

General presentation on ENTSO-E, Ten Year Network Development Plan and Regional Investment Plan

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1. ENTSO-E under the EU 3rd Energy Package

- ✓ organization
- ✓ roles and deliverables

2. Ten Year network development plan & Regional investment plans:

- ✓ Drivers
- ✓ Process
- ✓ Improvements compared to the pilot TYNDP 2010
- ✓ Expected results

Regulation 714/2009– an important raison d'être for ENTSO-E

•Article 4: European network of transmission system operators for electricity

- **Completion and functioning** of the internal market in electricity and cross-border trade
- **Optimal management, coordinated operation and sound technical evolution** of the European electricity transmission network

•Article 6: Establishment of network codes

•Article 8: Tasks of the ENTSO for Electricity

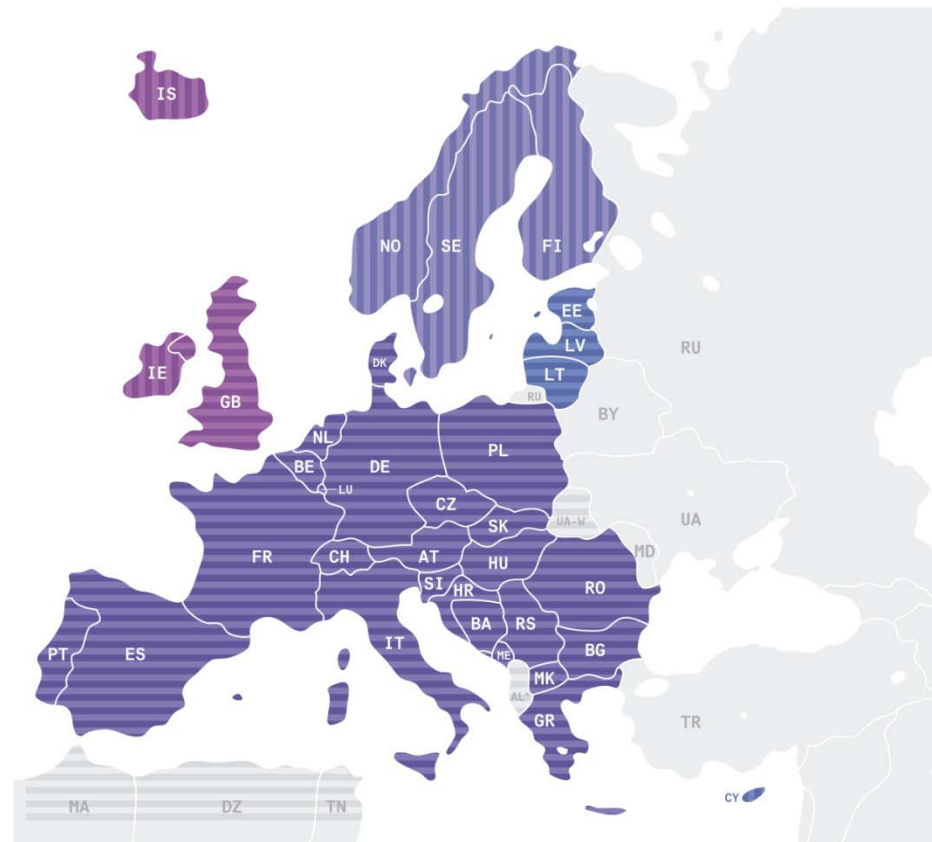
- **Network codes**
- **Common network operation tools**
- **Non-binding Community-wide 10-year network development plan**, including a European generation adequacy outlook, every two years
- Work programme, annual report, **summer/winter outlooks, monitoring**

ENTSO-E operational much earlier because a fully developed IEM and the integration of RES demand urgent TSO action

