



Common Baltic electricity market: challenges and perspectives

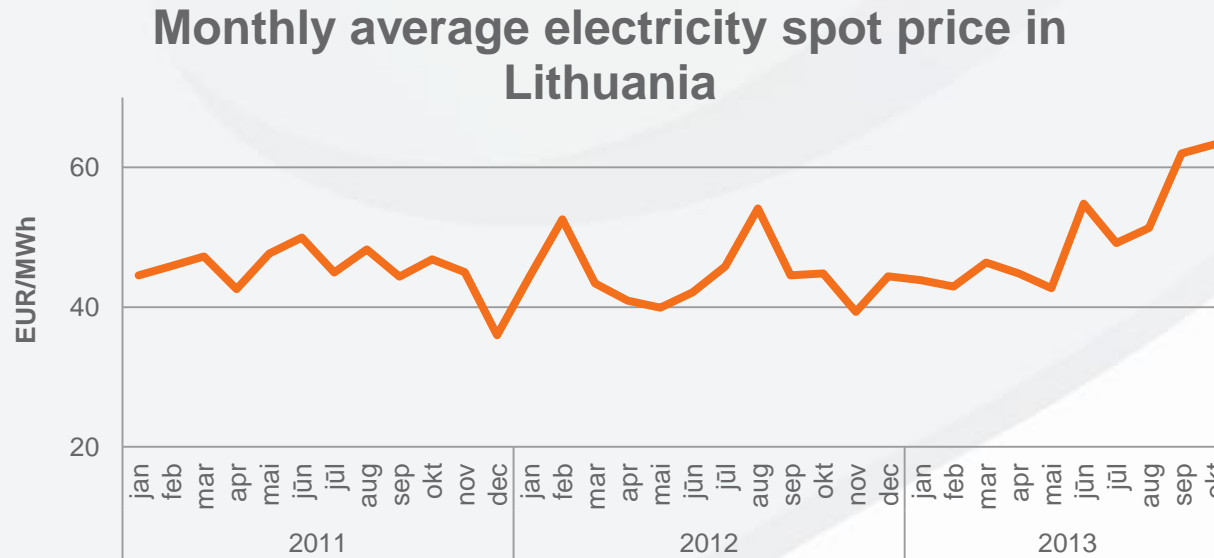
Gatis Junghans, Chairman of the Management Board, Elektrum

Vilnius, 10.10.2013

Topics

- Why electricity market prices in Lithuania and Latvia are so high and volatile this year?
- What are possible solutions to manage price problem in the Baltic market?
- What we can expect in the years to come?

