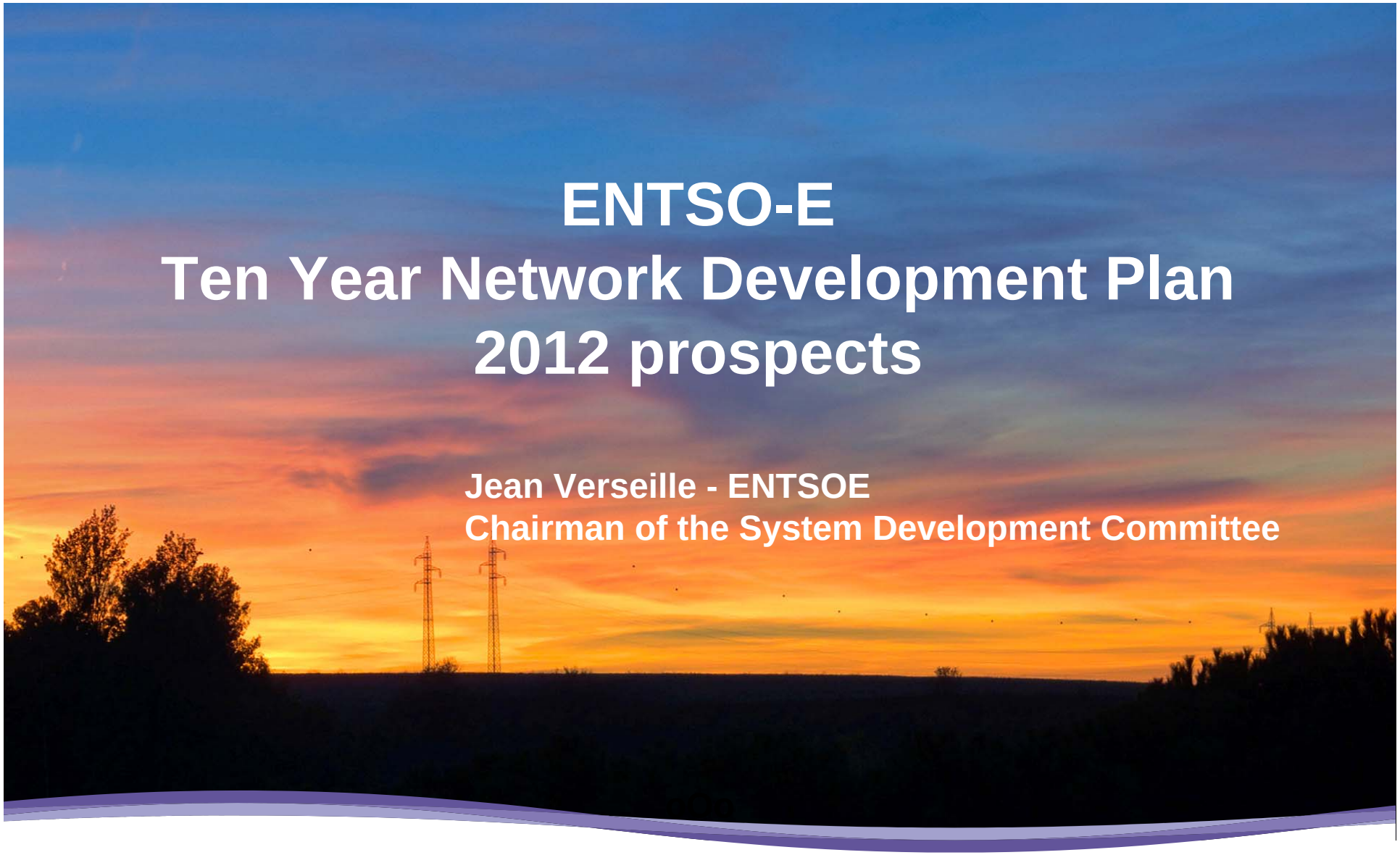

ENTSO-E
Ten Year Network Development Plan
2012 prospects

Jean Verseille - ENTSOE
Chairman of the System Development Committee

