



Enerģētika 2019

The future of the energy sector - challenges and opportunities

Bull or Bear? - Outlook for natural gas demand in the Baltic region

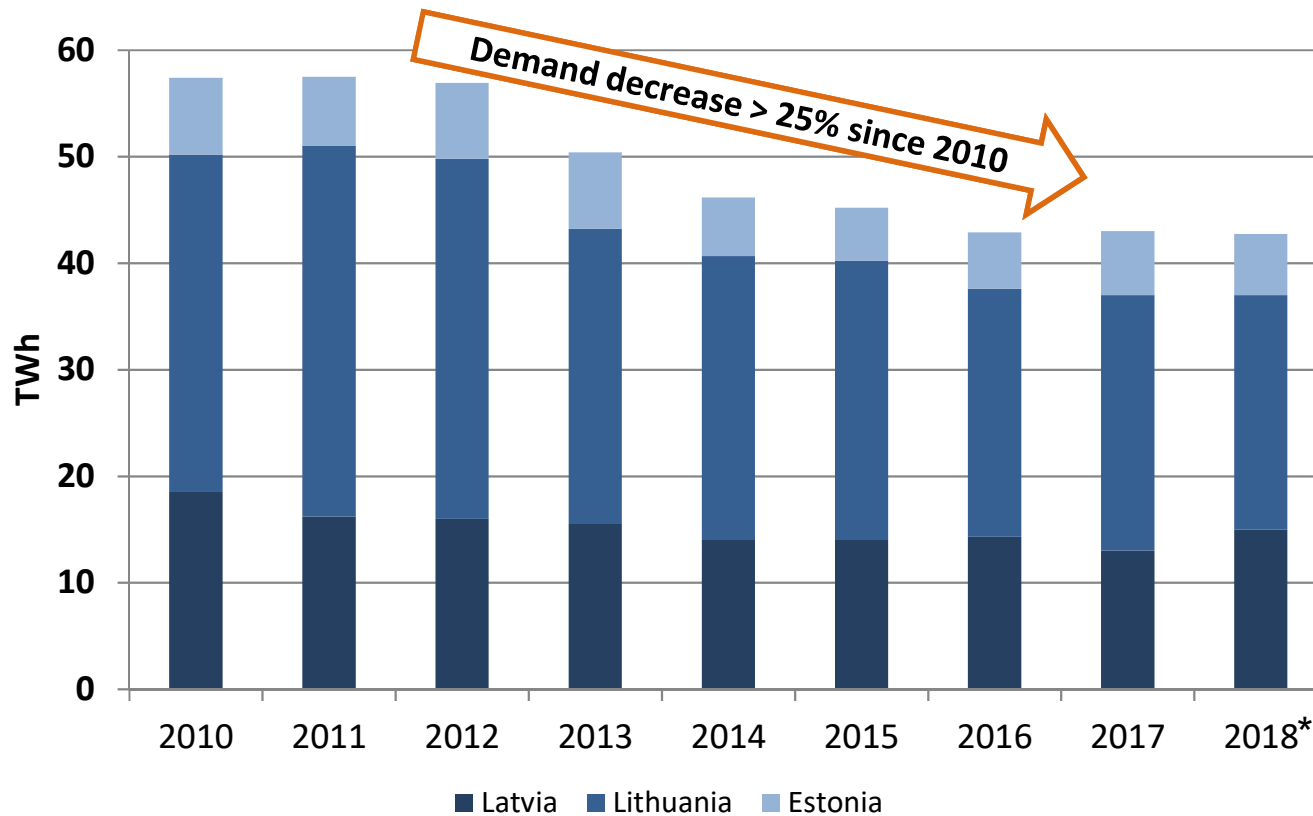


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Riga, 7 March 2019



Natural gas demand in the Baltic region dropped significantly since 2010

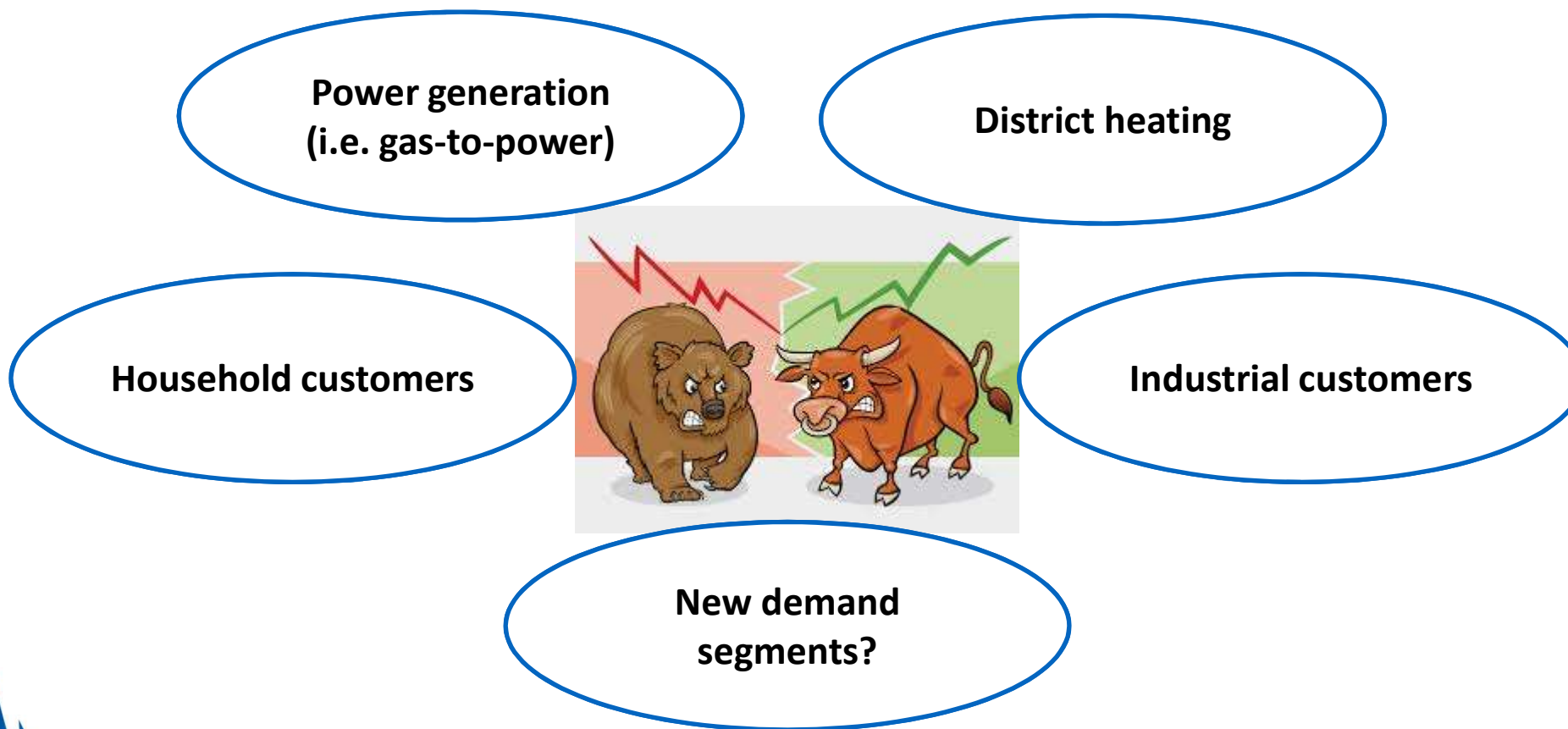


* Consumption for Lithuania and Estonia based on preliminary numbers
 Source: Central Statistical Bureau of Latvia; ENTSOG; Amber Grid

- Latvian gas market comprises approx. 35 % of Baltic gas market
- Significant drop in gas demand due to / after financial crises
- Currently, stagnating natural gas demand is in line with developments in many EU countries
- Promotion of renewables & energy efficiency are amongst key drivers behind the demand drop



Will overall gas demand remain bearish or will consumption recover and finally get back to growth?