ENTSO-E: a trans-European network

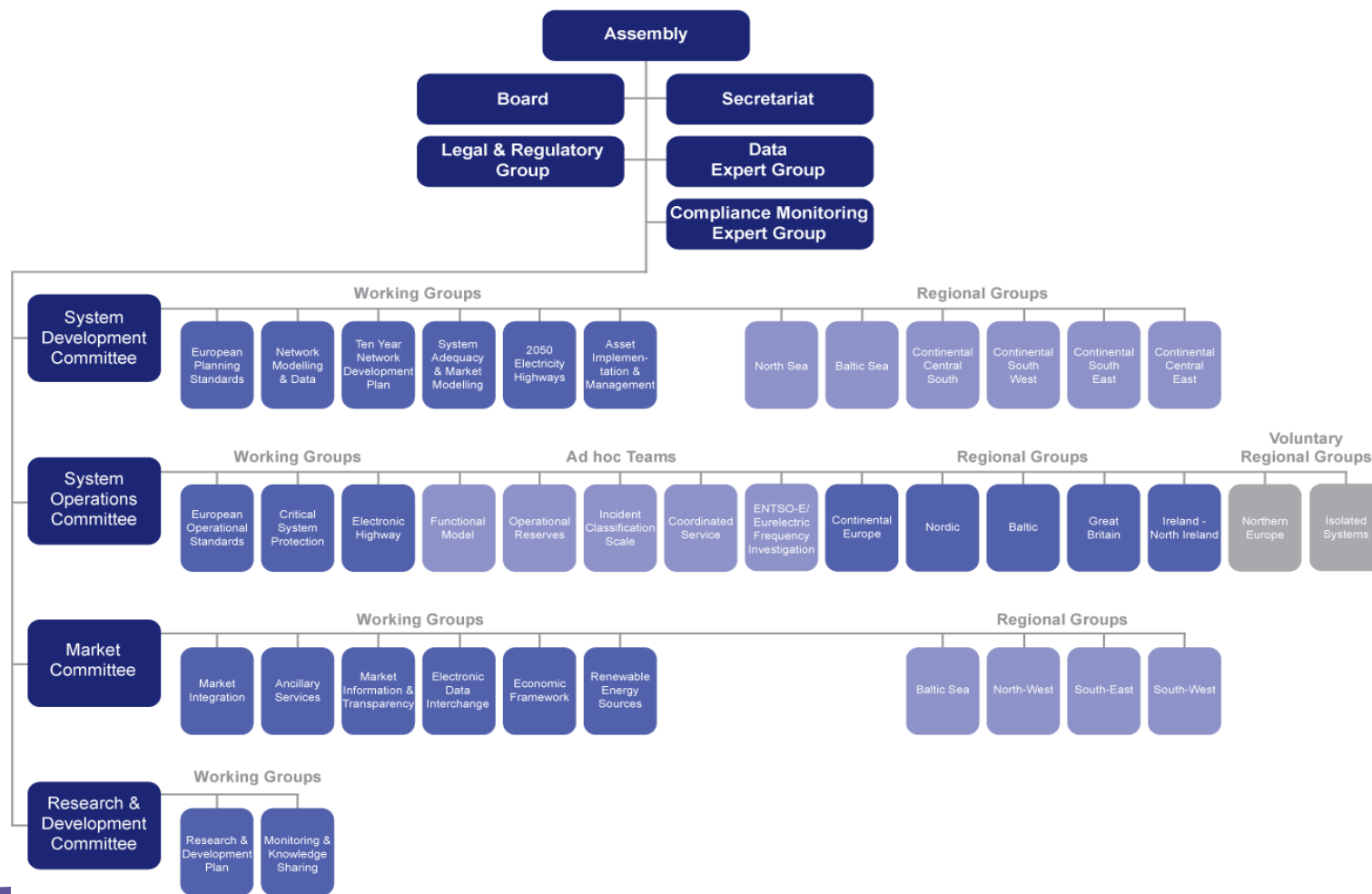


- Fully operational since **July 2009**
- Represents **41** TSOs from **34** countries
 - **525** million citizens served
 - **828** GW generation
 - **305,000** Km of transition lines managed by the TSOs
 - **3,400** TWh/year demand
 - **400** TWh/year exchanges
- Replaces former TSO organisations: ATSOI, BALTSO, ETSO, NORDEL, UCTE, UKTSOA



ENTSO-E structure reflects the tasks given to ENTSO-E under the 3rd Energy Package

ENTSO-E organizational structure



European transmission grid – key role in reaching the EU policy goals

Energy policy goals

- **Sustainability/GHG:**
 - More renewables, further from the loads
 - More heating and mobility with electricity
- **Competitiveness/market integration:**
 - More long-distance flows
- **Security of supply**
 - More optimal resources sharing