Florence Forum 23 May 2011

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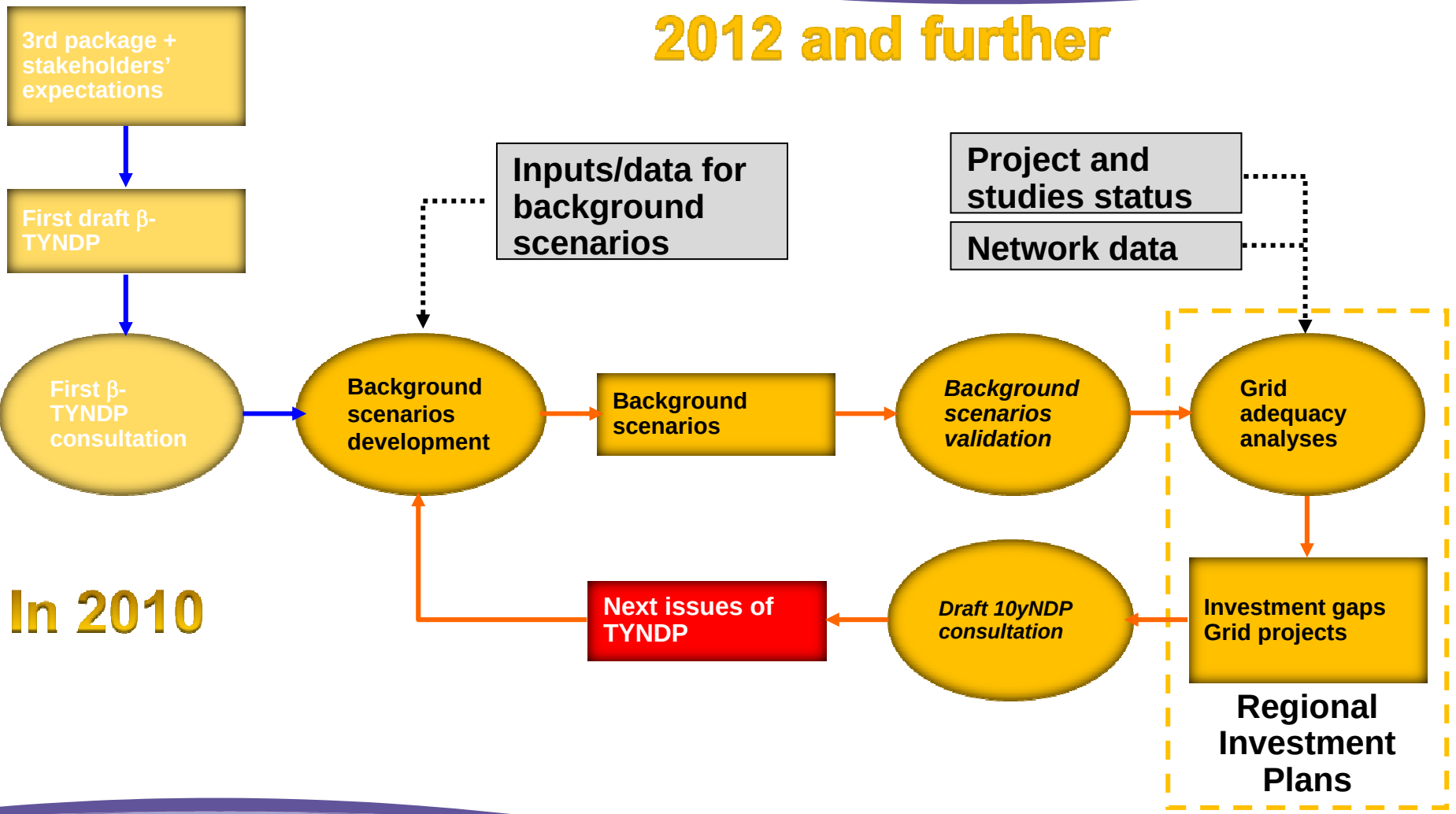
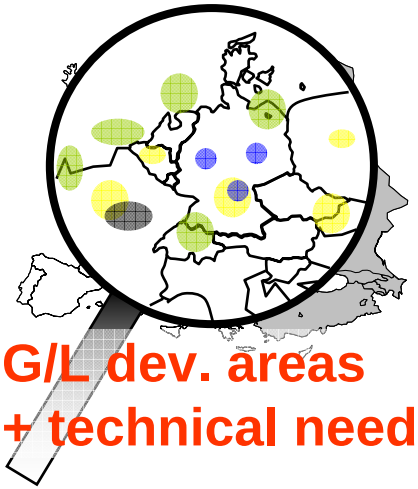
Reliable Sustainable Connected