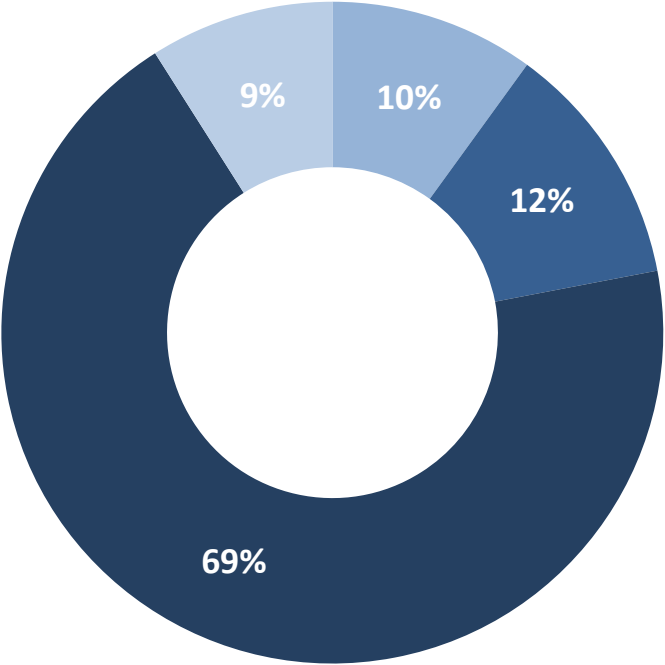
Which segment(s) could stabilize current and drive future natural gas demand in Latvia and the Baltic region?



Latvian natural gas demand already today strongly depends on heat and power production



