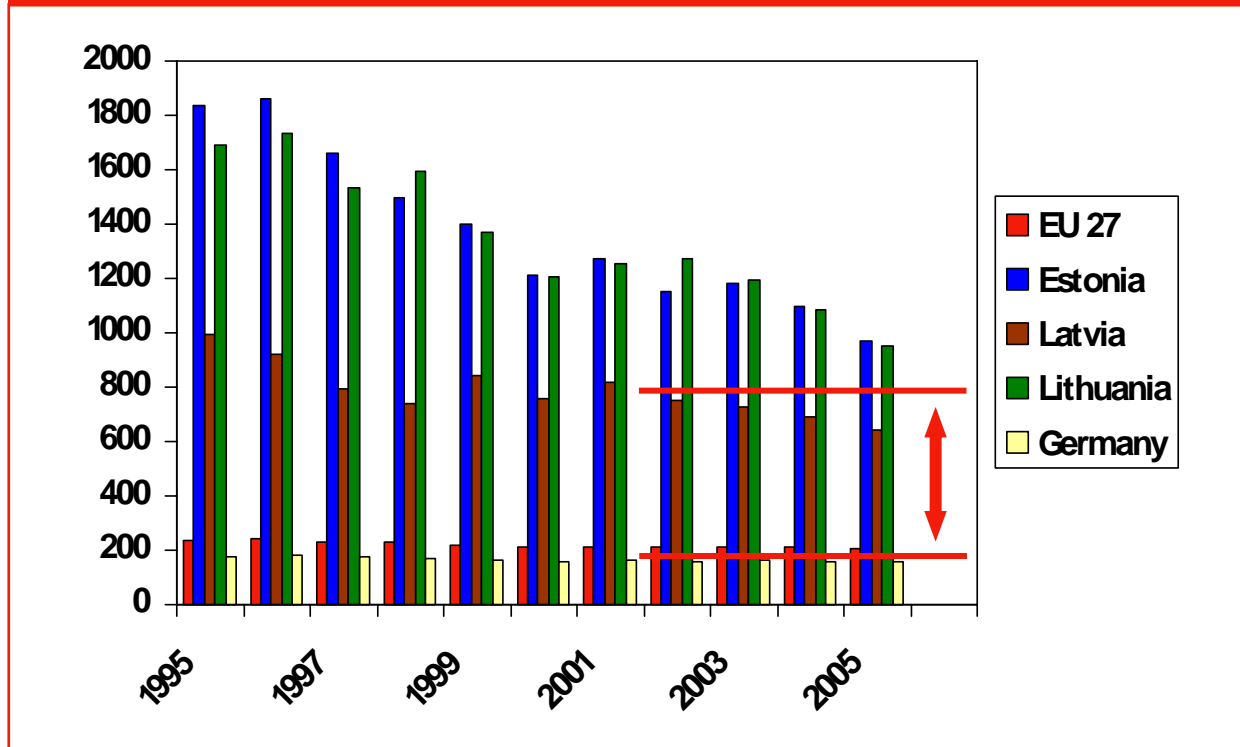
Primary energy production versus primary energy consumption



Primary energy consumption is about twice as high as national production, heavy dependence on energy import such as oil, gas and currently for Latvia in respect to electricity as well

