ENTSO-E's Ten Year Network Development Plan

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Reliable Sustainable Connected

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TYNDP 2014 regonal assessment – provisional results

- **Main purpose of the workshop: discussion of results of two Visions – Visions 1 and 4**
- **Based on discussions today, possibility to take your feedback into account in assessment of Visions 2 and 3**

- **All results of assesment, presented today, are <u>provisional.</u>**
  - Coordination with other regional groups in progress
  - Internal and central quality check in progress

Baltic Sea Regional Workshops

- April 2013 – Early consultation of TYNDP 2014 inputs and expectations
- ~~Nov - Dec 2013 - Regional Investment Plan and TYNDP~~
- March 2014 - Regional Investment Plan and TYNDP, Provisional Results of Visions 1 and 4

ENTSO-E workshops

- July 2013 – Workshop on the 2030 Visions - final visions outcome
- Nov 2013 - TYNDP 2014 Provisional Results of Vision 1
- June 2014 - TYNDP 2014

Baltic Sea Workshop in 2013 - Main Messages from Stakehoklders (1)

Market design

- Huge influence of market design/agreements on paper to the physical flows and needed investments.
- Suggestion to ENTSO-E is to take into account the impact of the market models and model design.
- Need to change market design and capacity mechanisms. Sustainable energy market should be a goal.

3rd countries

- If there are too many interconnections to neighbouring systems with different market design and taxes, local producers do not have equal trading possibilities.
- European legislation is not handling properly electricity market interaction with 3rd countries. Baltics have huge capacities between Russia and it is not utilized at their potential with current setup of electricity markets in Baltic Sea Region (NPS) and Russia.

RES integration

- Heavy impact on import and export between different regions in Europe caused by wind and solar generation
- Huge difference in installed capacity and produced energy
- CO2 price too high – demand figures not in line with electricity price, derived from high CO2 price
- Ramping issues – shall be taken as an issue, but currently not studied in detail in TYNDP

Baltic Sea Workshop in 2013 - Main Messages from Stakehoklders (2)

Market integration

- Market integration is unavoidable
- One of the idea of PCI is to speed up the development/construction proces for important projects.
- Cost allocation is a complicated approach and hard to decide the final solution.

Public acceptance

- ENTSO-E should include analysis of concequences caused by delays in commissionig planned interconnection capacities. What are consequences to the market, societal costs and SoS

TYNDP proccess

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

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ENTSO-E association

Key activities set out in Regulation 714/2009 part of the 3rd Internal Energy Market Package)

- Deliver **network codes**
- Deliver **Ten Year Network Development Plan** including an system outlook and adequacy reports
- Deliver crucial aspects of **market integration** ("market coupling")
- **R&D Plan** (fully included in EEGI – European Electricity Grid Initiative, part of the SET Plan)

Through its members deliver the **infrastructure** to:

- enable markets to function,
- secure energy supply,
- meet climate change objectives through connecting RES

The 3rd Package defines the TYNDP

Non binding
Every 2 years

Regulators check consistency

Binding
Every year

EU-TYNDP

- Generation adequacy outlook 5 yr up to 15yr (→ 2025!)
- modelling integrated networks
- Scenario development
- Assessment of resilience
- Based on reasonable needs of system users
- Identify investments gaps
- Review barriers to increase cross border capacities arising from approval procedures

Build on nat. gen. adequacy Outlooks and invest. plans

Take into account

Nat. TYNDPs

- Existing and forecast supply demand
- Efficient measures to guarantee adequacy & SoS
- Indicate main transmission infrastructure to be built
- Based on reasonable assumptions about evolution of generation
- Supply consumption and exchanges