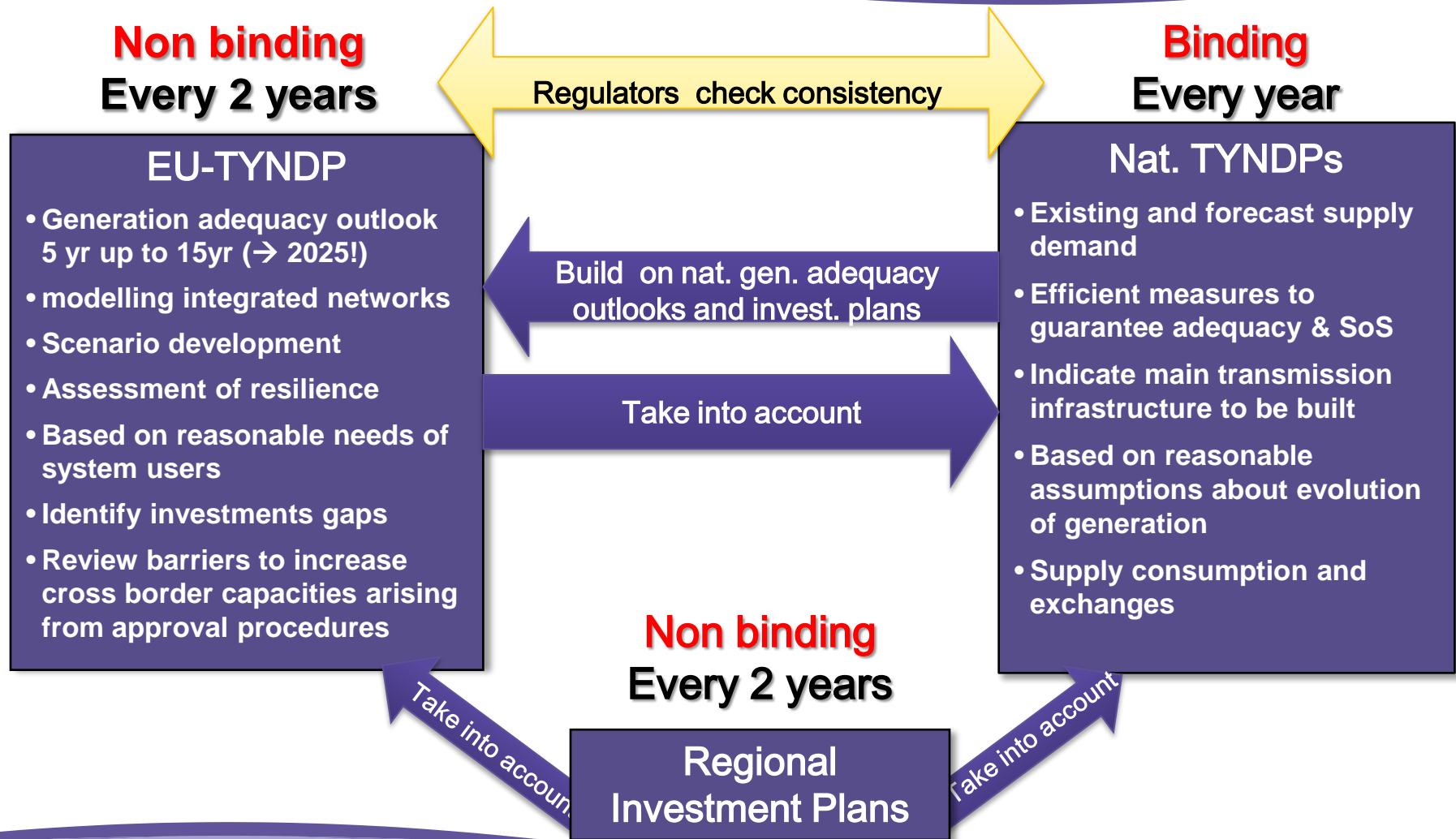
**all
require
Grid
capacity !**

Main drivers

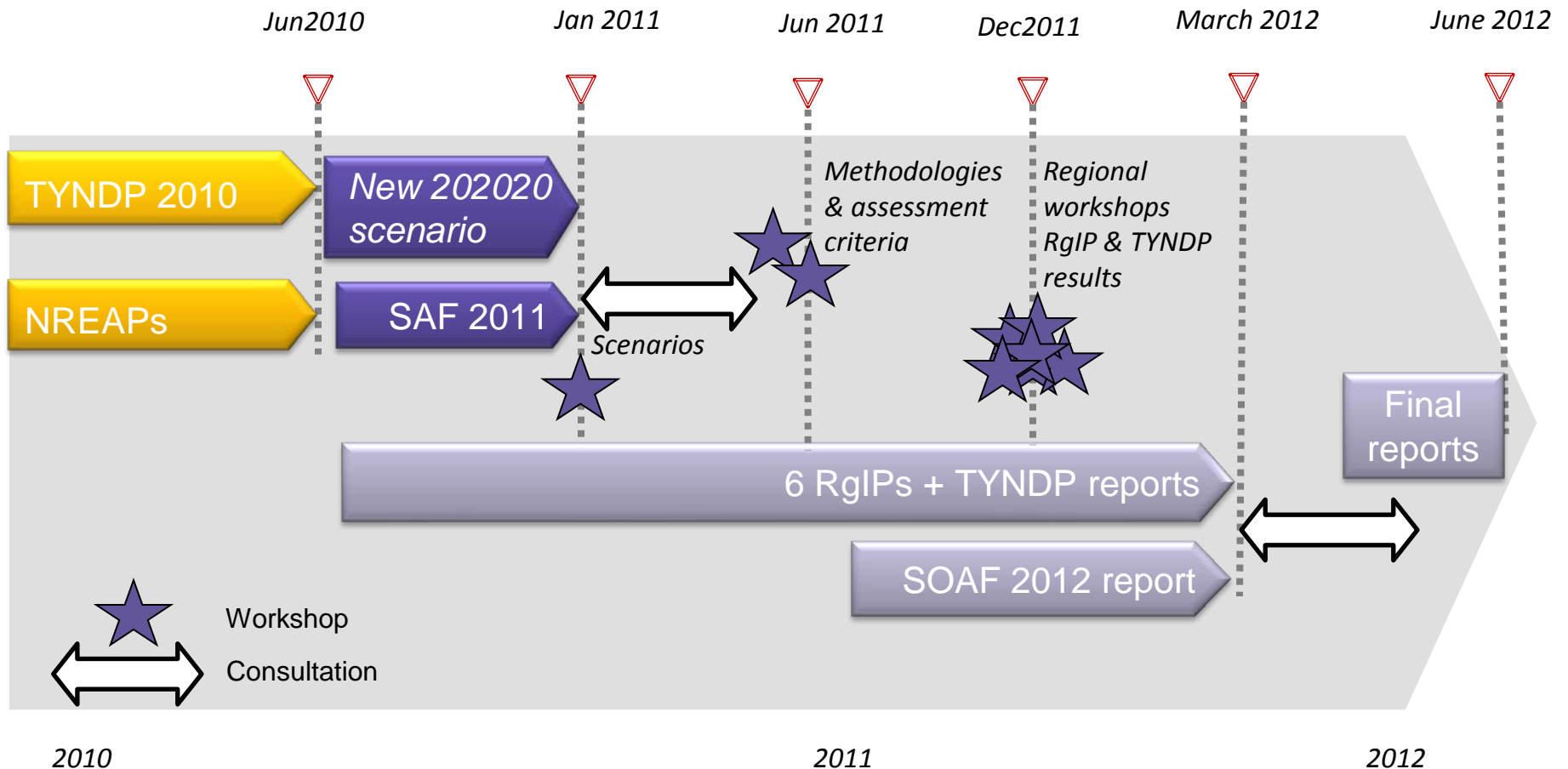


- **Massive integration of renewable energy sources**
 - in Northern Europe
 - in Southern Europe
- **Important East-West and North-South energy flows in South-East and Central-South regions**
- **Baltic States integration**
- **Connection of new conventional power plants**
- **Power supply of some large European cities and regions**