RgIP & TYNDP 2012 elaboration process



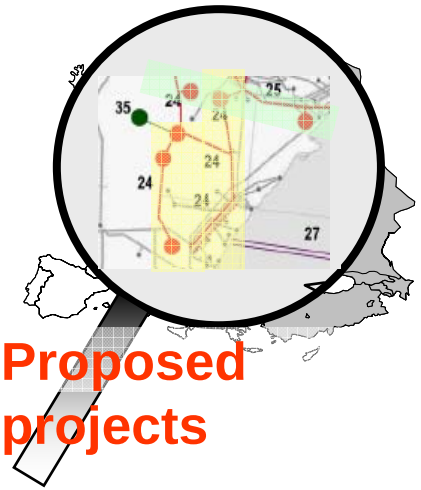
Methodology for grid adequacy analyses

NTCs 2010



G/L dev. areas + technical needs

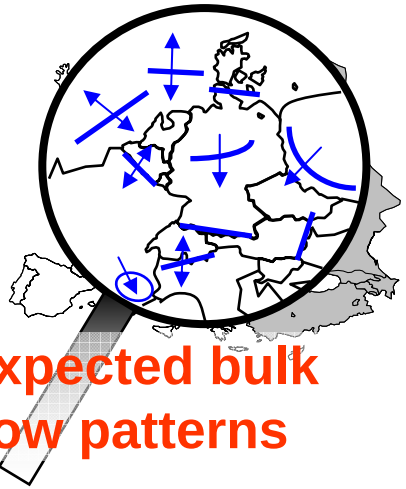
202020 in 2020 (+)