Shares of natural gas by customer groups in Latvia, 2015

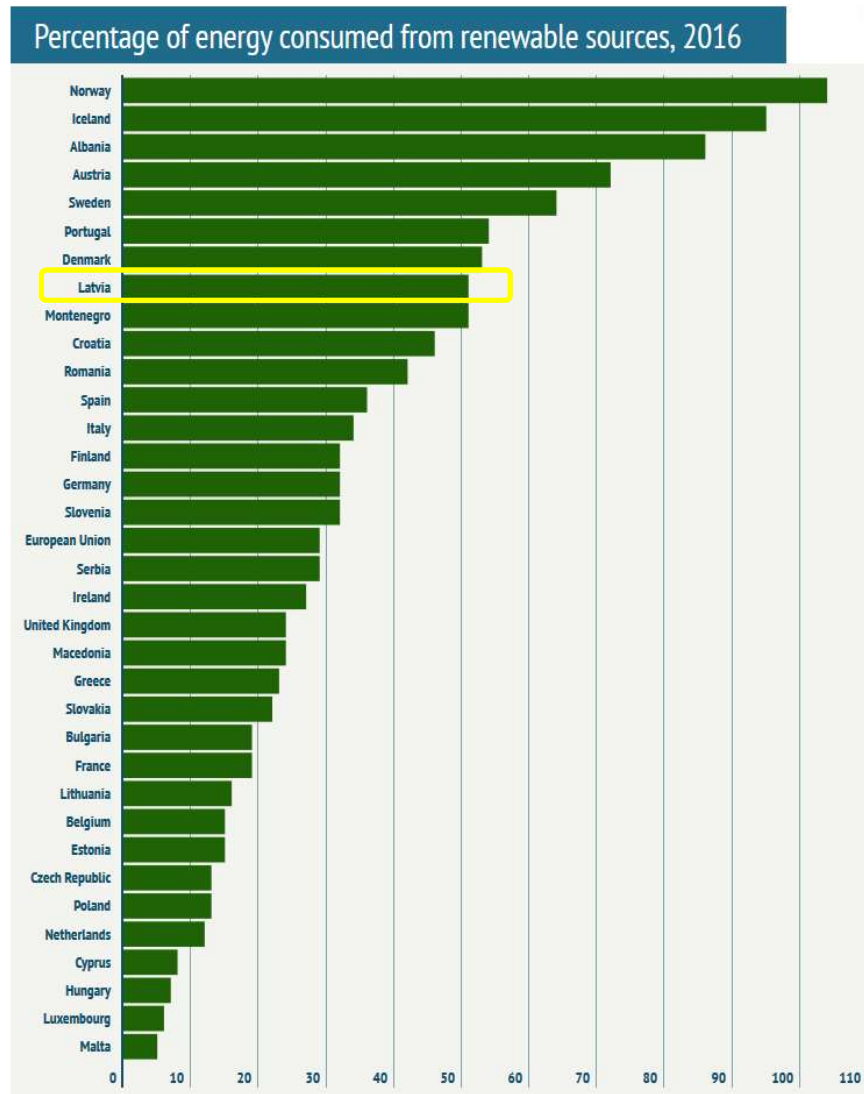


- Municipal and commercial companies
- Industry
- Power and heat production
- Residential customers

Source: ENTSOG, "Gas Regional Investment Plan 2017"