Electricity price in Lithuania reached historical high



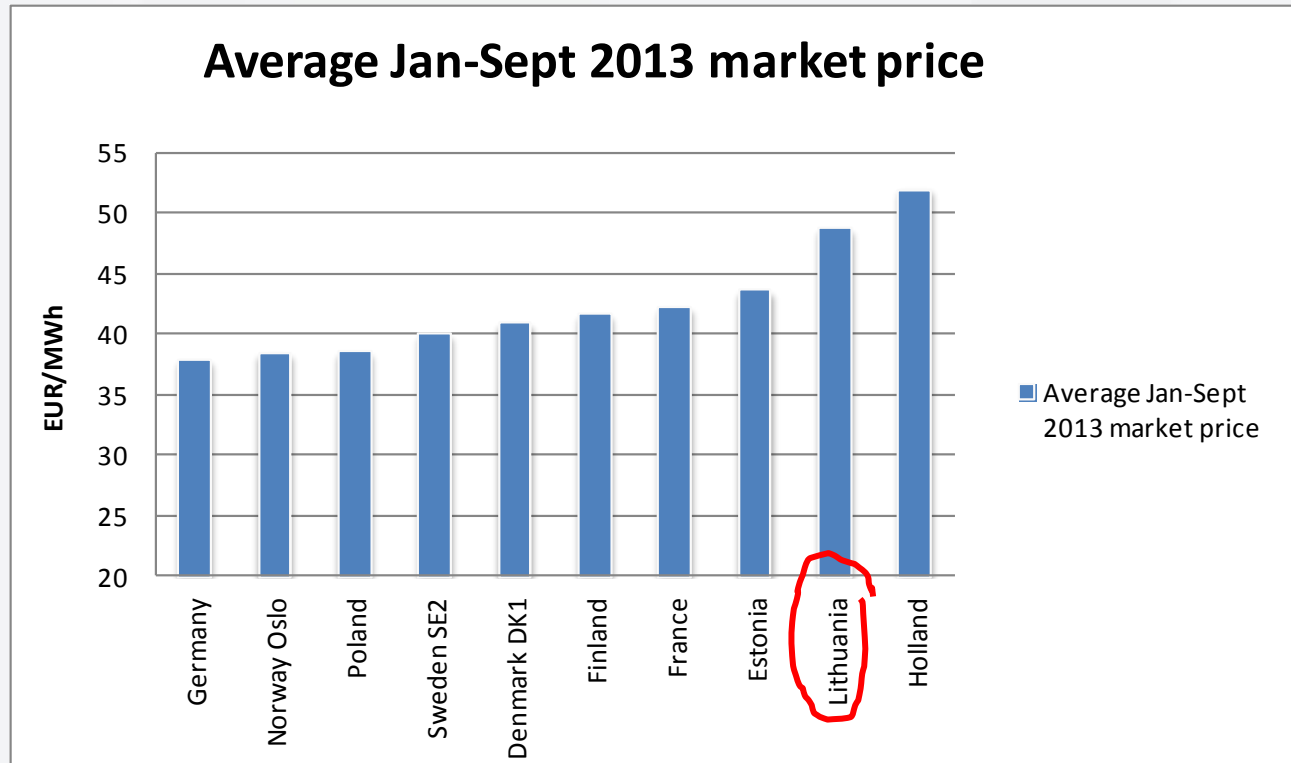
- Average Jan-Sept 2013 market price reached 49 EUR/MWh, 7% increase from similar period in 2012;
- Average Jun-Sept 2013 market price reached 54 EUR/MWh, 16% increase from similar period in 2012;
- Peak prices in 2013 have exceeded 200 EUR/MWh;

Electricity price in Lithuania reached historical high [2]

- Average Jan-Sept 2013 market price in Lithuania (49 EUR/MWh) was 12% higher than in Estonia;
- Average Jun-Sept 2013 market price in Lithuania (54 EUR/MWh) was 18% higher than in Estonia;
- Cost of EST-LIT price difference in Jan-Sept 2013 period to Lithuanian and Latvian buyers was approx. 34 MEUR.



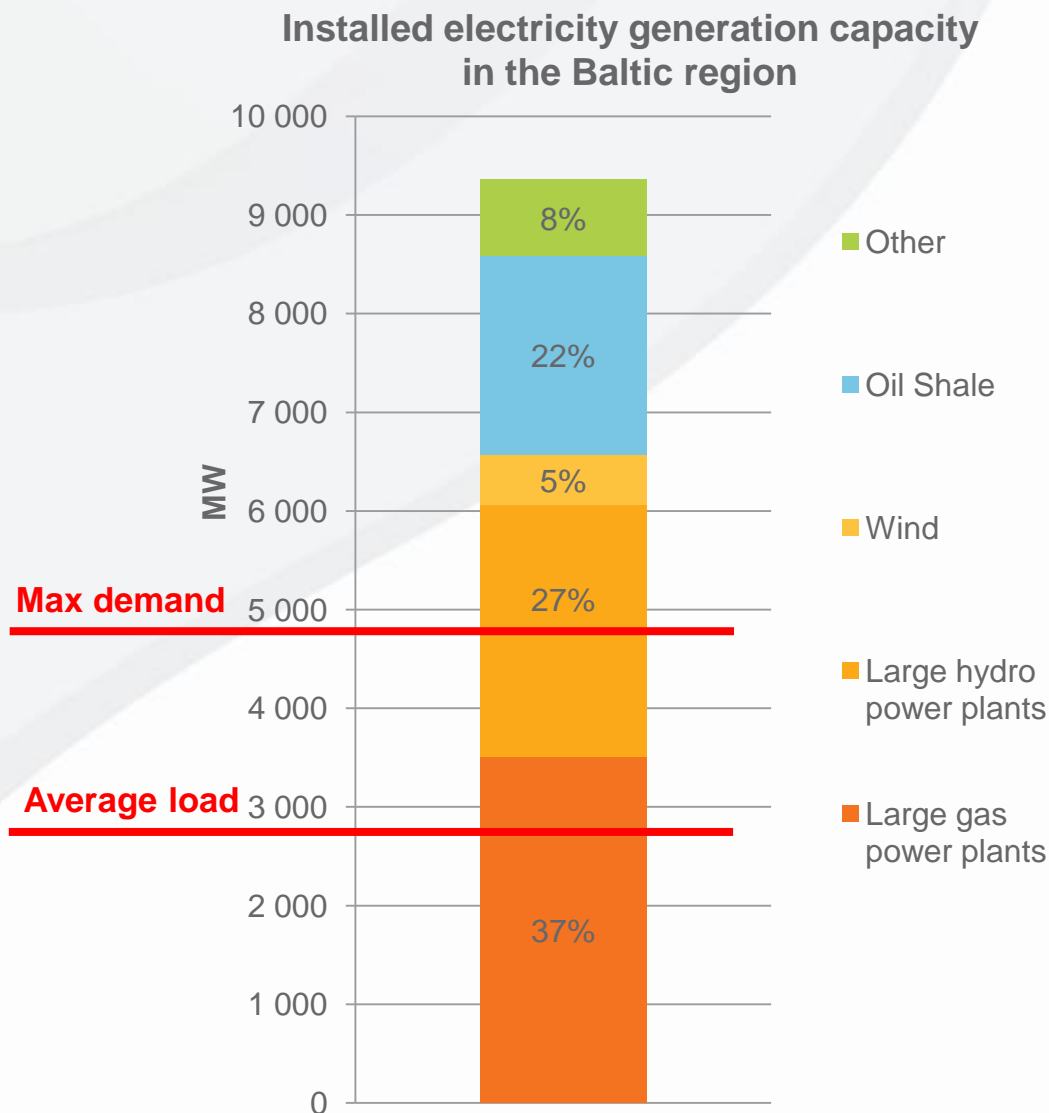
Electricity market price in Lithuania is among the highest in Europe



