



**Baltic Transmission System
Operators on barriers, future
challenges and solutions creating EU
integrated electricity market**

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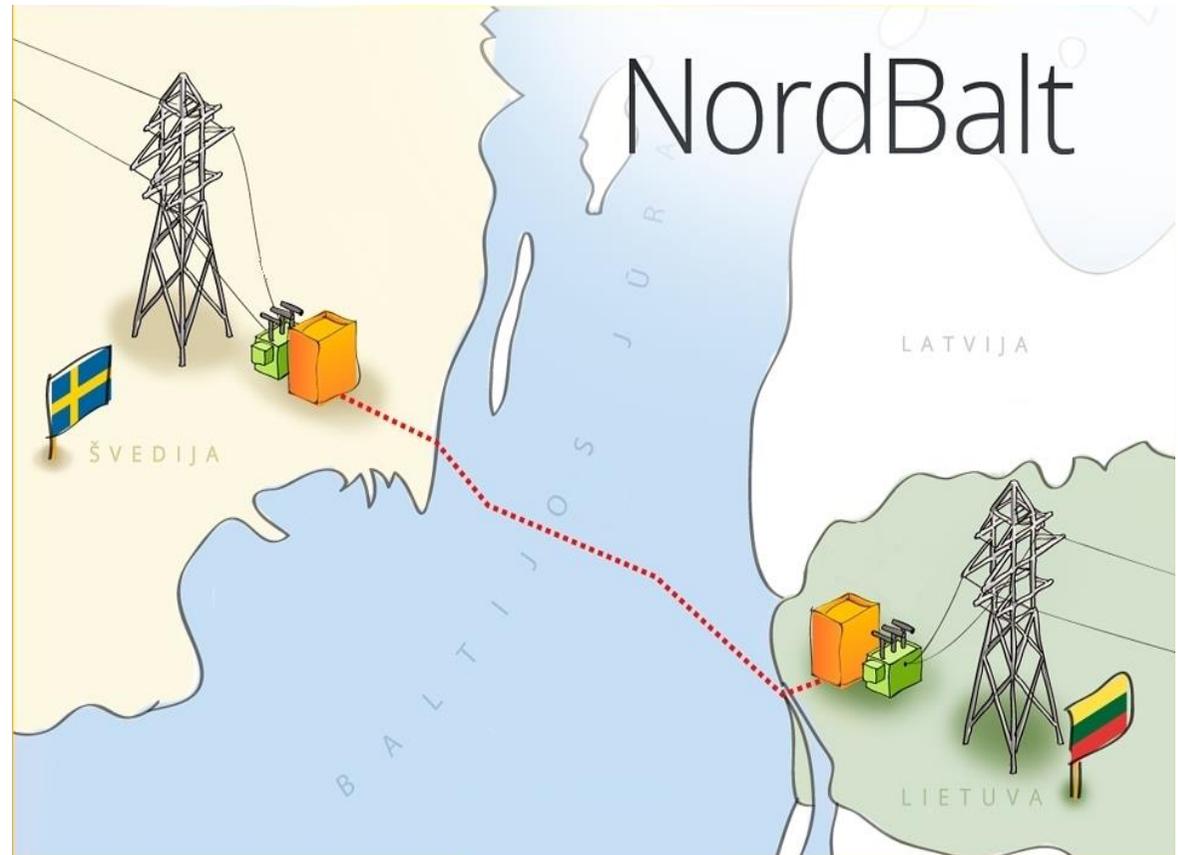


Litgrid projects

- Connecting to the European electricity **infrastructure** – NordBalt, LitPol Link
- Internal **grid** development
- Becoming a part of the common European electricity **market**
- Integration to the **European Continental Network**