Due to a high share of hydro power Latvia is amongst top ten European countries in the consumption of renewables



Source: Data from Eurostat, 2016

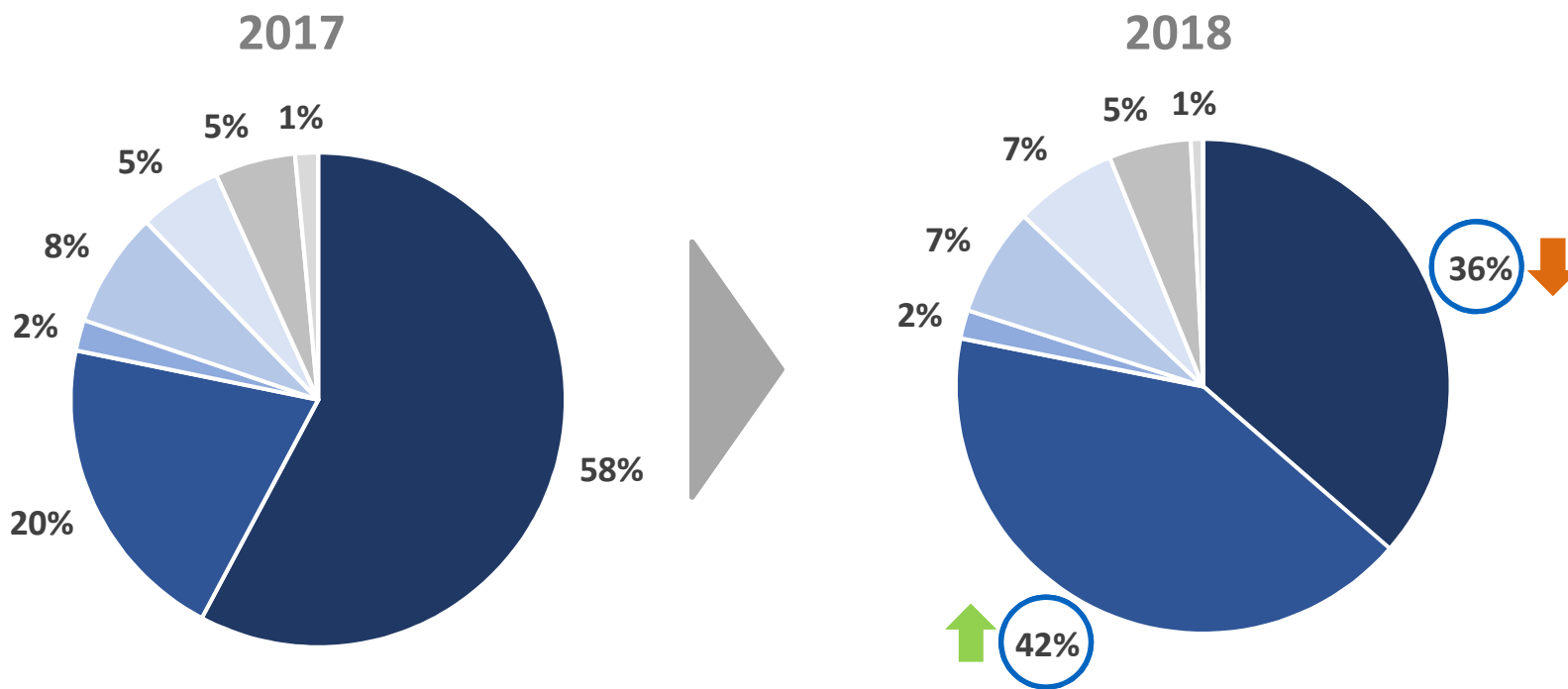
Source: <https://www.euronews.com/2018/09/27/which-european-nations-lead-the-way-with-renewable-energy-euronews-answers>