- Lithuania imports >60% of electricity from lower-price regions (Russia, Nordic market, Estonia) which is priced higher in Lithuania.
- Transmission congestions is the main cause for high electricity price.
- Due to restricted import capacity expensive gas power plants are often pivotal suppliers in Lithuania and Latvia, and thus set a market price.

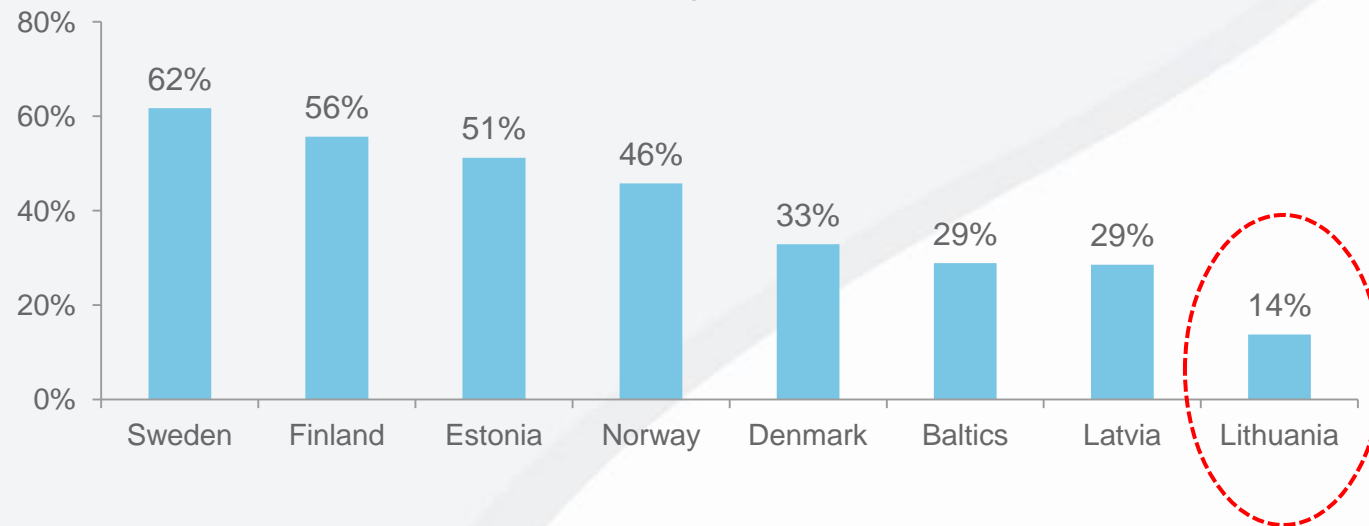
Installed generation capacity in the Baltic region - sufficient