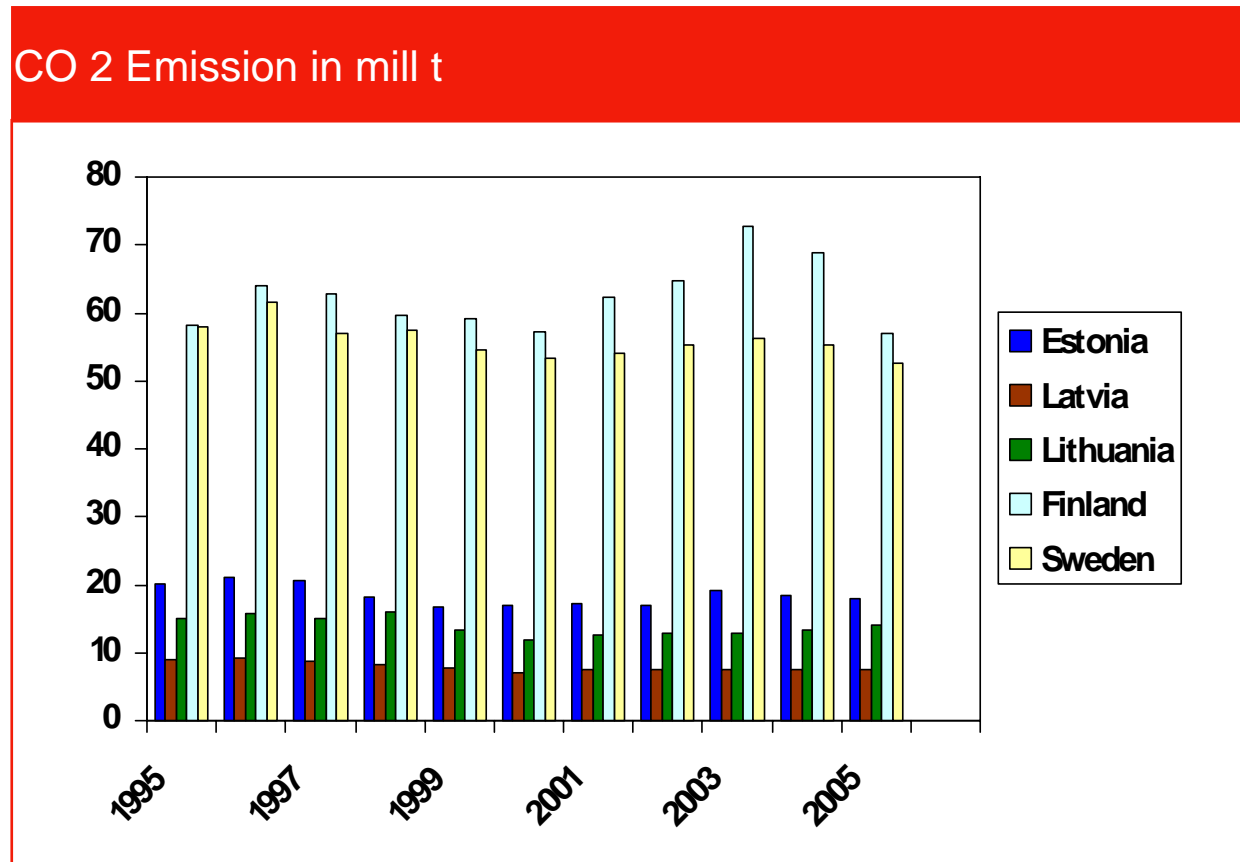
Energy Intensity of the Baltic Economies

Energy Intensity of individual national economy (ROE kg/1000 EU)