NordBalt



HVDC submarine/land cable – 450 km

Capacity – 700 MW

Link in operation – 2015

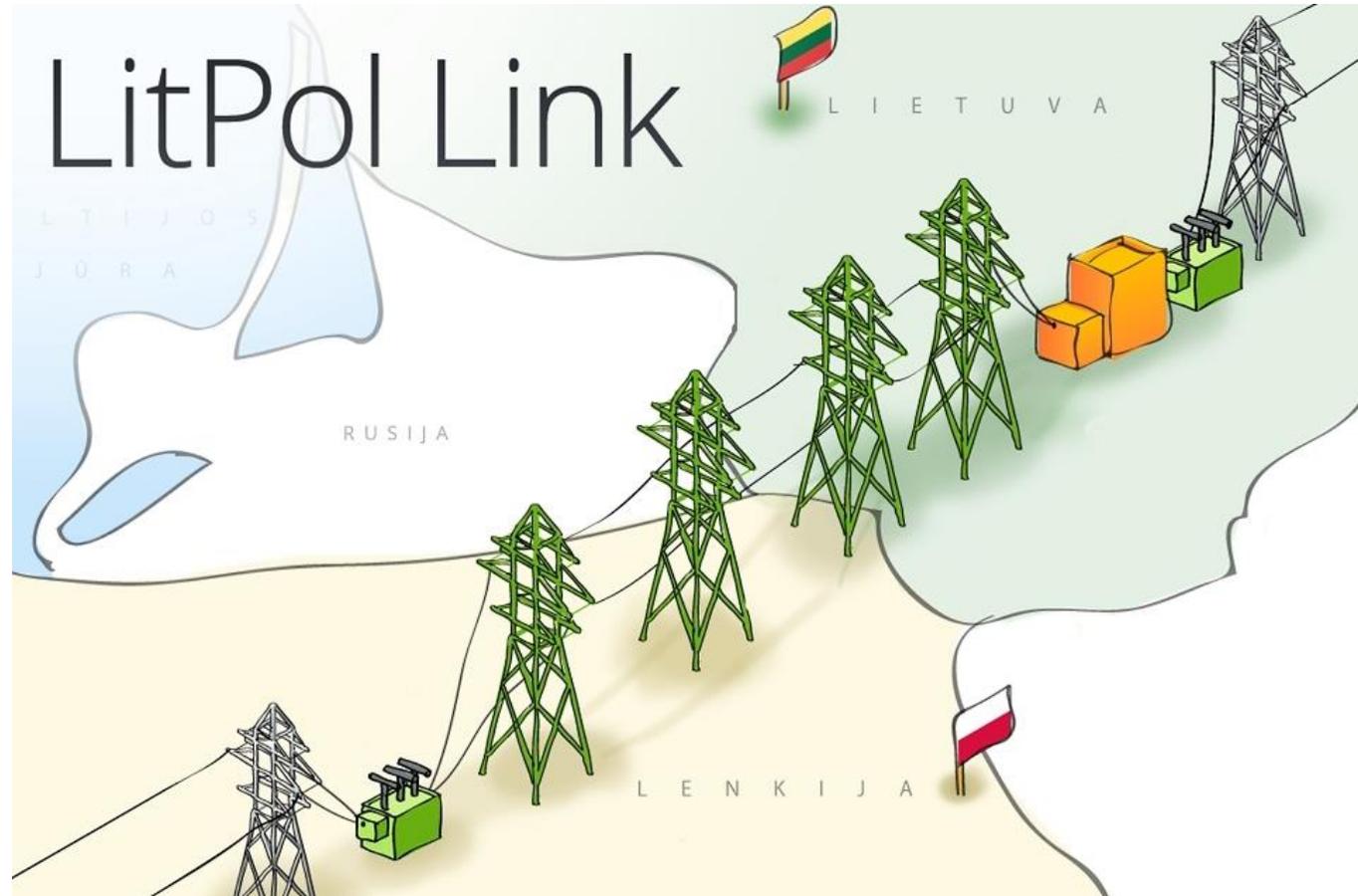
Prel. cost – 552 mill. EUR

LitPol Link



High-voltage double-circuit overhead power line length – ~150 km

Capacity – 1000 MW



Link in operation:

1st stage – 500 MW by 2015

2nd stage – 500 MW by 2020

Prel. cost – 371 mill EUR

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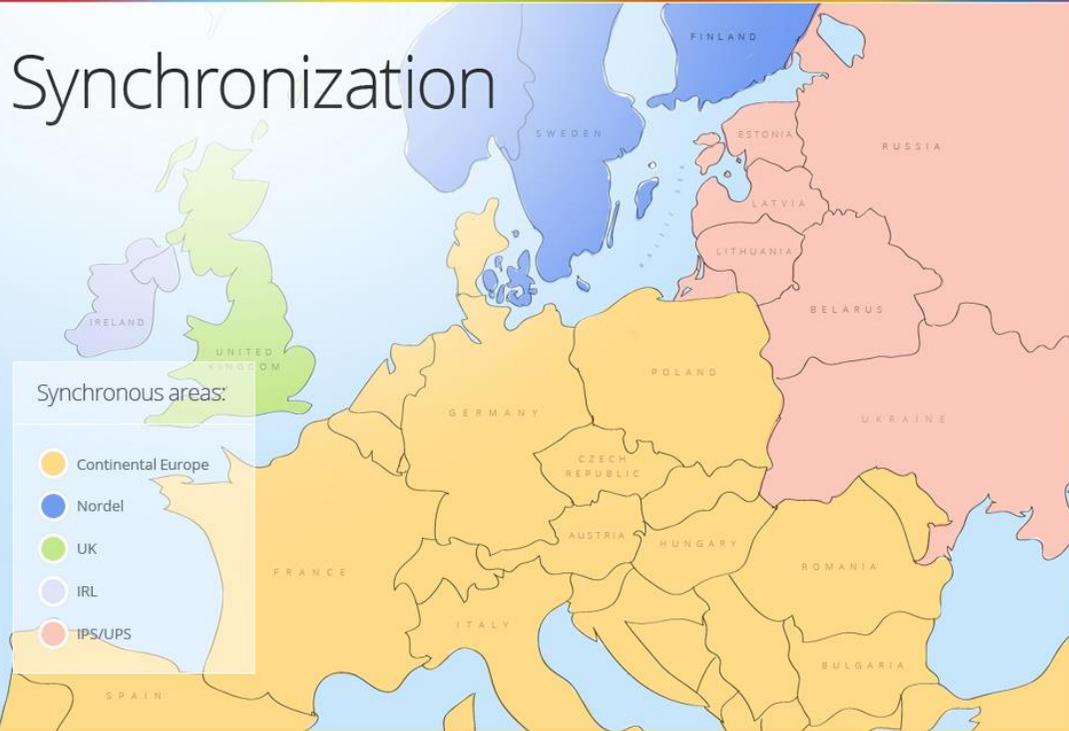
Synchronous interconnection with European Continental Network

Now

Future

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Synchronization



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Synchronization



Baltic States integration to the EU internal electricity market

Currently the feasibility study on the interconnection variants for the integration of the Baltic States to the EU internal electricity market is in preparation process.

Main goals of the study:

1. Investigate main technical aspects of different interconnection scenarios;
2. Identify limiting factors and propose necessary measures;
3. Evaluate associated costs and socio-economic impact;
4. Evaluation of future electricity markets;
5. Assess legal aspects in different scenarios;
6. Provide a possible timetable towards synchronous operation with Continental Europe Network;

Integration into Nordic and European electricity market

**2012 06 18 Nord Pool Spot
Lithuanian bidding area was established**

Latvia is joining Nord Pool Spot 2013 06 03

- A common Nordic electricity market secures a transparent wholesale electricity price, fair trade and equal trade conditions for all market participants
- Until 2016 Lithuania will become a part of European electricity market where the price is based on transparent and objective criteria