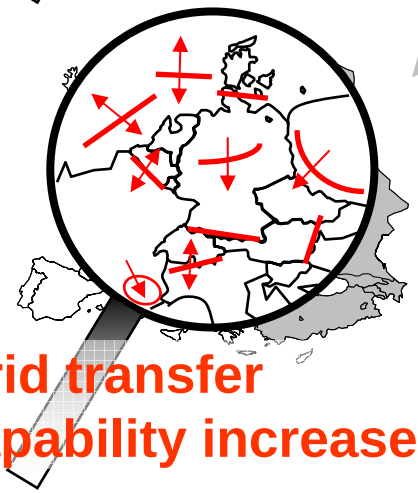
Proposed projects

Market studies

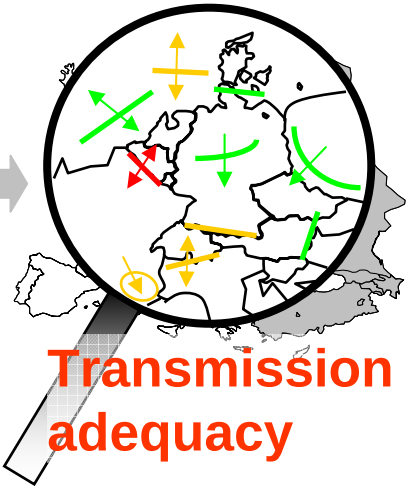
Network studies



Expected bulk flow patterns



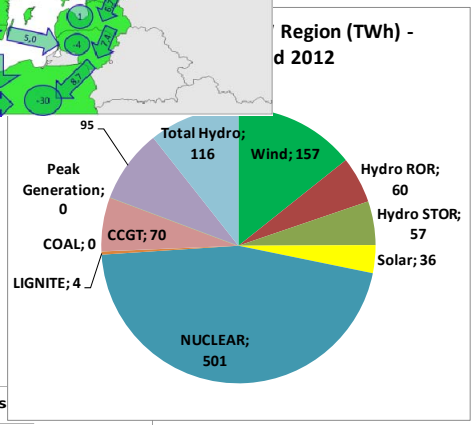
Grid transfer capability increases

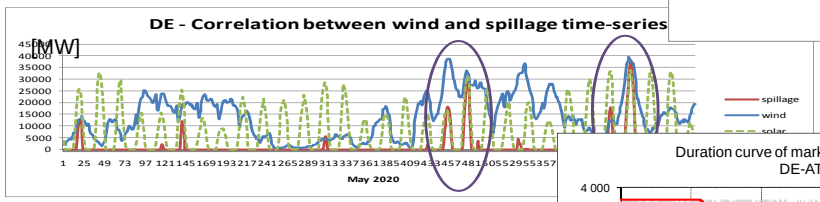


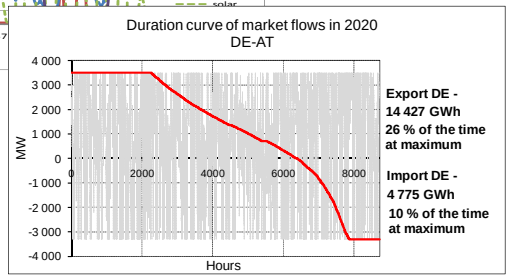
Transmission adequacy