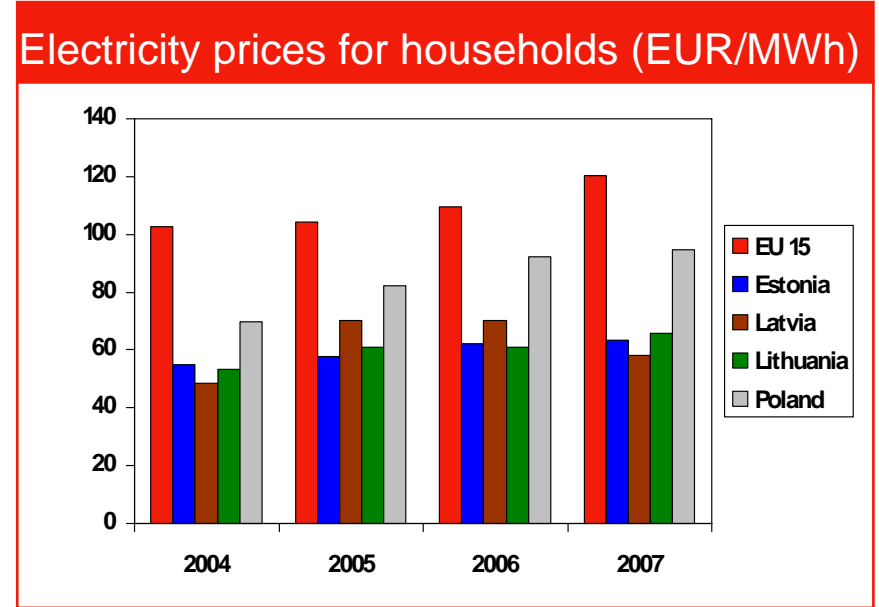
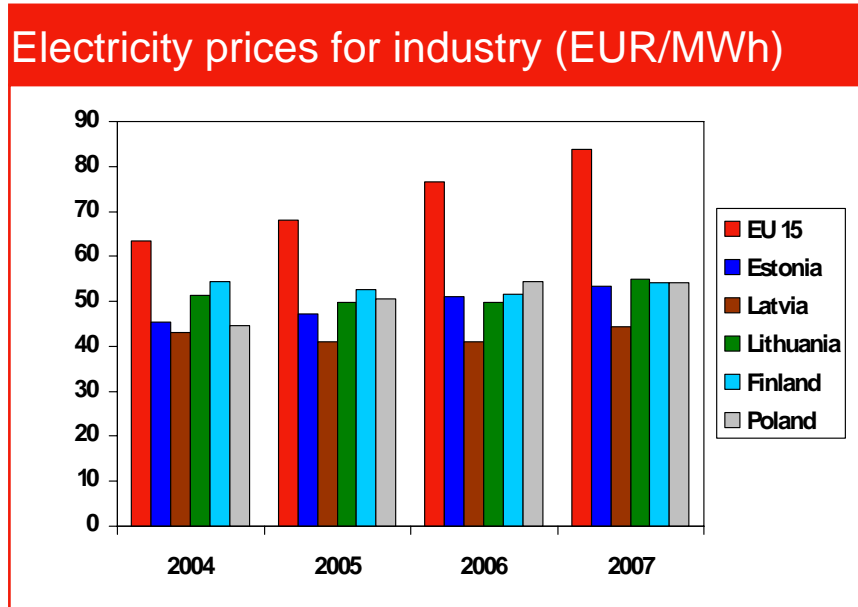
Beside remarkable achievements there is still too much energy consumed per 1 GDP unit

CO 2 Emission in the Baltic States



Stable, partly increase of CO 2 emission over the last 5 years in the Baltic countries

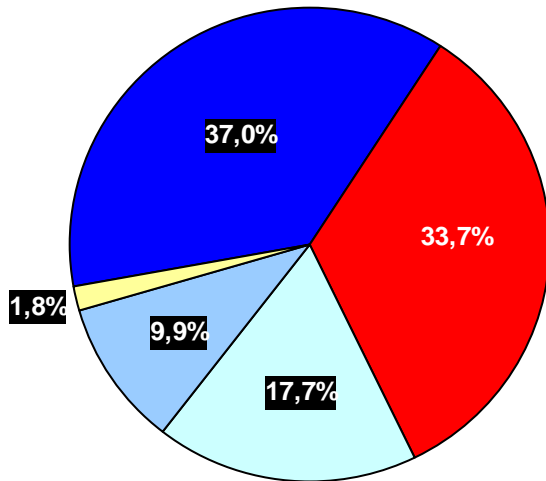
Electricity prices in the Baltic States



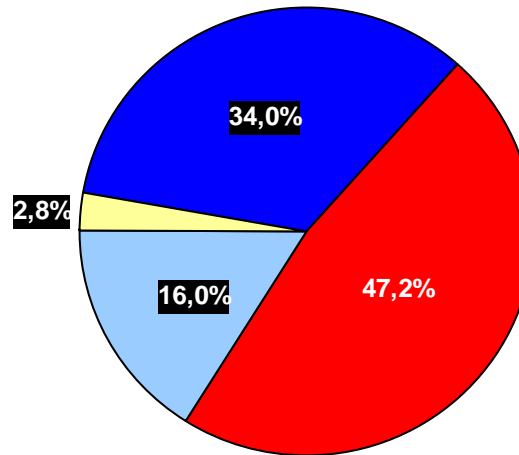
Electricity prices for industry on the level with Finland and Poland but much below EU 15 average, electricity prices for households still much below Central European countries like