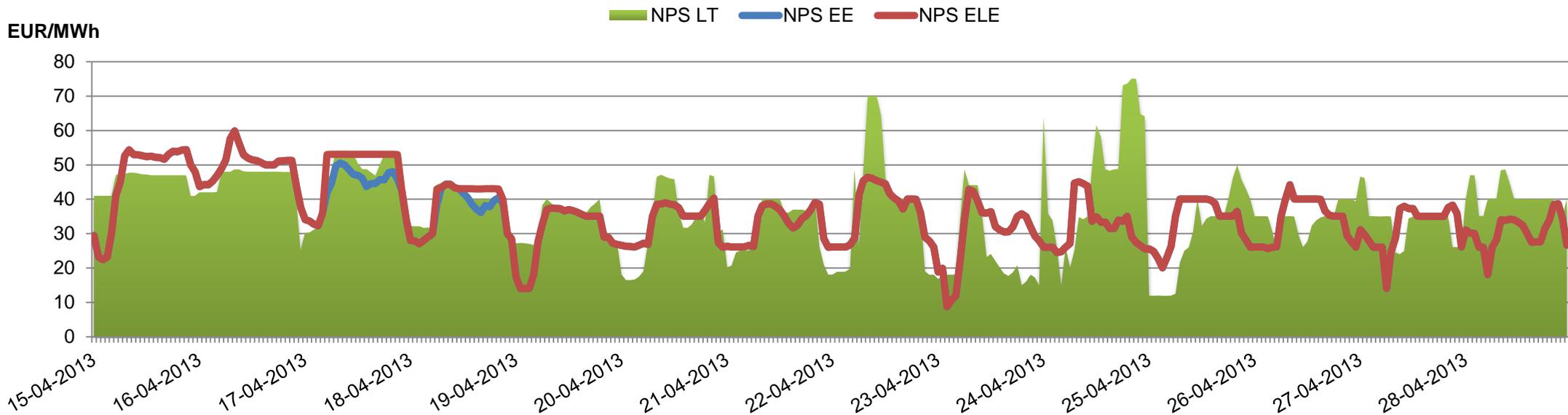


Electricity trading in Baltic countries



- NPS ELE and NPS LT prices should be equal due to substantial capacity between Lithuania and Latvia.
- But prices differ and sometimes too much.
- As NPS ELE and LT are not connected, the prices are defined by traders, but not market itself.

Electricity prices in Nord Pool Spot LT, EE and ELE zones



Common Nordic-Baltic electricity market

After establishment of Nord Pool Spot Latvia (NPS LV) in 2013 06 03 electricity trading will be optimized in the Baltics:

- Electricity will be sold or purchased only in the area it is physically generated or consumed.
- Power exchange will make trading between the countries.
- Optimal electricity flow will be ensured – from lower to higher price area.

Correlation between electricity prices in Estonia, Latvia and Lithuania will increase and will equalize as much as will be possible due to interconnection capacity.