The 3rd Package defines the TYNDP



Overall schedule TYNDP 2012





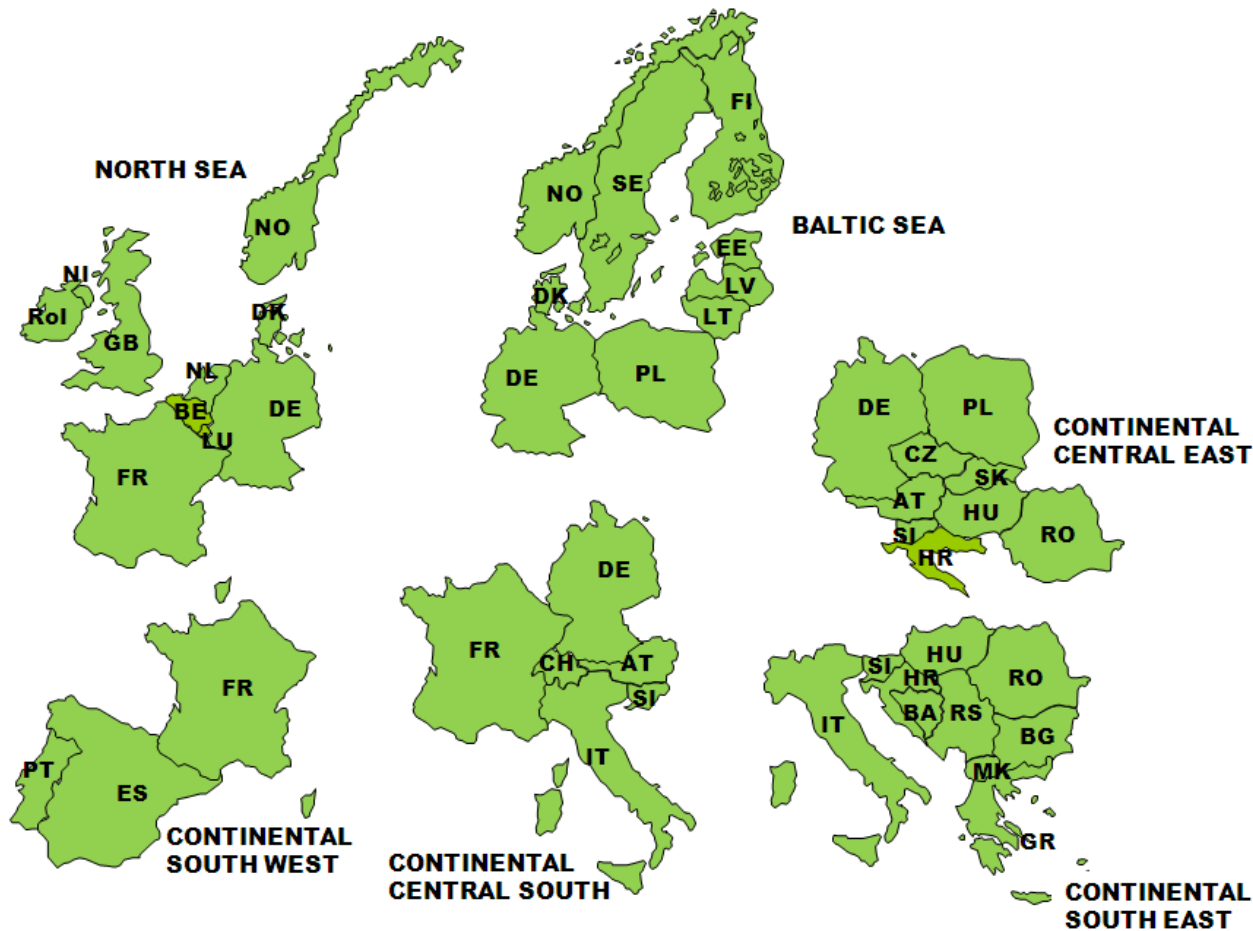
- **Explicit definition of projects of pan-European significance**
- **Public procedure to identify the 3rd party projects**
- **More scenarios : top down + bottom up scenarios + Nuclear phase-out sensitivity analysis**
- **Regional market & network studies – based on the common set of data**
- **Project assessment based on a set of clear indicators**
- **More compact reports easy to understand**



8 documents

- About 50p each, complementing each other
- **Scenario outlook & adequacy forecast report (SOAF)**
- **6x Regional Investment Plans reports**
 - Detailed grid development issues, reg. level
- **10-year Network Development Plan report**
 - Synthetic compilation, pan-European level