However, due to the high share of renewables gas demand for power generation in Latvia is rather volatile



Composition of Latvian power production by source



Total MWh of electricity produced:
7,346,337

Total MWh of electricity produced:
6,501,336

- Daugava Hydro
- Thermal*
- Wind
- Cogeneration (up to 10MW)
- Biomass
- Biogas
- Small Hydro

* Rīgas TEC-1, Rīgas TEC-2, AS "Rīgas Siltums", SIA "Juglas Jauda", SIA "Fortum"

Source: <http://www.ast.lv/en/electricity-market-review>



Gas-to-power potential in Lithuania and Estonia currently seems to be rather limited



- **Lithuania** imports approx. 2/3 of its electricity (Latvia, Estonia, Finland, Sweden and Poland)
- Share of electricity generated from renewables resources in Lithuania in 2017 > 50%
- Lithuanian government recently published a new energy strategy with the goal to phase out fossil fuels



- **Estonia** still produces more than 80% of its electricity from shale oil (Narwa power plants)
- However, share of renewables has continuously increased during recent years due to respective state incentive and support schemes



Several factors influence the burning of natural gas in the Baltic power generation segment



Ambient temperatures

Water levels

Availability of NordBalt cable

Commodity and CO₂ prices

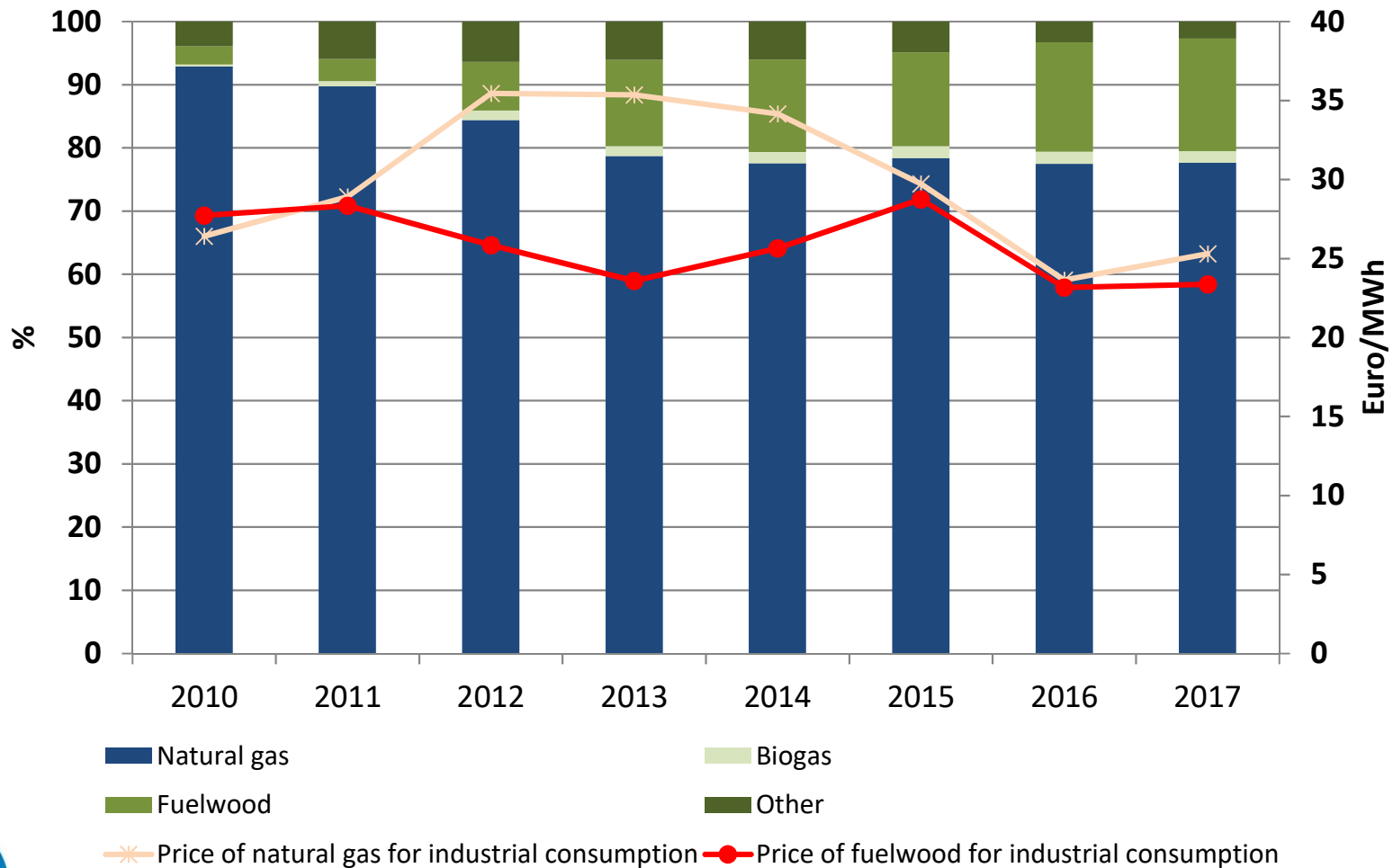
Infrastructure tariffs (e.g. storage tariffs)



Although overall heat production in Latvia increased the share of natural gas in heat production declined



Percentage share of different fuels in installed heat capacity (MW) in Latvian CHP's



Sources: Euroheat & Power, Central Statistical Bureau of Latvia, "Units, conversion factors and formulae for wood for energy", Pieter D. Kofman, 2010

LNG may open up possibilities to develop new demand segments in a stagnating regional market



- Market for **LNG in off-grid solutions** is slowly developing
- First projects successfully implemented in Estonia and Lithuania