A dense study process all over 2012

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







↳ at stake

timely delivery

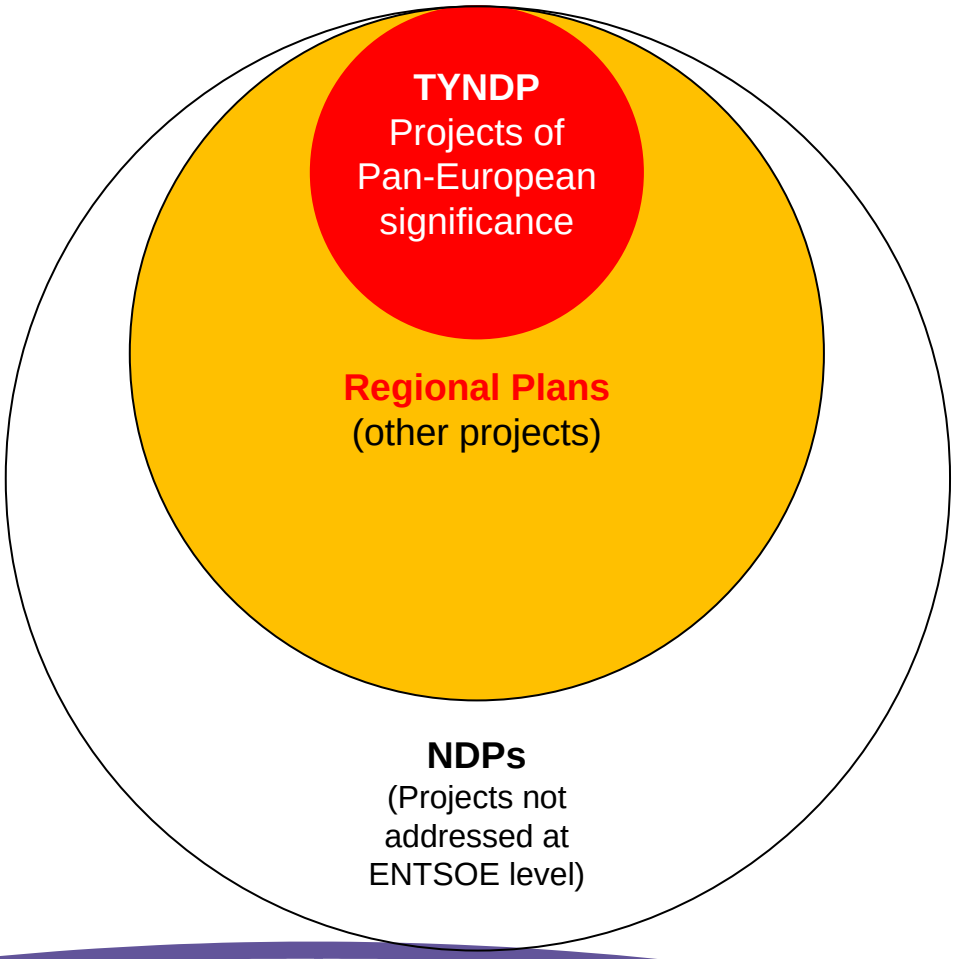
consistent results

limited resources

Presently being investigated

↳ *Subject to adaptations &/o changes*

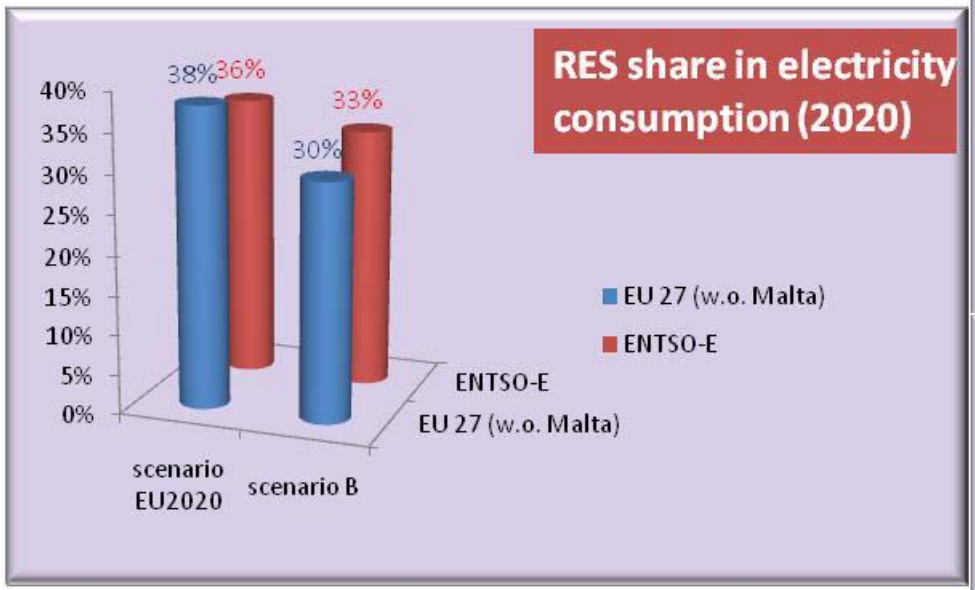
Projects of Pan-European significance