Shareholders' Structure of the Baltic Gas Companies (31.12.2007)

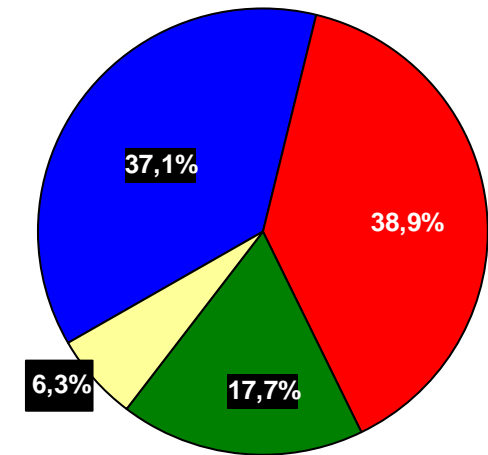
Eesti Gaas



Latvijas Gāze



Lietuvos Dujos



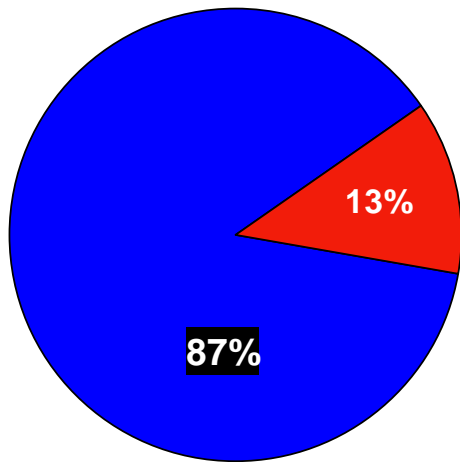
Natural Gas Import/Consumption to/in the Baltic States



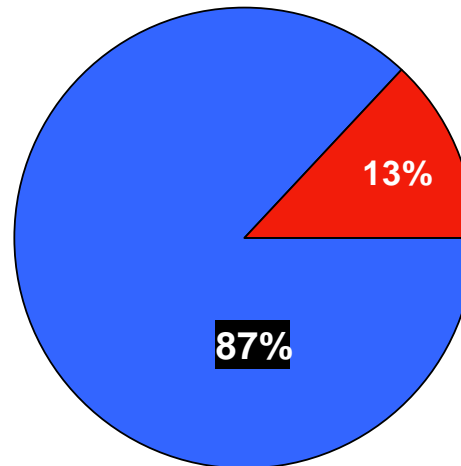
Until 2007 permanent growth in gas sales, further annual sales rates are going to be effected by high gas sales prices (gas could become less competitive)

