



Covenant
of Mayors



www.eumayors.eu

Energy efficiency in Latvia in an energy security context



Tamas Solymosi
Covenant of Mayors Office

11 September 2014



Agenda

Overview of CoM finance related activities

Energy efficiency in Latvia in an energy security context:

- Current situation
- Options to increase energy security
- Why building energy efficiency?
- Questions (for discussion)





CoM objectives: assist to

- ✓ Gain knowledge and insight into the (practical) financial aspects
- ✓ Review best practices and case studies
- ✓ Gain a greater understanding of own status, partnership opportunities, requirements of the financial sector
- ✓ Learn about the application of EU and national finance programs
- ✓ Interact with leading professionals & peers
- ✓ Involve the private sector



Illustrative issues

- How to
 - **present information** to the financial world
 - **improve** the (perceived) **financial feasibility** of projects
 - **utilise** limited amounts of own source (funds)
 - **access** EU funds, and different types of finance
 - **analyse** and **manage** project risks
- What are **typical issues / hurdles** in preparing and implementing projects, how others succeeded to handle those



Energy efficiency finance issues

Public budget cuts

Utilisation of EU funding

Banking regulation changes

Availability of skilled labour

Energy security

Economic investment potential

Project generation ability

Non-technical barriers

Cooperation



Regional features

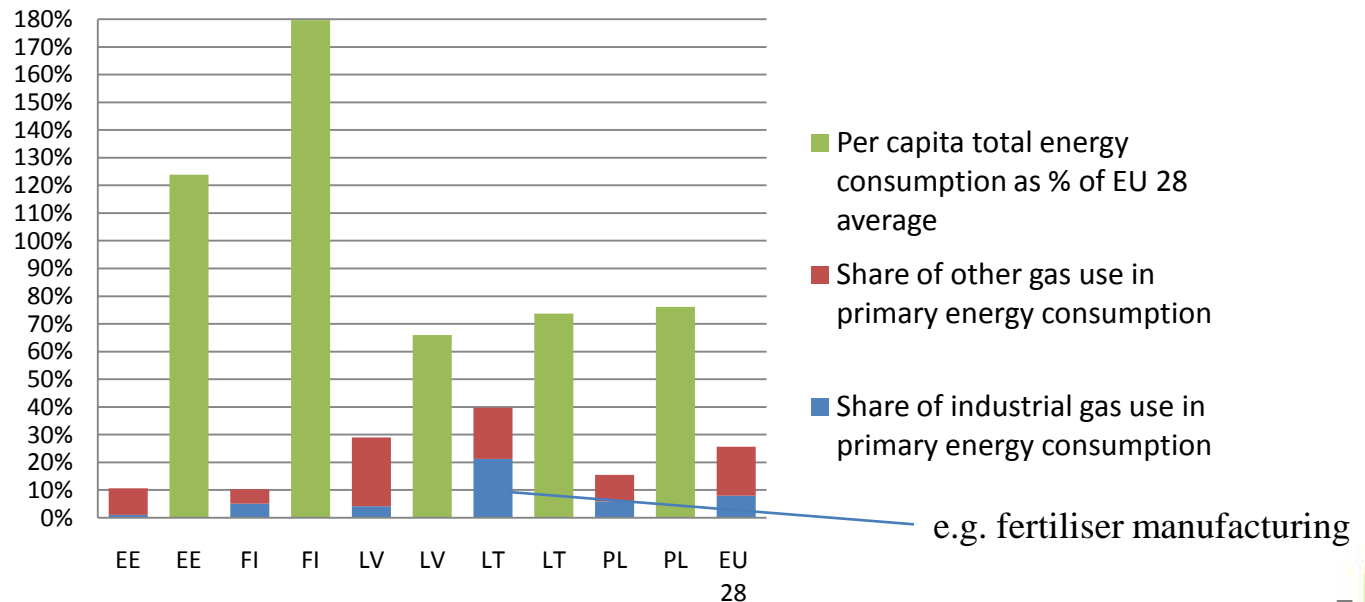
- ❖ Only Russian gas (**until 2015**:> EUR 400 million EU funds: Klaipeda LNG port)
- ❖ Local electricity generation (**until 2015**: > EUR 200 million EU funds: PL-LT electrical interconnections)
- ❖ Gas: mostly for heating and electricity generation
- ❖ District heating: majority of heating demand (esp. in capitals: >75% in Riga, Vilnius) and role in energy security (where with fuel oil alternative)
- ❖ EU electricity cost < power from gas in Baltic states
- ❖ Major gas storage in LV (services LV, EE, RU, LT)