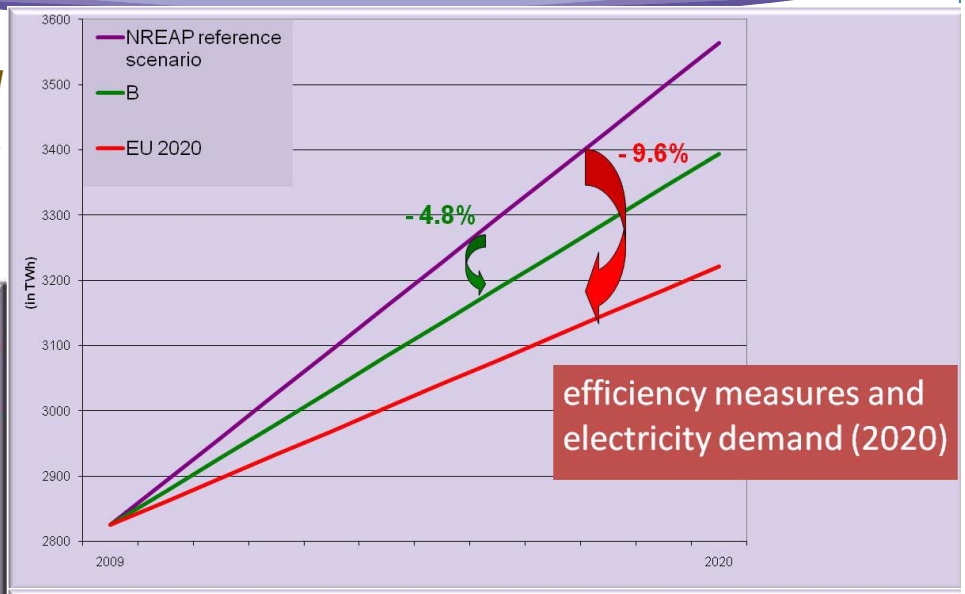


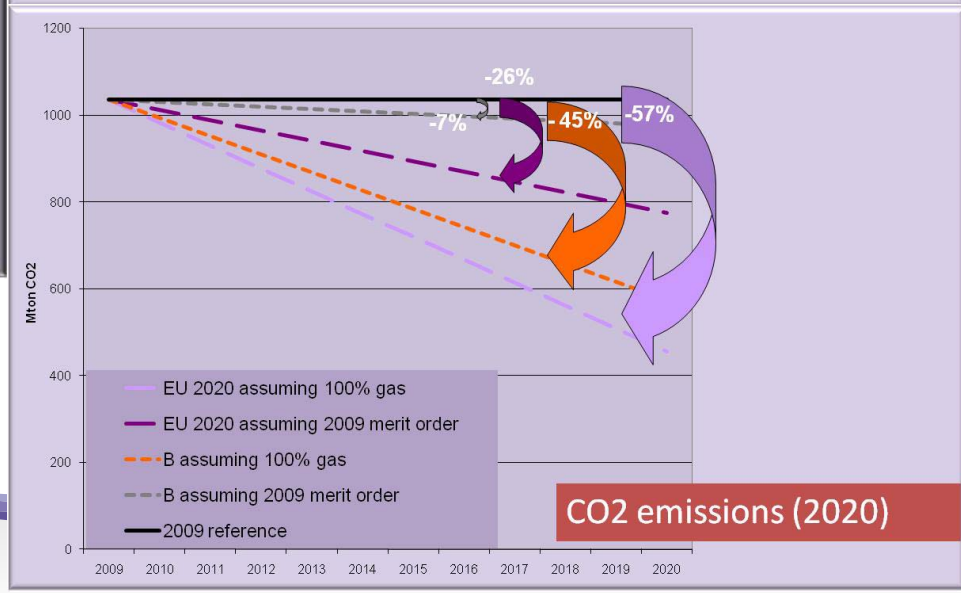
- Definition of projects of pan-European significance
  - ❑ Meeting the 3 EU energy targets
    - RES, SoS, IEM
  - ❑ Voltage & capacity thresholds
- From TSOs... or 3rd parties
  - ❑ See the non-discriminatory procedure
- ↳ TYNDP = basis for EIP projects selection

