

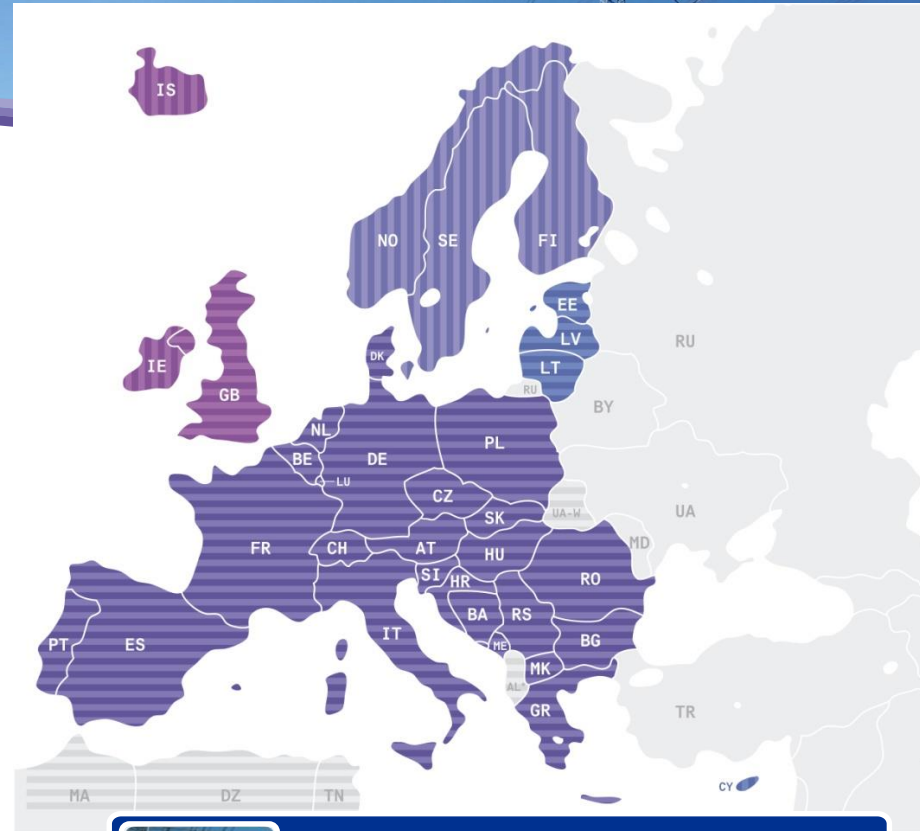
# ENTSO-E's Ten Year Network Development Plan

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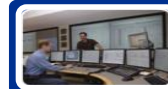
Baltic Maritime Spatial Planning Forum, June 17-18, Riga

# International TSO cooperation: we are ENTSO-E

- 41 TSOs from 34 countries
- Founded on 19 Dec 2008 and fully operational since July 2009
- A trans-European network
  - 525 million citizens served
  - 828 GW generation
  - 305,000 km of transmission lines
  - 3,400 TWh/year demand
  - 400 TWh/year exchanges
- Replaces former TSO organisations: ATSOI, BALTSO, RTSO, NORDEL, UCTE, UKTSOA



System Development



System Operation



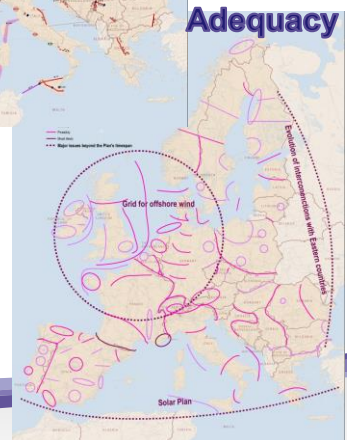
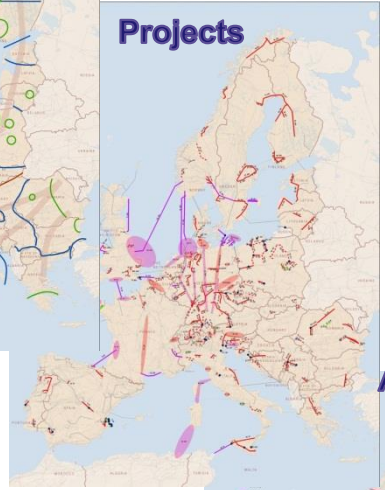
Electricity Market



Research and Development

# Why a European Ten-Year Network Development Plan?

Regulation (EC) 714/2009 – “In order to ensure greater transparency regarding the entire electricity transmission network in the [Union], the ENTSO for Electricity should draw up, publish and regularly update a non-binding [Union]-wide ten-year network development plan”