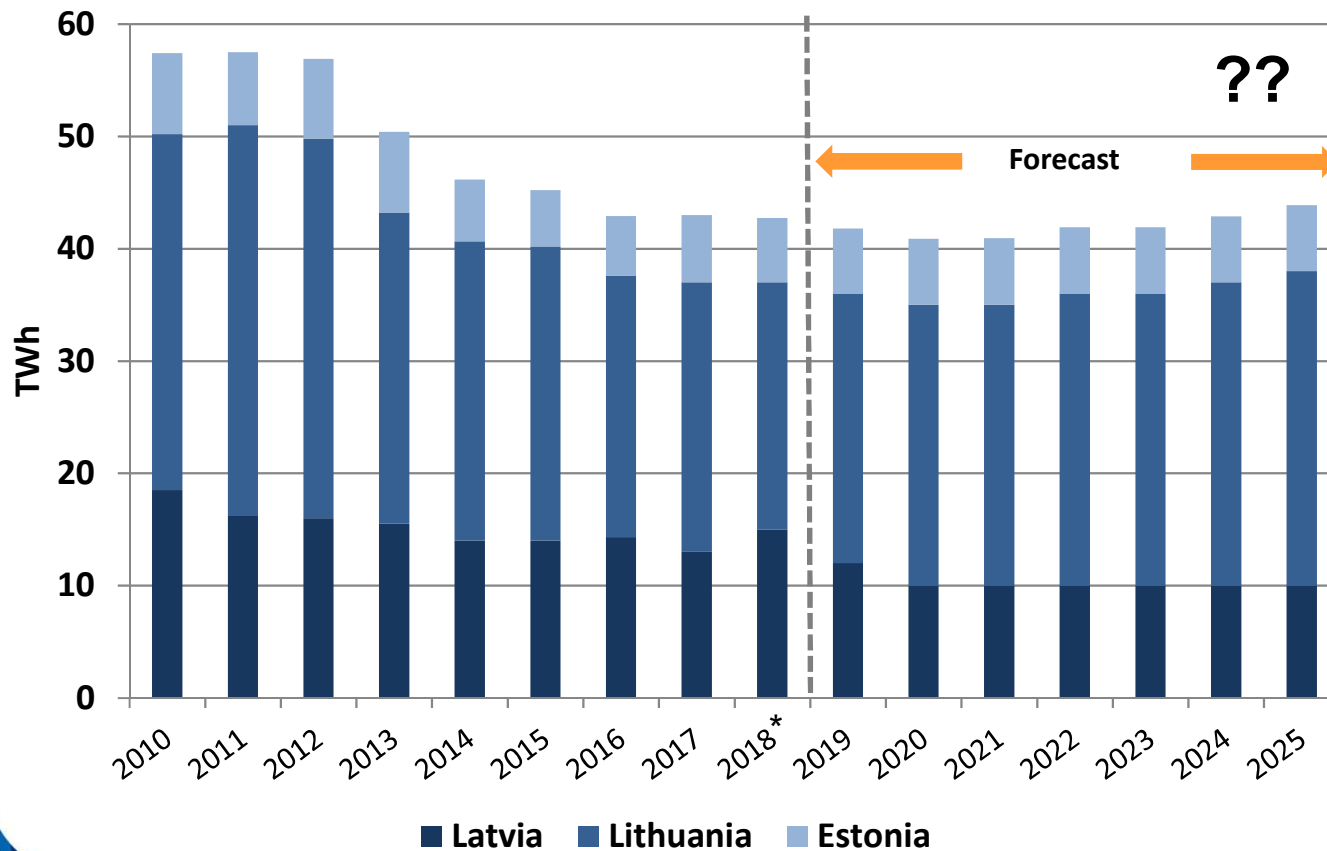
- Potential for **LNG/CNG in transportation** not exploited yet
- So far only small local pilot projects for LNG/CNG in transportation



- Significant growth potential in the region for LNG as **bunkering fuel**
- Since Jan 2017 LNG-fuelled fast ferry is operating between Tallinn and Helsinki



Despite potential new demand segments no quick recovery of natural gas demand expected in the Baltics



* Consumption for Lithuania and Estonia based on preliminary numbers
 Source: Central Statistical Bureau of Latvia; ENTSO; Amber Grid, GRIP

- Due to a high share of renewables and a strong position of natural gas in power generation already today the growth potential remains limited
- International and local climate policies as well as better energy efficiency will keep pressure on demand in other traditional demand segments (i.e. district heating, industry, households)
- **Development of new demand segments requires investments and will take time!**





Thank you!