Top-down and bottom-up scenarios

See ENTSO-E Scenario Outlook and Adequacy Forecast, Feb. 2011







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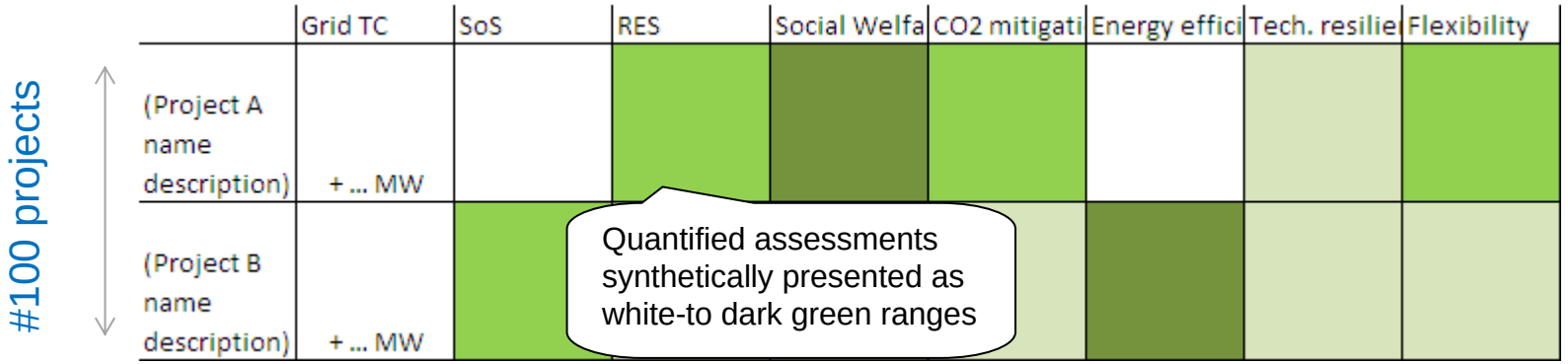
Development concerns in Europe by 2020

- 5-6 main development concerns
  - North-South power flows
    - RES (North Seas, South to EU)
    - Load in Italy, South Germany
  - Better integration of Baltic states, British islands, Iberian peninsula
  - East-West flows in S-E Europe
- Probably about 100 projects
  - Increasing the grid transfer capability on specific locations
  - Clustering about 500 investments

Project assessment in the TYNDP

- Synthetic presentation of projects
- A multi-criteria assessment
  - To base EIP project selection