- Installed generation capacity in the Baltics exceed maximum demand 2x;
- Average demand: 25% of installed generation capacity;
- Gas-fired power plants have the least utilization rate (~15%);
- Oil-shale power plants have the highest utilization rate (~50%);
- Gas-fired power plants are important reserve capacity for the region;

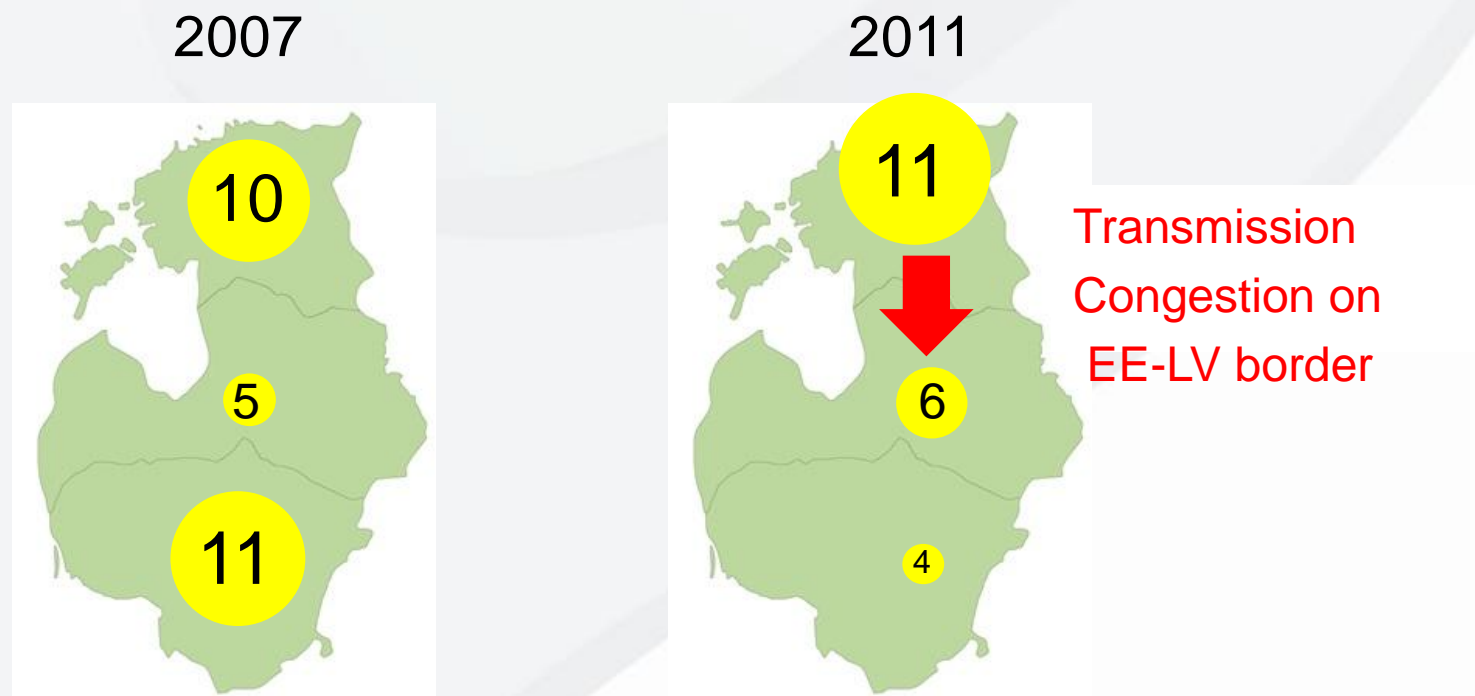


Lithuania has the lowest utilization of installed generation capacity in the region

Average utilization of installed generation capacity (2011)