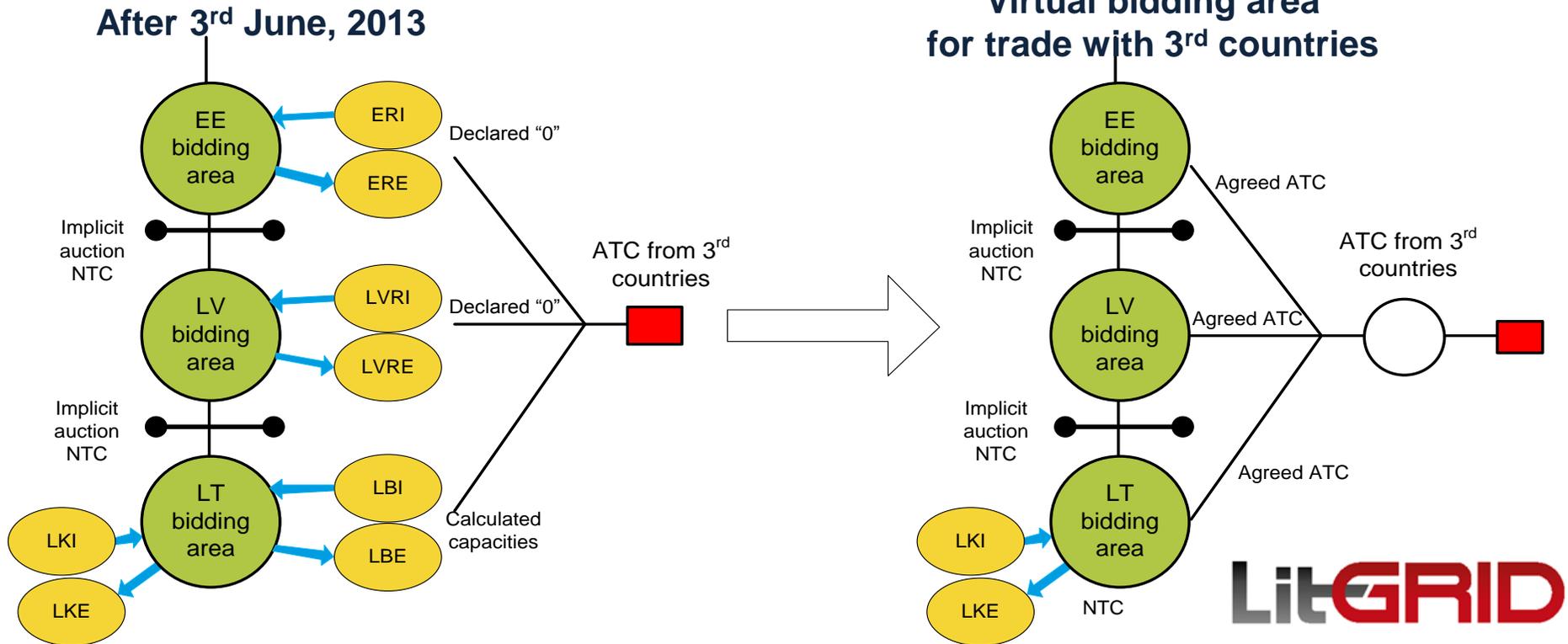
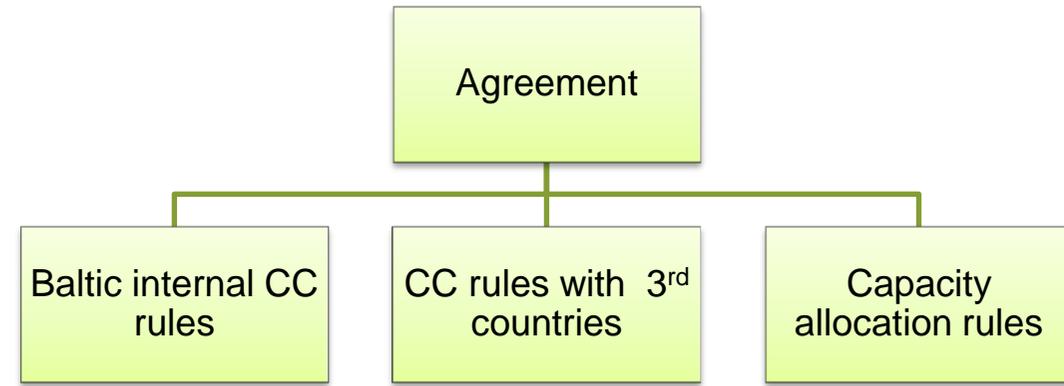
After NPS LV establishment – no explicit auction between Estonia and Latvia – higher risk for financial trade from Estonia towards Latvia and Lithuania.