Presently being investigated

Subject to adaptations &/o changes

+ monitoring
+ commissioning date
+ social acceptance risk
…

The 2012 *package*

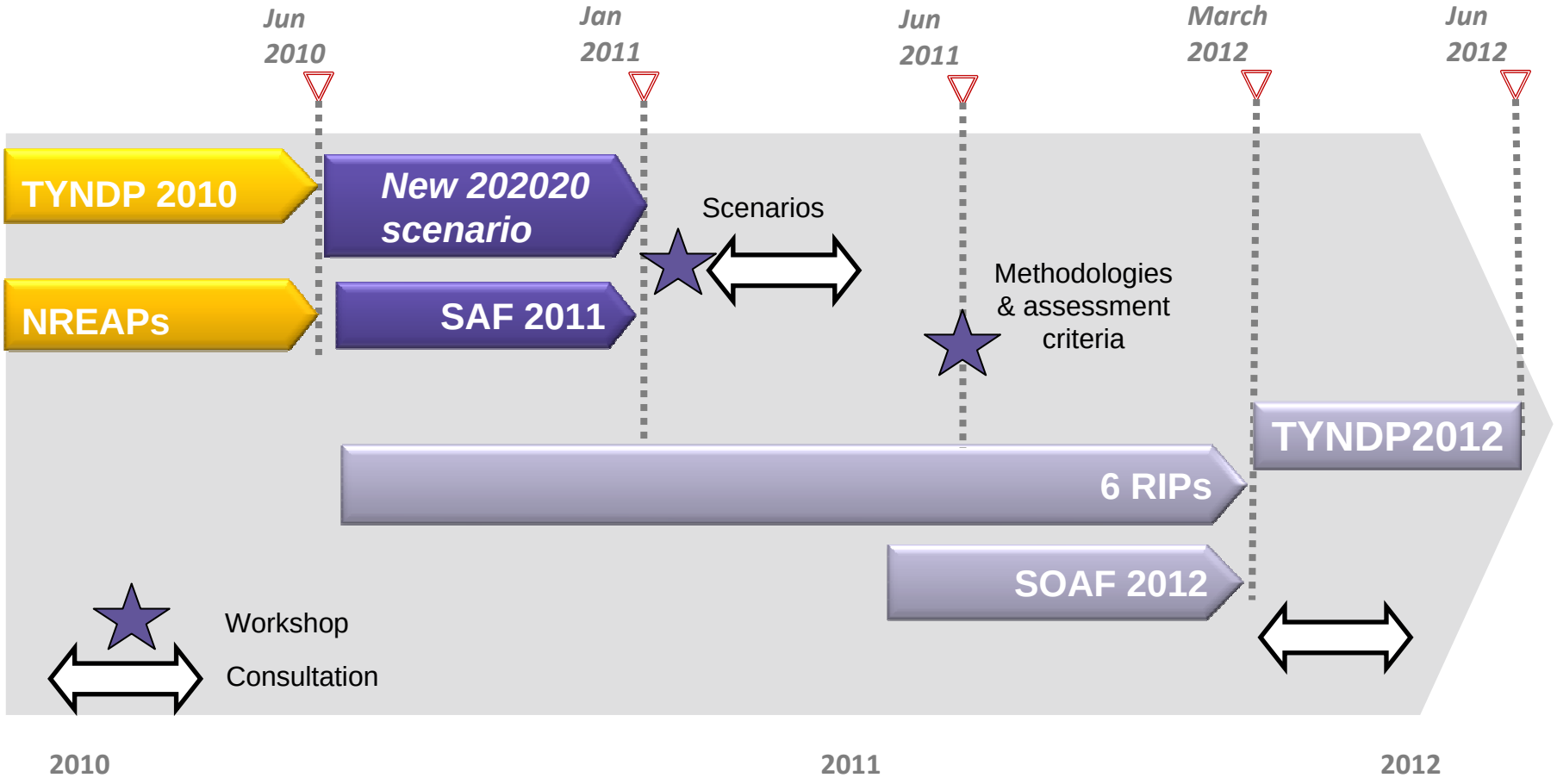
8 documents

- 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

Overall schedule



Back-up

Definitions – Projects of European significance

- A *Project of European significance* is…
  - … a set of EHV assets (with at least one part in Europe);
  - … all contributing to a same grid transfer capability increase across a grid boundary, valuated in MW;
  - … matching the following thresholds:
    - main equipment > 220 kV for OHL AC and > 150 kV else
    - Grid Transfer Capability Increase either
      - enabling > 500 MW of additional NTC; or
      - enabling or securing output of > 1 GW/1000 km² of generation (new and/or existing); or
    - securing for > 10-year load growth for an area > 3 TWh/yr.

EC Reg. 2010/617 on notification of infrastructures

EC 2009/72

RgIP & TYNDP 2012 – The reports' structure

Regional Investment Plan

1. **Executive summary**
2. **Introduction**
3. **Assess TYNDP 2010** (reg. focus)
   (+ details / project in appendix)
4. **Specific RG methodologies**
5. **Scenarios** (regional focus)
6. **Investment needs**
   Present situation (NTC 2010), G/L dev.
   & tech. needs + Results of market studies (expected reg. p. flows maps)
7. **Investments projects**
   of European significance (& others if relevant) mid-term, long-term
   Economic assessment (opt.)
8. **Transmission adequacy** (map)
9. **Environmental assessment**
   (optional, some macro-indicators)
10. **Resilience assessment**
11. **Conclusion**

+ Appendices (incl. table of projects)

Common methodologies

Aggregated results

Pan-European consistency checks

Ten Year Development Plan

1. **Executive summary**
2. **Introduction**
3. **Assessment of TYNDP 2010**
4. **Methodology**
5. **Scenarios** (synthesis from SAF)
6. **Investment needs** (synthesis)
   pan-E NTC 2010, G/L dev. & technical
   needs + expected power flow maps
7. **Investments projects** (synth.)
   of European significance only MT/LT
8. **Transmission adequacy**
   (pan-E map)
9. **Environmental assessment**
   (optional, macro-indicators)
10. **Resilience assessment**
11. **Conclusion**

+ Appendices (incl. table of projects)

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