ENTSOE Regional Groups



The most appropriate framework for grid development in Europe

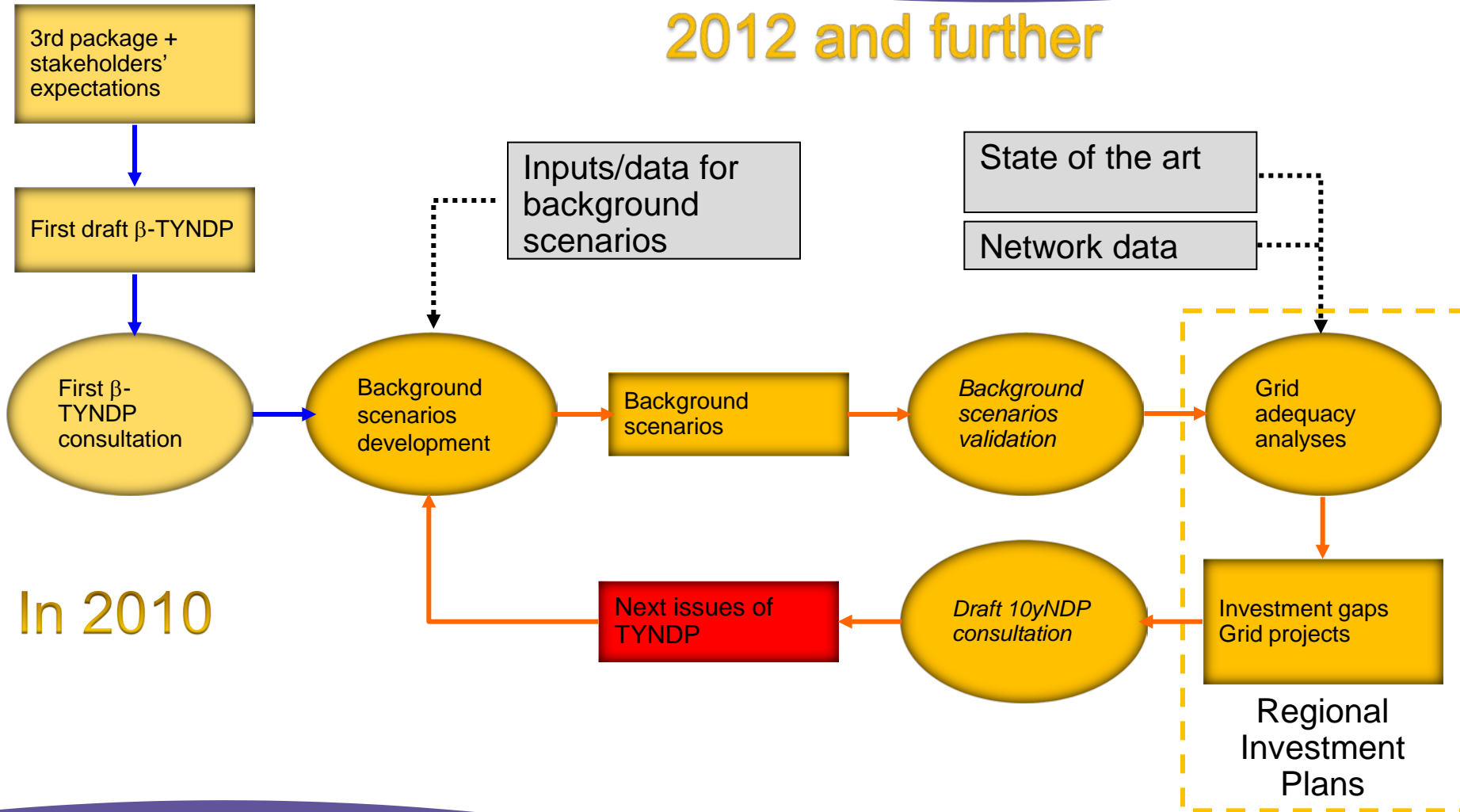
Every RG gather countries sharing the same common concerns

Overlapping, in order to ensure overall consistency

RgIP & TYNDP 2012 elaboration process



2012 and further

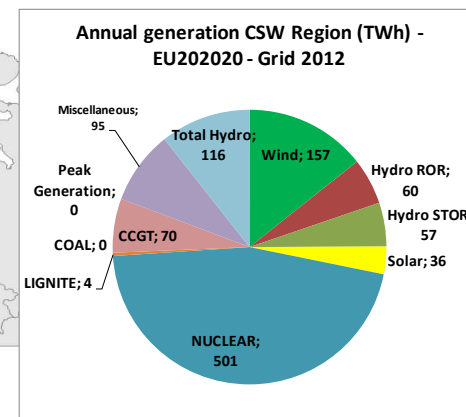
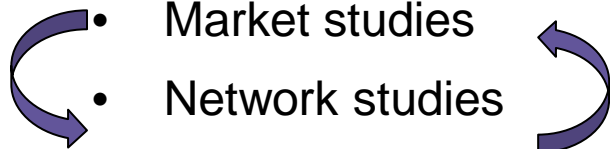