Regional features

- ❖ LT, LV: High reliance on gas (LT: 2nd in EU)
- ❖ High specific total primary energy consumption:
 - ❖ FI: 2nd highest per capita in EU (after LU)
 - ❖ EE: 2nd highest per unit of GDP (LV, LT, PL also $> 2^*$ EU average)

Energy intensity, natural gas use

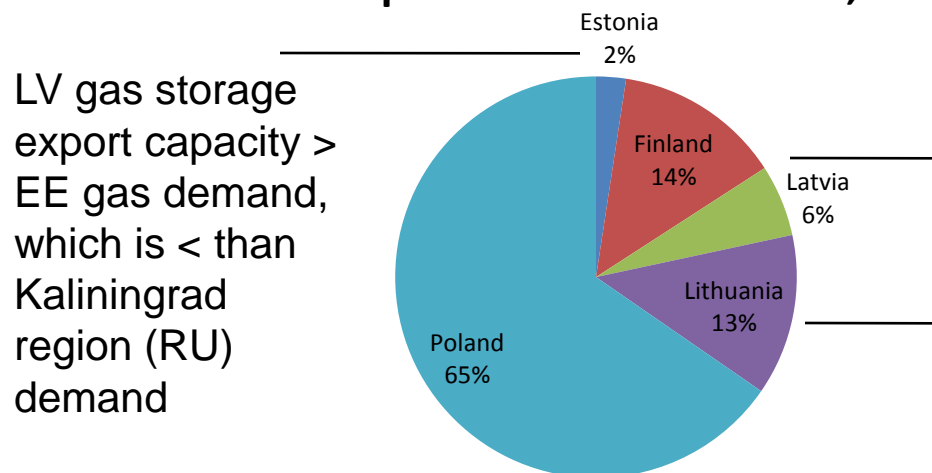




Regional (natural gas) features

- ❖ LT, LV, EE together: about 1/3 of PL gas consumption
- ❖ Major decrease in consumption since 1991 in LV, EE
- ❖ Significant investment in supply side (infrastructure)

Distribution of the total natural gas consumption of the 5 countries, 2012



LV gas storage export capacity > EE gas demand, which is < than Kaliningrad region (RU) demand

LV: >25% of power by cogeneration
Storage capacity: >140% of national consumption (potential for >33% capacity increase)

LT: New LNG terminal capacity similar to total national gas need (+50% potential capacity increase) – designed for meeting regional needs