Non binding
Every 2 years

Regional Investment Plans

Take into account

Take into account

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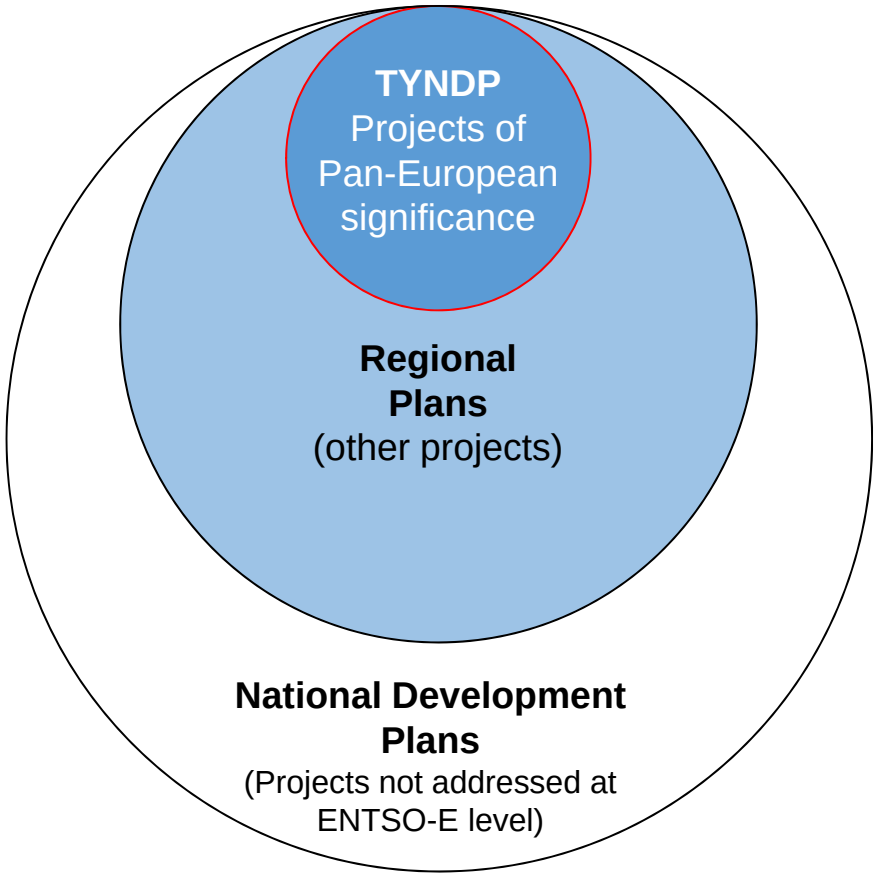
What cover the projects of Pan-European significance?



Definition of Projects of Pan-European Significance

- Meeting the EU energy targets: RES, SoS, IEM
- Voltage & capacity thresholds

From TSOs & 3rd parties

- Non-discriminatory procedure

Basis for further selection of Projects of Common interest

Main impact on the TYNDP

1. Inclusion of the 3rd party projects in the TYNDP
   - The new procedure for including 3rd party projects in the TYNDP

2. Inclusion of storage in the TYNDP – starting with TYNDP 2014
   - The storage projects must shall assessed starting with TYNDP 2014

3. New CBA methodology – applicable starting with TYNDP 2016
   - The final version submitted to the EC on 16 November 2013

4. Consistent and interlinked electricity and gas market and network model
   - By 31 December 2016

PCI process

ENTSO- E	Project promoters	NRAs *Electricity*	EC Regional Groups	ACER	European Commission
• Prepare TYNDP for electricity	• Submit projects for EC • Criteria • CBA	• Check application of criteria • Cross-border relevance	• Evaluate projects • Rank • Adopt regional lists	• Opinion • Cross-regional consistency	• Adopt Union-wide list of projects of common interest (no ranking)