Agreement on capacity calculation and allocation

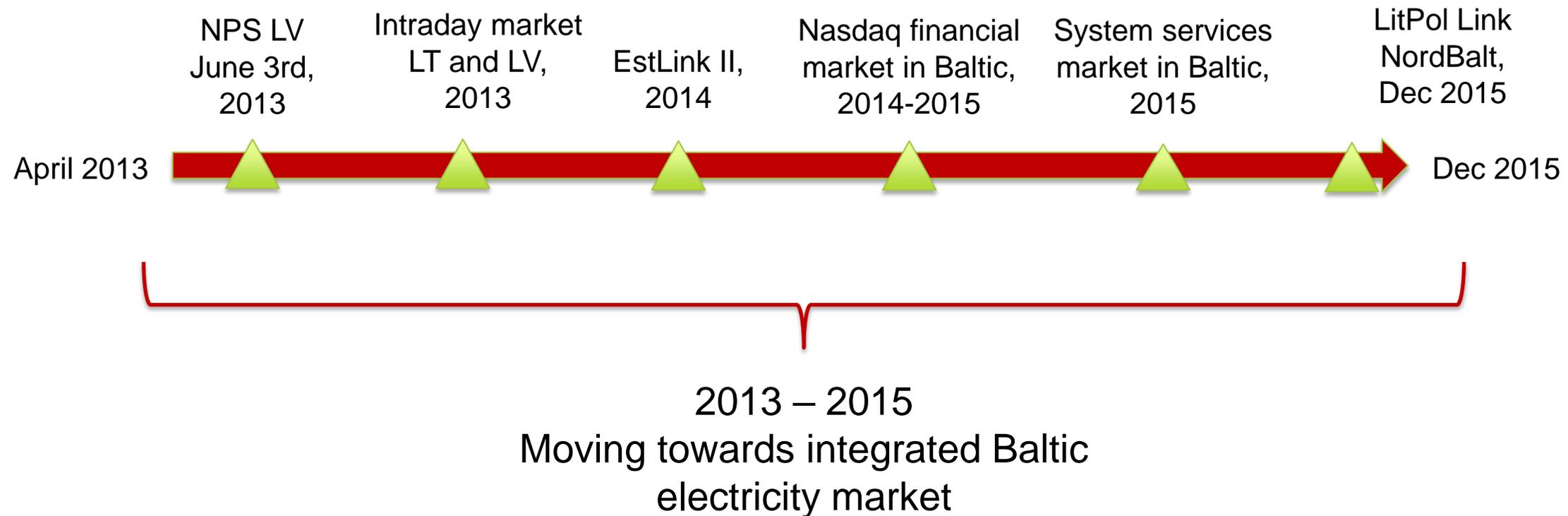
On 15th of March 2013 Baltic TSOs' signed Baltic cross-border trading capacity calculation and allocation rules.

Main goals of these rules are:

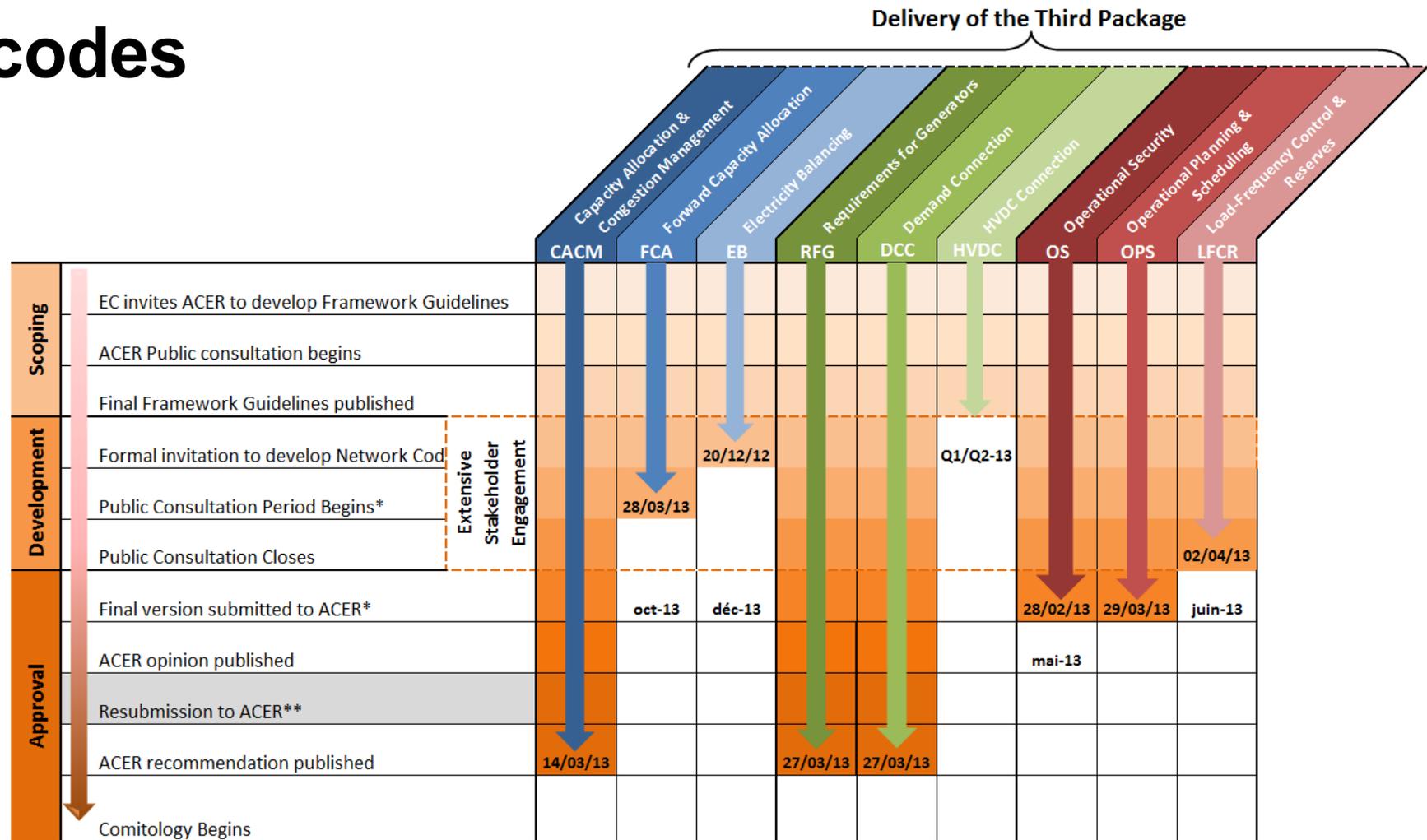
- Ensuring that maximum transmission capacity between power systems of Estonia, Latvia and Lithuania would be made available to the market;
- Ensuring coordinated approach towards trade with 3rd countries.



Next steps in Baltic market integration



Network codes



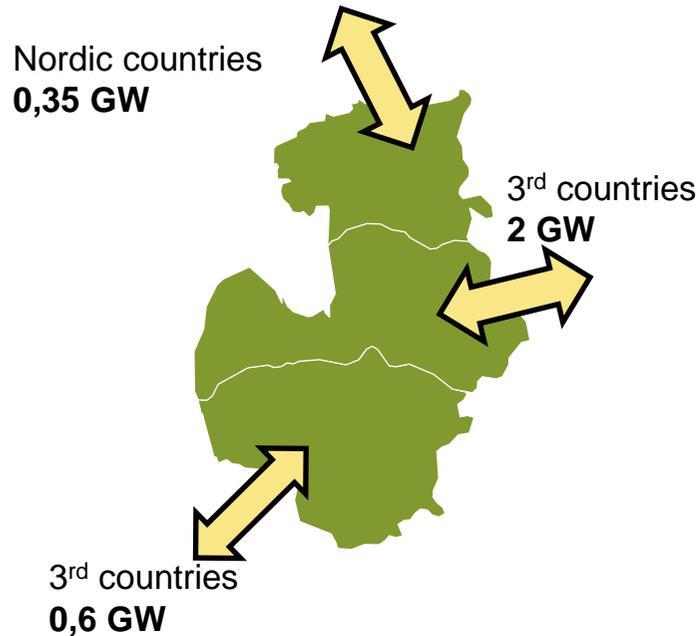
Disclaimer: The purpose of this chart is to provide overall transparency of ENTSO-E's network code development. All forward-looking dates are provisional until confirmed. Stakeholders will be informed and invited to all confirmed events by means of official communication

* In accordance with ENTSO-E's Network Code Development Process, an internal re/drafting and approval is done before public consultation and submission of the code to ACER.