Baltic gas business – differ to Central European gas consumption

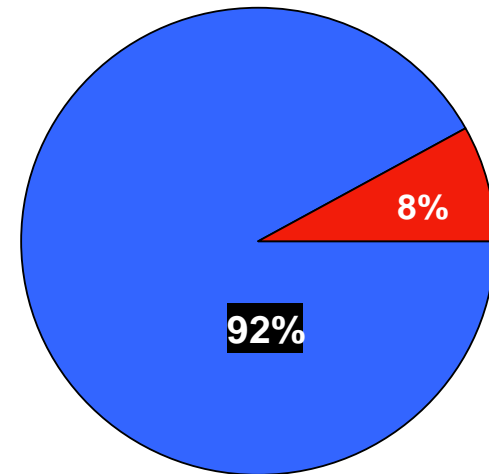
Estonia





Latvia

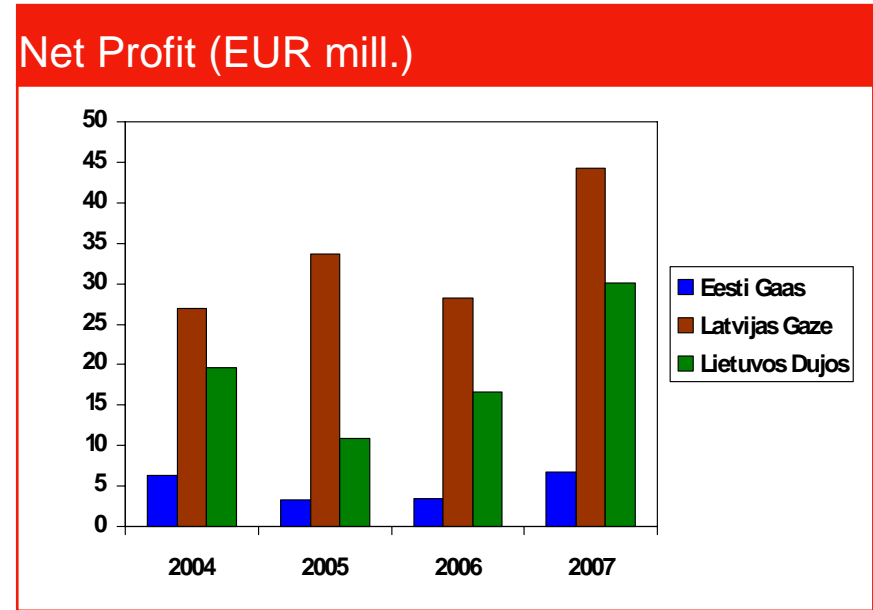
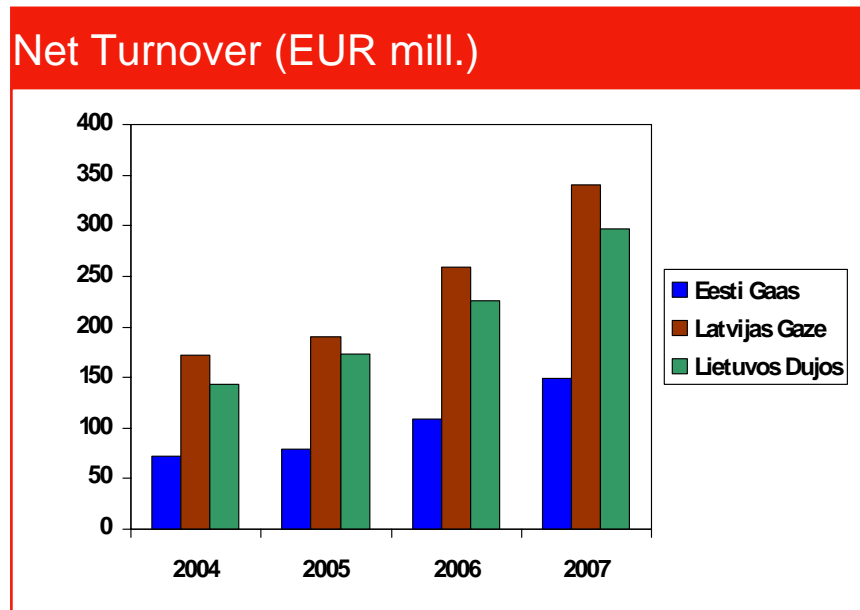