General criteria

Priority corridor implementation

Economic viability

Crosses border or has cross-border impact

Specific criteria

Market integration

Security of supply

Sustainability

→ Cost-benefit analysis

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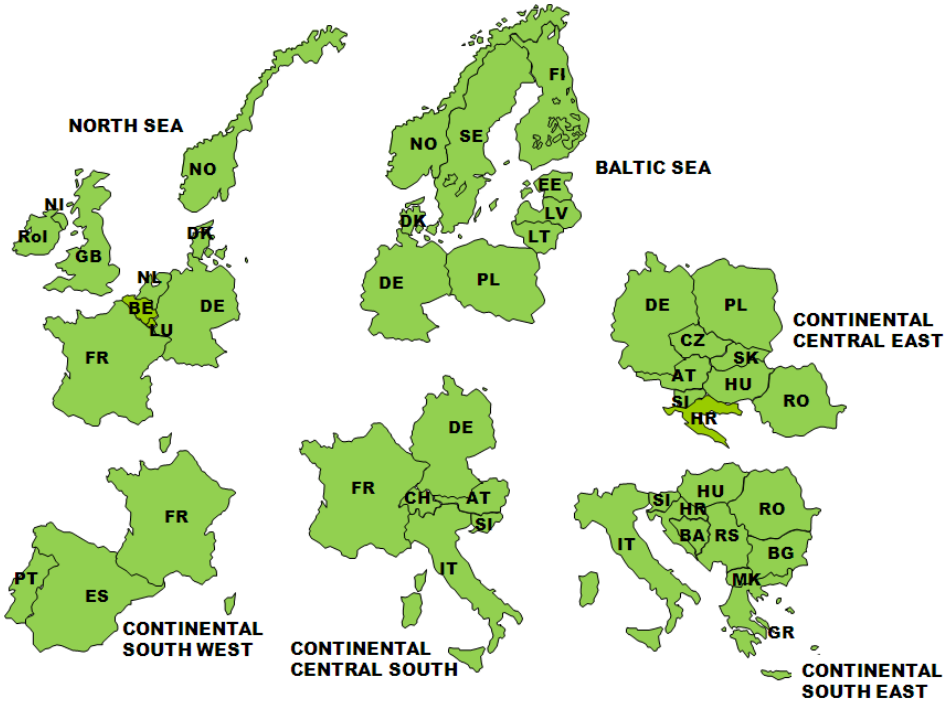
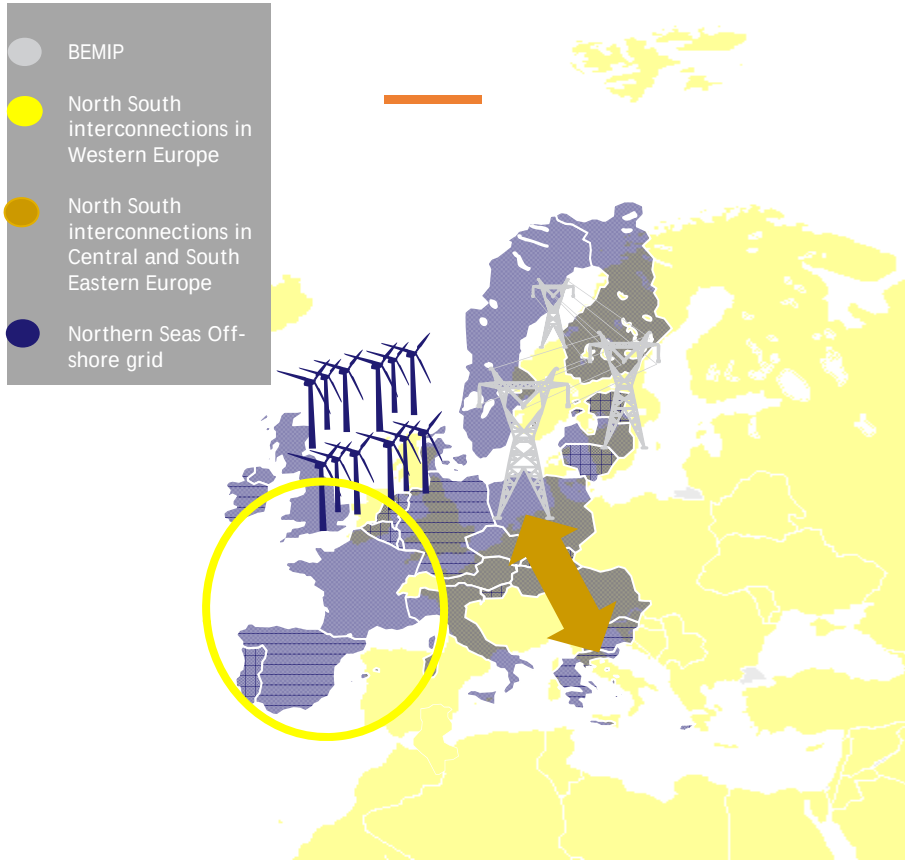
TYNDP and EC regional Groups





TYNDP – from the first plan to today

TYNDP 2010

-ENTSO-E proactively publishes the pilot TYNDP

- Bottom-up approach

- 2020 scenarios

- No 3rd party projects incorporated

- ENTSO-E significant effort to create and run the TYNDP process with all its 41 members

TYNDP 2012

- First official TYNDP package

- Bottom-up and top down approach

- 2020 scenarios

- First call for the inclusion of the 3rd party projects(transmission) in the TYNDP

- First assessment of the projects using the CBA methodology

- Supports the discussions on the new energy infrastructure legislation

TYNDP 2014

- Second official TYNDP package

- Bottom-up and top down approach

- 2030 scenarios

- Second & Third call + new procedure for the inclusion of 3rd party projects(transmission and storage) in the TYNDP

- Improved CBA methodology

- Sole base for the 2015 PCI list

- Intermediate update of the TYNDP 2012 table of projects

- Creation of the Long-Term Development Stakeholder Group

Conclusions

1. **TYNDP is the most comprehensive and up-to-date European-wide reference for the transmission network development**

   -looks unbiasly at all the different drives which lead to grid development

   (e.g. RES, coal, gas, nuclear etc)

2. **TYNDP supports the decision making process at regional and European levels;**

3. **TYNDP forms the sole bases for the selection of Projects of Common Interest (PCIs)**

4. **TYNDP is a continuous improving process**

Thank you!

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