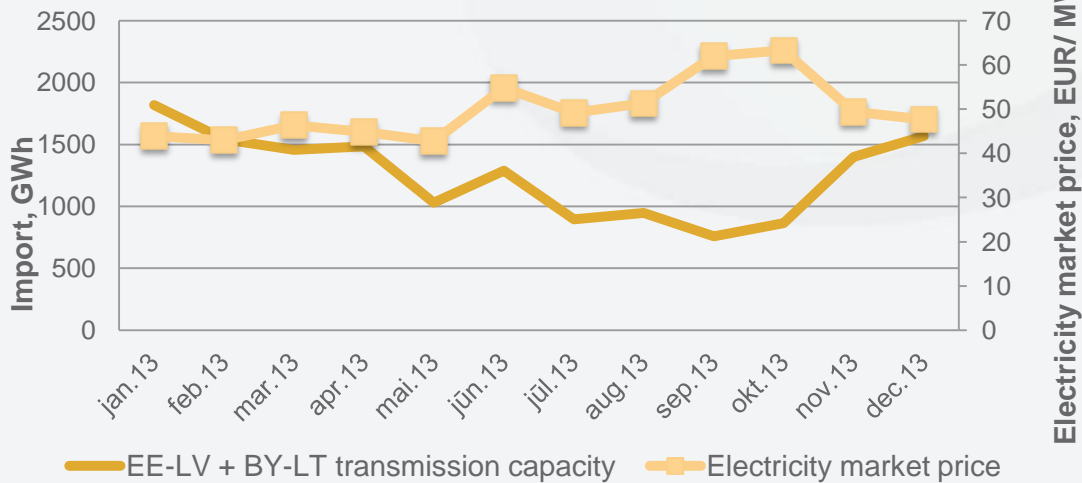
Changes in generation distribution among Baltic states – one of the main cause of intra-Baltic transmission congestions



- Closure of Ignalina nuclear power plant at the end of 2009 has increased cross-border trade in the region.
- Transmission restrictions between Estonia and Latvia usually appear from June till October.

Is cross-border transmission capacity allocated efficiently?

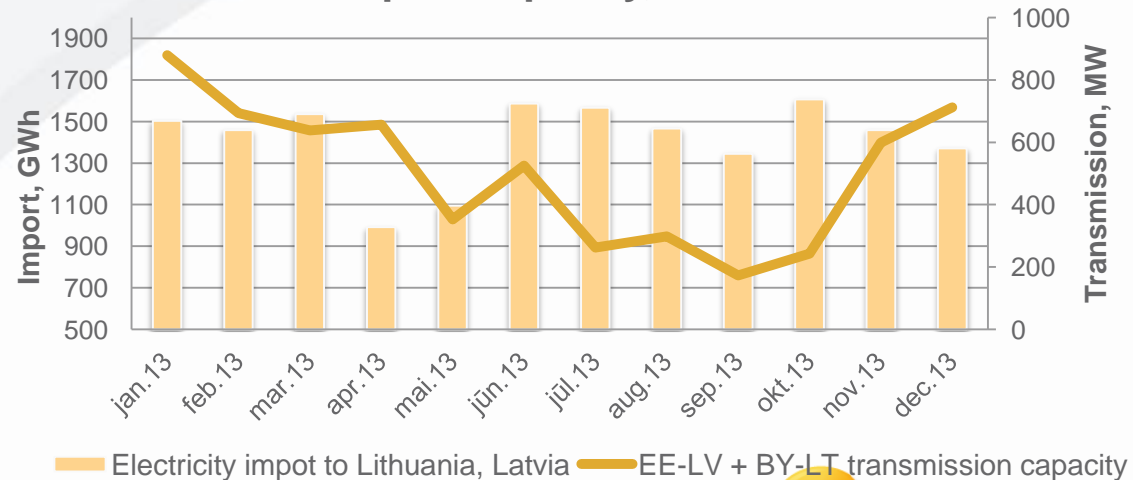
Latvia's and Lithuania's electricity price vs import capacity, 2013



- The bigger the import restrictions, the higher the electricity market price in Lithuania.

- TSOs restrict transmission capacity mostly in the period when a need for import capacity is the greatest, ie. June-October.