In 2010

A dense study process all over 2012



- Scenario elaboration & validation
- Market studies
- Network studies
- Project identification & valuation
- Report compilation

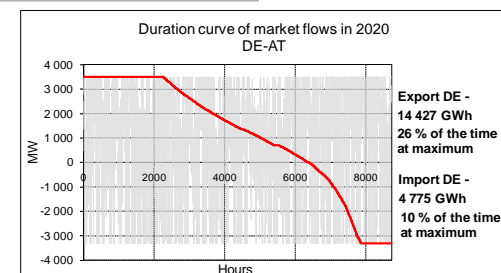
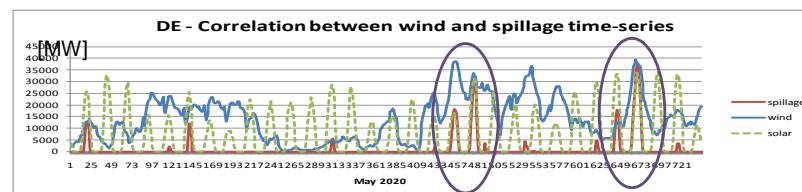


at stake

timely delivery

consistent results

limited resources



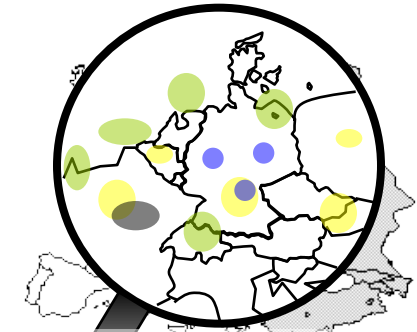
Presently being investigated

Subject to adaptations &/o changes

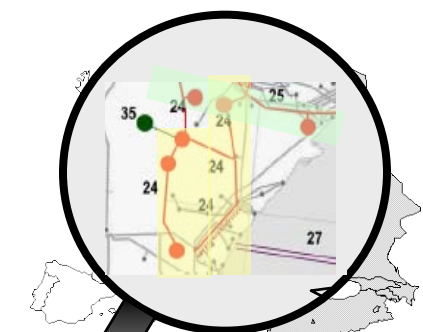
Main deliverables TYNDP 2012



NTCs
2010



G/L dev. areas
+ technical needs

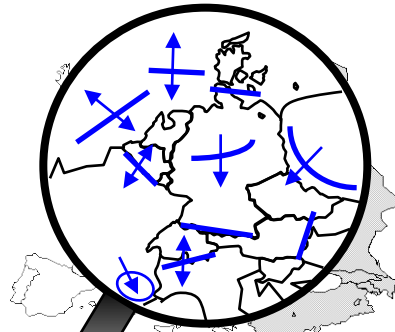


Proposed projects

Market
studies

2020
in 2020
(+)

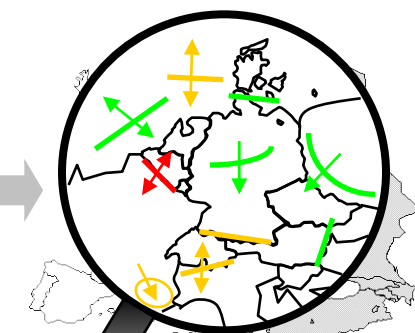
Network
studies



Expected bulk flow
patterns



Grid transfer capability
increases



Transmission
adequacy

Conclusions

- The pilot TYNDP in 2010- first overview of the needs, drivers and the necessary European infrastructure
- TYNDP 2012: more comprehensive, common studies(market, network), top down approach (based on NREAPS)
- TYNDP open to the 3rd party projects
- The TYNDP as the factual and methodological basis for key policy and investment decisions.
- Coherency with longer term plans – 2050 Modular Development Plan for Electricity Highways System, North-Sea grid, Mediterranean ring, System Extension Project (Ukraine/Moldavia, ..)



Thank you for your attention

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