**Transparency**

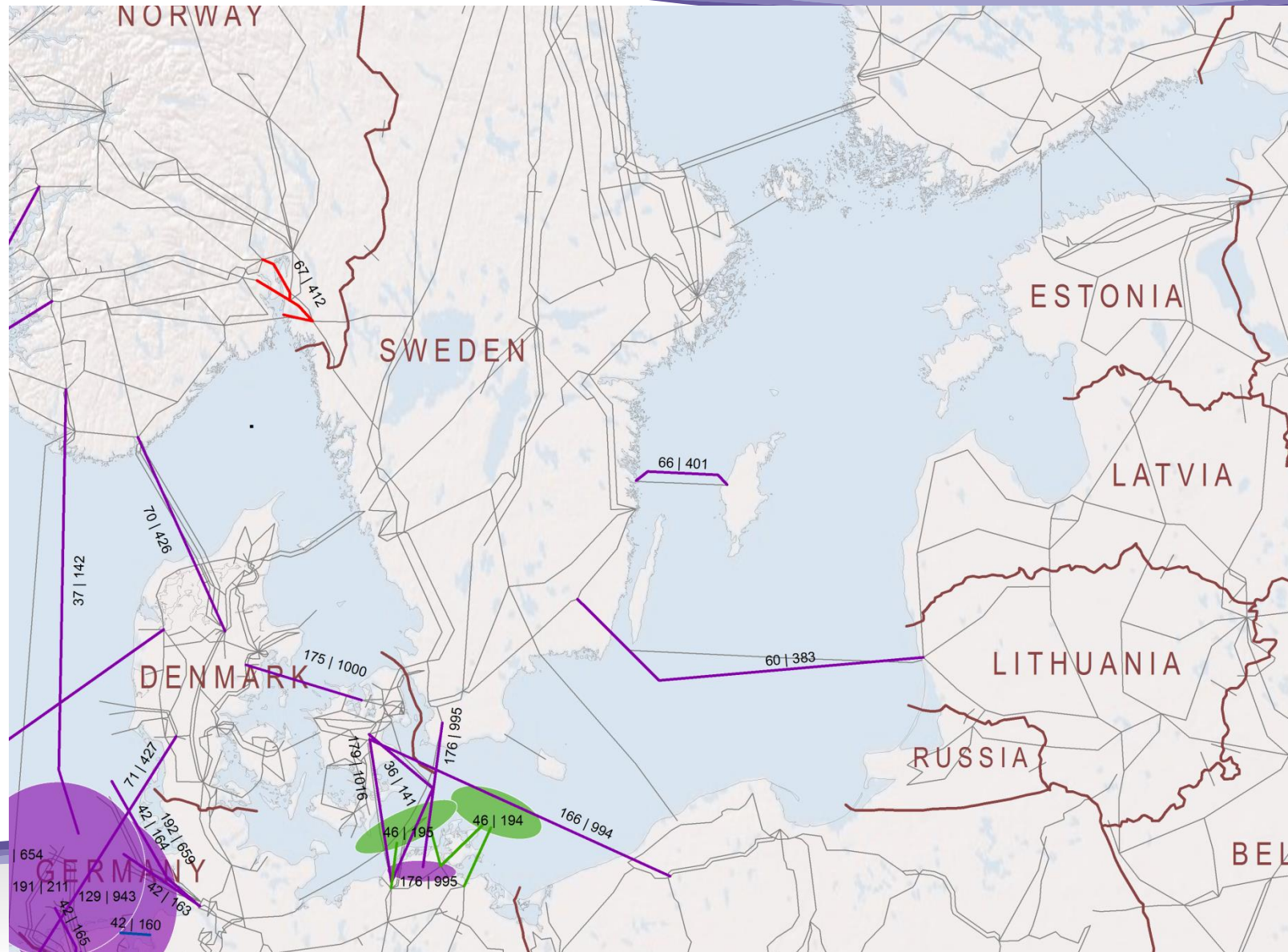
**TSO cooperation platform**

**Stakeholder involvement**

**Inform EU policy and investment decisions**



# Planned/under consideration and existing electricity interconnections



# Difficulties encountered during planning process

- Applying for construction and environmental permits is different in each country but has not caused issues during construction process, but planning process is contradictory and conflicting in different countries.
- Planning procedures of interconnections, impacting several countries should be harmonized and defined, how different countries authorities communicate to each other; what are requirements in different countries.
- Common guidelines (best practice) could improve the process, as harmonization of legislation could take time.
- Legislation concerning crossings (cable with cable and cable with gas pipeline) is missing or inadequate in several countries. There are some recommendations available, but regulations how and if permission for crossing should be asked is missing
- While construction near the existing cables there should be a contact to the owner of the cable, possible crossings need to be planned in due time in advance.
- Undersea installations, commissioned during recent decade are included into navigation maps, but information concerning earlier installations is often missing – it is extremely difficult to identify the owner of the cable.

# The protection and considering of the existing cables in all sea-actions

- There is a ban for anchoring on top of the cables, and they are marked in the sea-maps
- There is often also ban for fishing (trawling) unless the cable is buried at the bottom of the sea
- All ships should have updated maps at their disposal
- At Baltic Sea there are almost every year some cables that are damaged due to anchors, and the electricity transmission is cut for quite a long time, typically 1-3 months
- The outage of electricity transmission causes bottlenecks in the electricity markets and raises the regional market price for electricity causing socio-economic losses for the society. **Annual loss to the society can reach hundreds of millions euros!!!**
- The cable faults caused by external participants are often also difficult legal cases, which can have long processing time



Thank you!