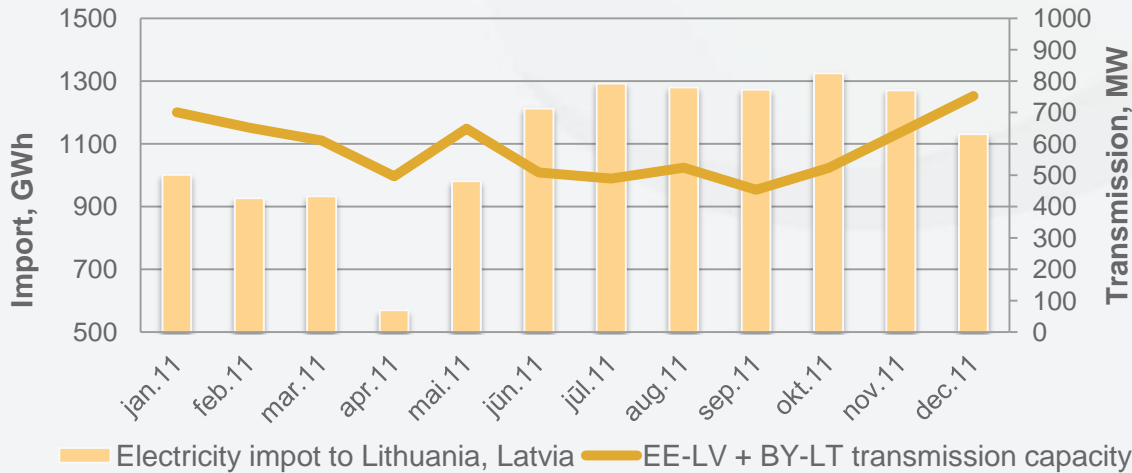
Latvia's and Lithuania's import need vs import capacity, 2013



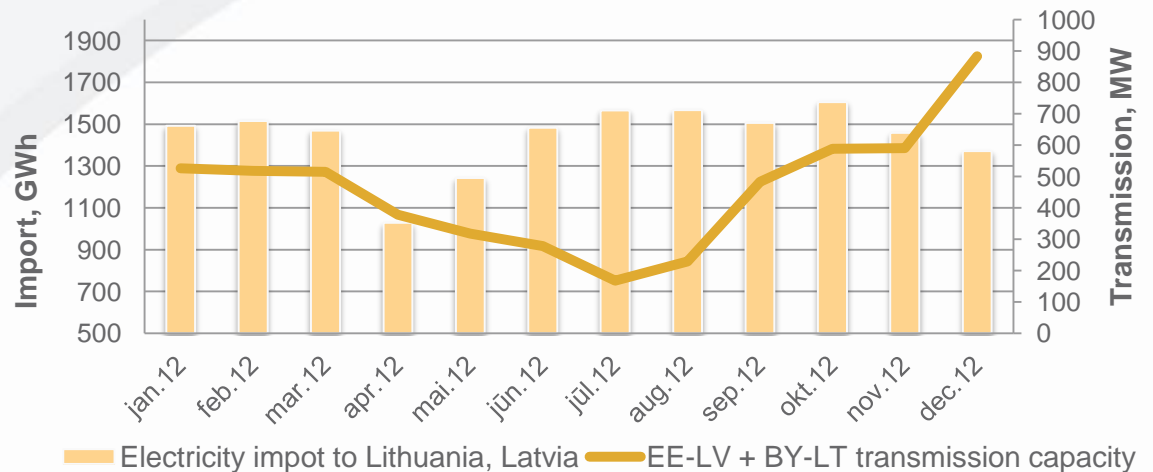
* October-December values are forecast.

Is cross-border transmission capacity allocated efficiently? [2]

Latvia's and Lithuania's import need vs import capacity, 2011



Latvia's and Lithuania's import need vs import capacity, 2012



Who are winners and losers from the high electricity prices?

- **Losers**

- **Consumers.** High spot market prices will sooner or later affect price for end users.
- **Electricity supply companies.** >90% of consumers buy electricity at a fixed price. Supply companies who face difficulties and losses due to high spot price volatility and unpredictability.