Lithuania



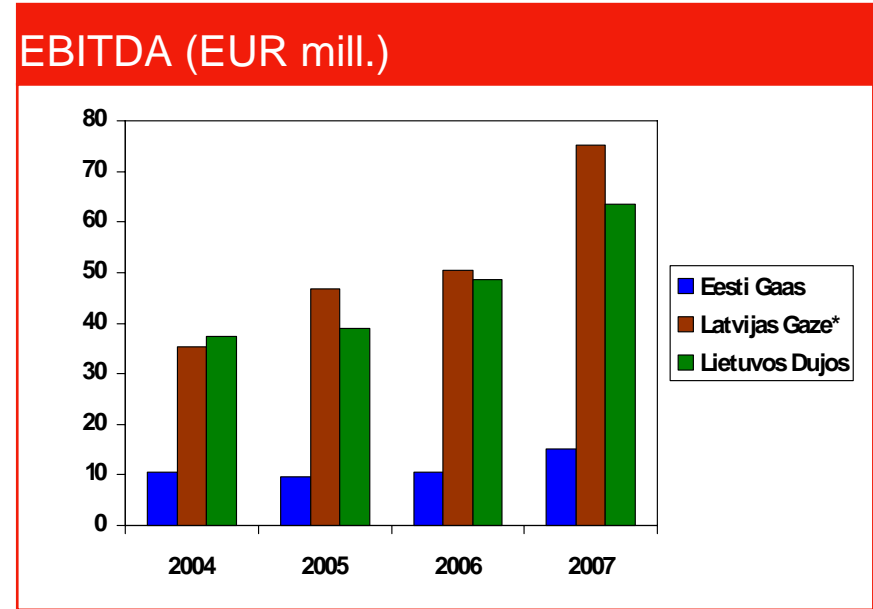
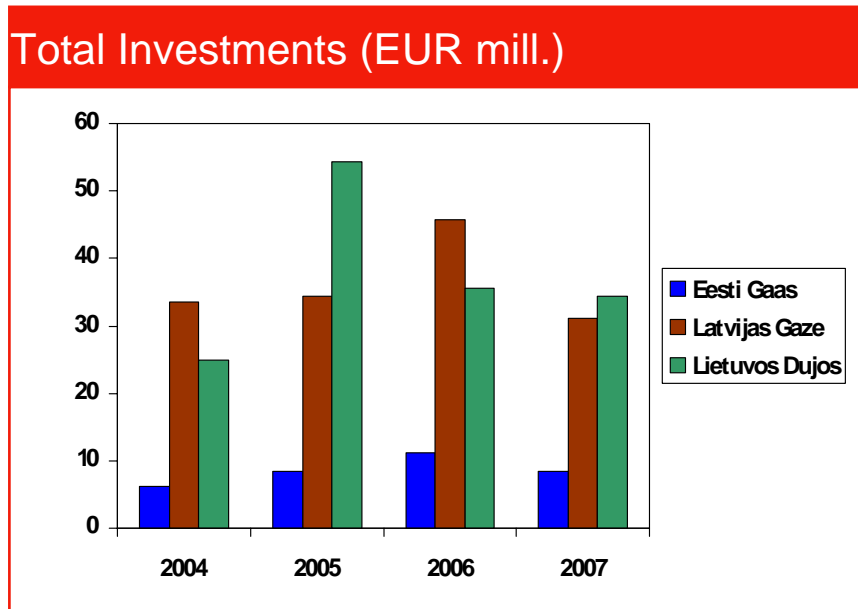
-  Household & Commercial appliances incl. space heating for annual consumption
-  Industry / Power Generation / District Heating / Third parties