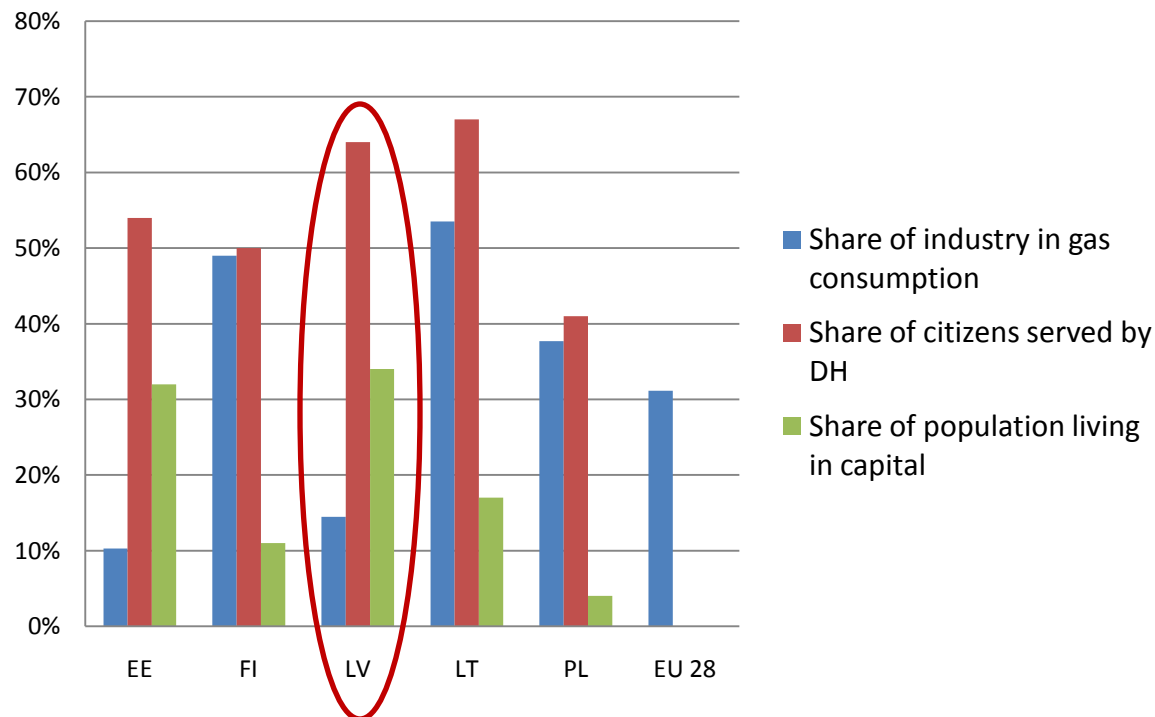
* Statistics from EUROGAS 2013 report



Regional features

- ❖ LV: DH in capital: top share in residential heat demand
- ❖ LT industrial gas demand 6 * (LV+EE) industrial

Energy consumption indicators





Latvian district heating features

- ❖ **High level of heat wasted** (e.g. $\approx 50\%$ more KWh/m² used in DH buildings in Riga than in Denmark, outside Riga even more)
- ❖ **High share of DH** in gas consumption, especially in peak period in winter (which is most critical from an energy security point of view)
- ❖ $>75\%$ of **fuel is natural gas**
- ❖ DH heat sales (TJ): about 60% of natural gas import
- ❖ Major **economic investment potential** (high level of waste and **high energy unit cost**)



Options for energy security



(Natural gas) Demand side

- ❖ Decrease excessive waste in building heating (esp. in district heating) – **best value for money**
- ❖ Use cheaper EU electricity (not from gas)
- ❖ More renewables / waste in baseload DH need

(Natural gas) Supply side

- ❖ Use LT LNG terminal, LV gas storage
- ❖ Which of additional investments considered (LNG terminal, gas pipelines, storage) to make?
- ❖ LV gas storage best leveraged internationally





Why building energy efficiency?

- ❖ Major **decrease** in
 - ❖ natural gas import need (energy trade deficit)
 - ❖ peak demand in heating season (supply risk)
 - ❖ fuel poverty at DH building families
(heat cost / average income)
 - ❖ (back-up facilities) gas supply infrastructure need in the Baltic countries (current > EUR 1 billion investment plans with risk of future stranded assets)
- ❖ Major **increase** in
 - ❖ Number of new local jobs
 - ❖ Environmental & quality of life benefits
 - ❖ Inčukalns storage export potential





Questions



- ❖ Saving \approx 20-25% of gas imports by upgrading buildings to the Danish level?
- ❖ Heat regulation, cost allocation 100% in DH, quickly? (international best practices)
- ❖ How would the costs and benefits of the above compare to those of another LNG terminal?

- ❖ How can utilities be motivated in energy efficiency? (relevant EU Directive)
- ❖ Could revolving funds be helpful?
- ❖ Cooperation opportunities of regional capitals?



THANK YOU!

tamas.solymosi@eumayors.eu

www.eumayors.eu