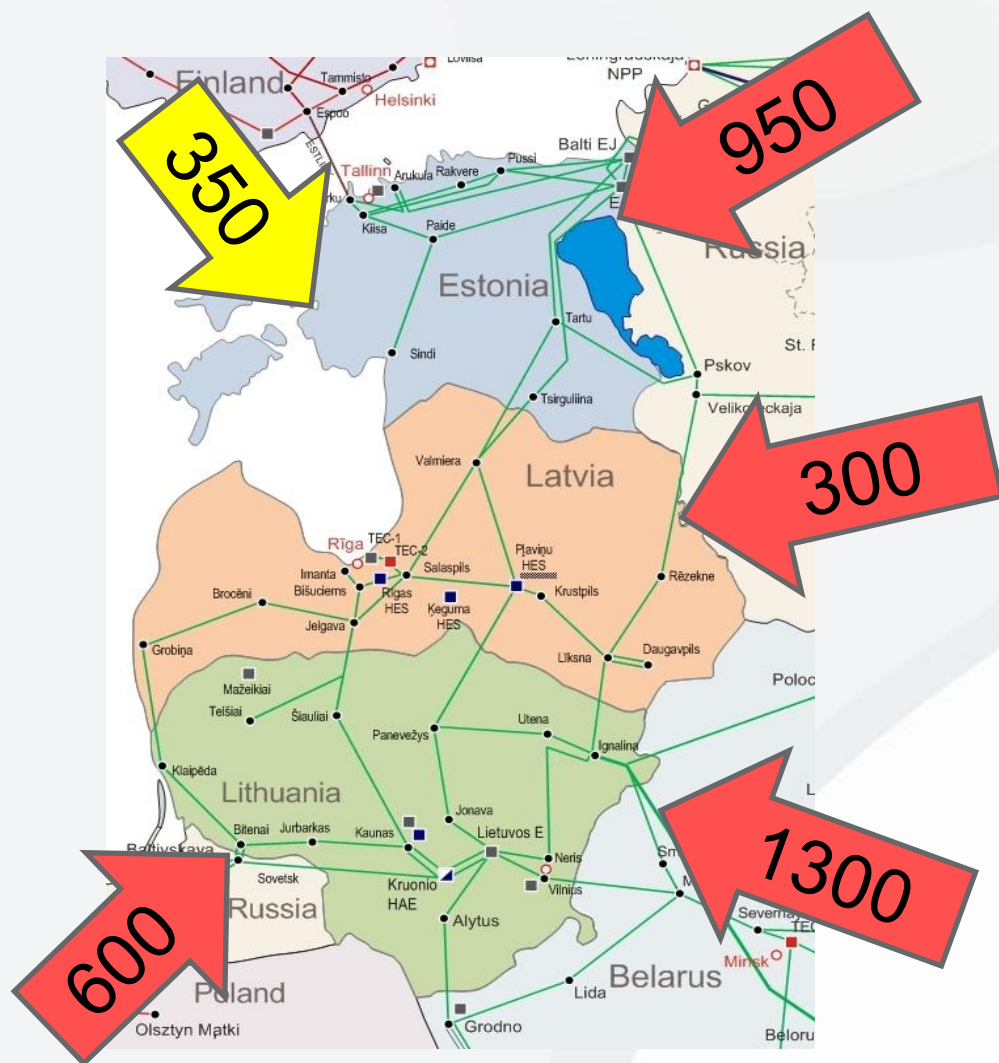
- **Winners**

- **Transmission system operators.** In Jan-Sept 2013 period Estonian and Latvian TSOs received approx. 22 MEUR income from spot price difference.

What are solutions to manage price difference among Baltic states?