Baltic Gas Companies – major facts (I) 2004 - 2007



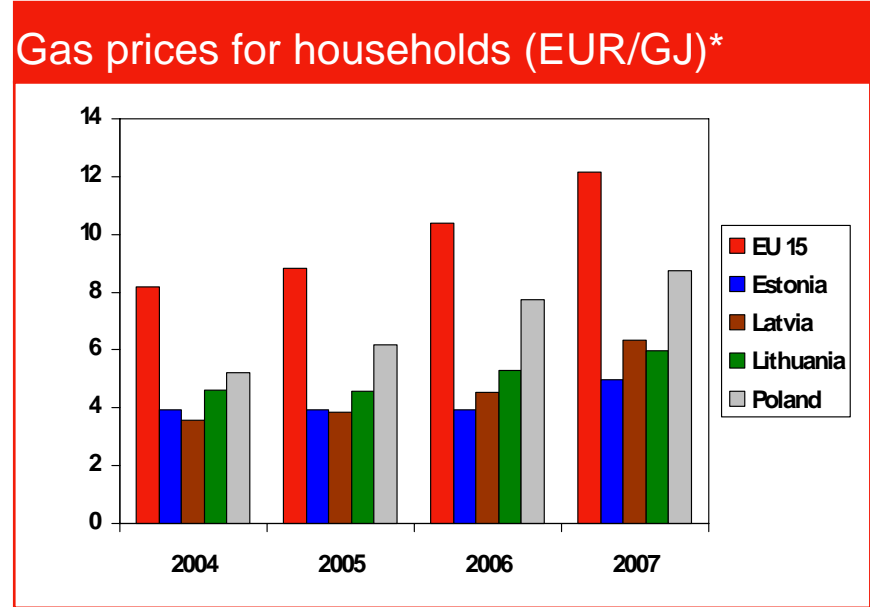
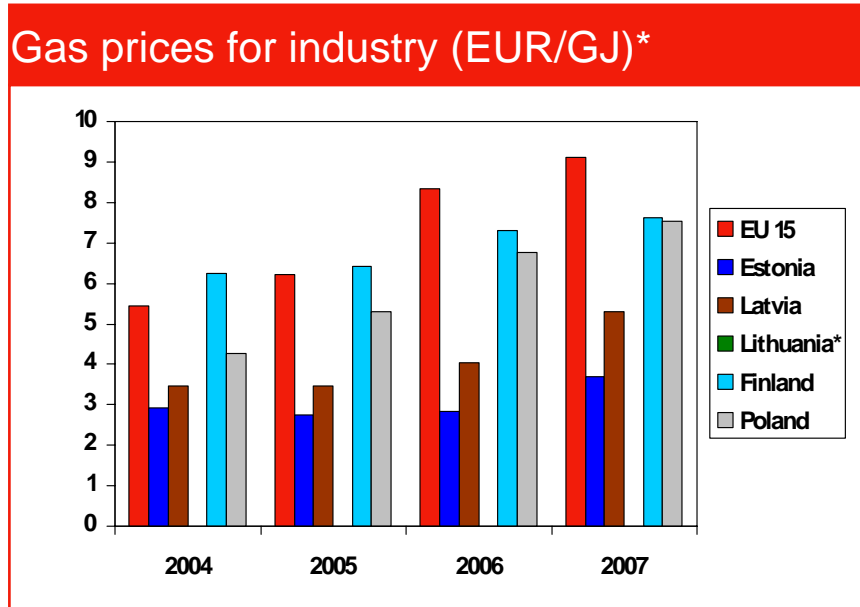
Rapid increase of turnover due to high growth of gas sales prices, profit of the year 2007 can be recorded as one time high

Baltic Gas Companies – major facts (II) 2004 - 2007



Less investments over the last year – question of reasonable return?, rise in EBITDA over the last years

Gas prices in the Baltic States



Especially in 2007, the gas prices for households and industry were drastically increased, but the level of gas prices is still much below European average – EU 15

Source: Eurostat, * prices differ in Lithuania very much,

* According to LD Lithuanian gas prices differ very much in comparison between Eurostat and actual prices

Conclusions

- Lack of power generation capacities possible after closure of Ignalina NPP and oil shale units in Estonia from 2012 – 2014 onwards, potentially missing base load (positive signals : e.g. PP projects of Latvia or Lithuania)
- Natural gas may become less competitive due to rapid price increase over the last 2 – 3 years and further oil price records, potentially decrease of gas sales
- Due to CO2 reduction plans of EU Commission gas should be more promoted as environmental friendly source
- To evaluate joint Baltic promotion of new gas driven technologies
- To combine efforts regarding new energy efficiency measures
- Potentially, alternative peak and mid-load gas supply to the Baltic states as subpart of European LNG projects
- Forced by EU potential ownership unbundling of gas transmission/distribution system of Baltic gas companies, acting in an isolated market, could lead to substantial changes regarding active market players
- To combine efforts regarding mind-setting about sustainable and reasonable regulatory framework within EU gas and electricity market – no sustainable prove of more competition and lower prices because of OU

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