** In case ACER does not attach a recommendation to its opinion, ENTSO-E has the opportunity to resubmit the code

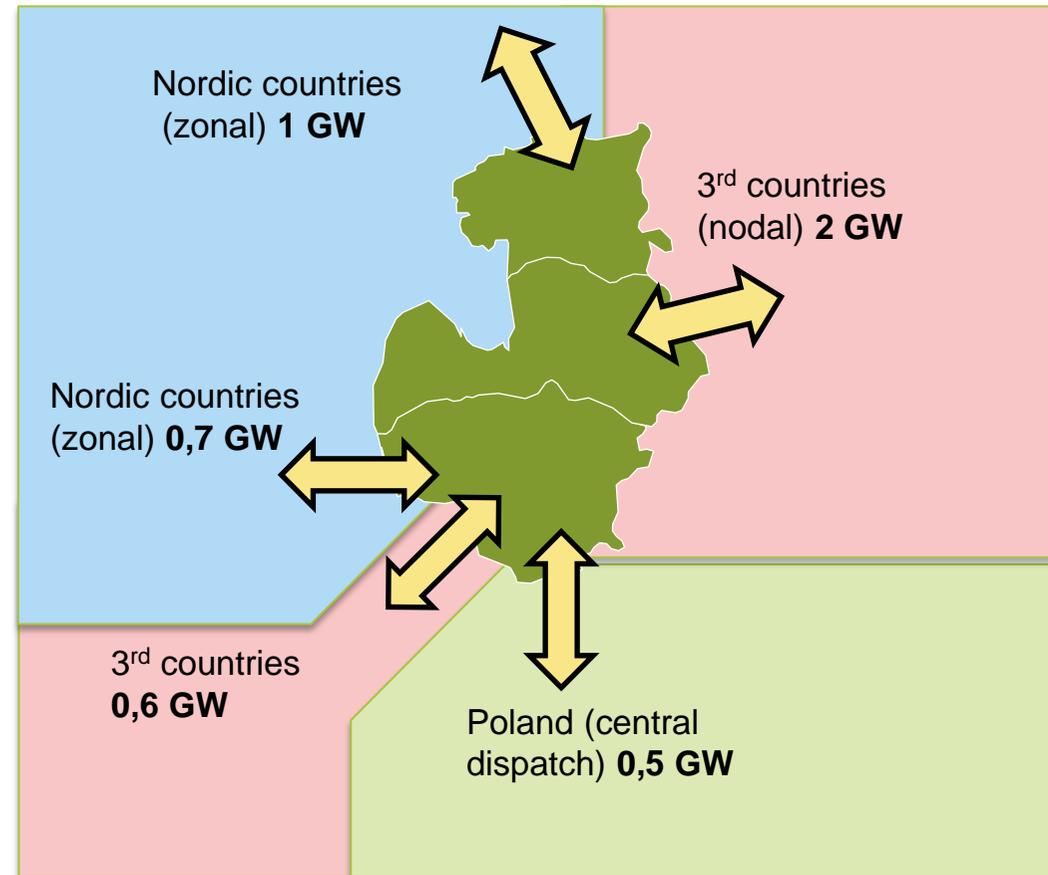
- Electricity market, System development and System operation NCs
- NCs will become binding
- Lithuania will have to be ready to implement NCs

Baltic system and market – hub of flows



2013

Baltic demand and cross-boarder capacity
4,5 vs 3 GW



2016

Baltic demand and cross-boarder capacity
4,9 vs 4,8 GW

Lithuania could become Nordel, IPS/UPS and Continental Europe systems' crossroad

Thank you!

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