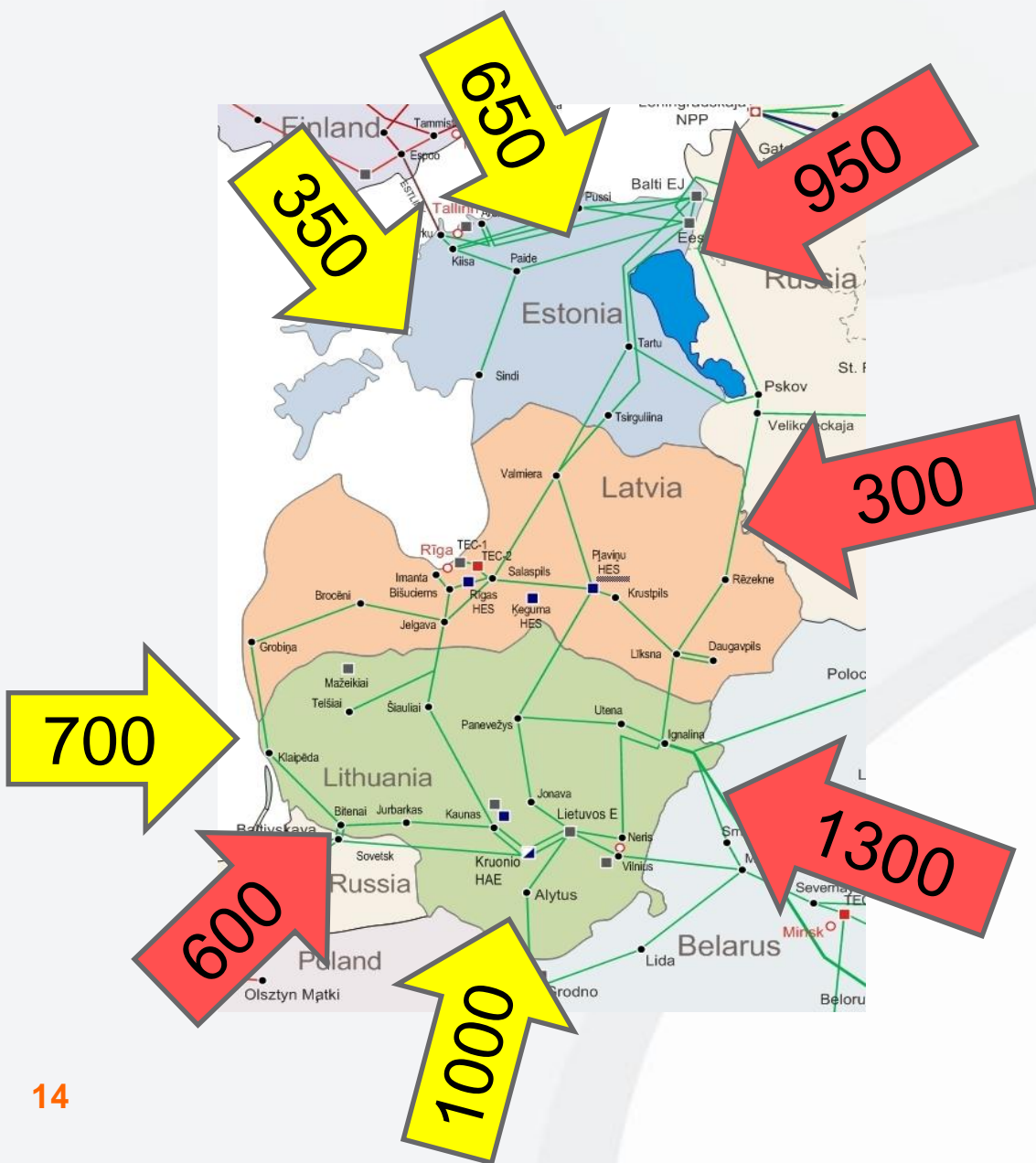
- **Long-term solutions**
 - New interconnections (EE-LV, NordBalt, LitPol).
- **Short-term solutions**
 - **Move transmission line maintenance schedules** in order to increase usable cross-border transmission capacity in periods with lower electricity production in Lithuania and Latvia.
 - **Use more ancillary services** (e.g. generation reserve capacity, counter-trade) in order to decrease TRM (transmission reliability margin) and increase usable transmission capacity.
 - Maintain **reasonable production level** in Lithuania.
 - **Financial market** in the Baltics for managing price risk.

Baltic interconnection capacities in 2013



- From EU: **350 MW**
- From 3rd countries: **3150 MW**
- Usefulness of Estlink interconnection is limited due to transmission limitation on Estonian-Latvian border;
- Usefulness of interconnections from 3rd countries is limited due to monopoly with cross-border deliveries.

Baltic interconnection capacities in 2020



- From EU: **2700 MW**
- From 3rd countries: **3150 MW**
- Baltic region to become transit hub among Nordic-Continental-Russian markets;
- Total installed capacity of external interconnectors would exceed maximum demand in the Baltics;
- Market liquidity should not be an issue anymore.

Wrap-up

- Lithuania and Latvia is experiencing historically high electricity prices in 2013;
- At the moment Baltic market outlook for 2014 does not look much different from 2013;
- There are no financial instruments to manage price risk in Latvia and Lithuania;
- But, there are several unutilized solutions to the price problem. Beneficiaries of the price difference (TSOs) should be urged to evaluate whether the cost of high price to consumers is reasonably balanced with the cost of measures applied to minimize price difference in the region.

THANK YOU FOR ATTENTION

WWW.ELEKTRUM.LT

GATIS.JUNGHANS@LATVENERGO.LV