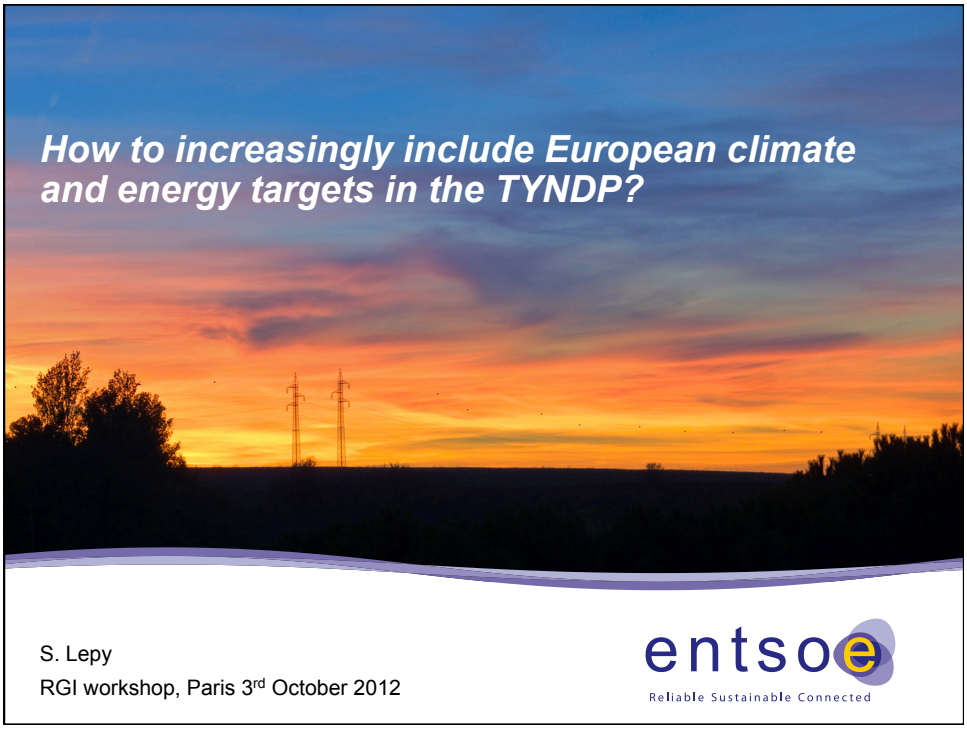
How to increasingly include European climate and energy targets in the TYNDP?
S. Lepy
RGI workshop, Paris 3rd October 2012
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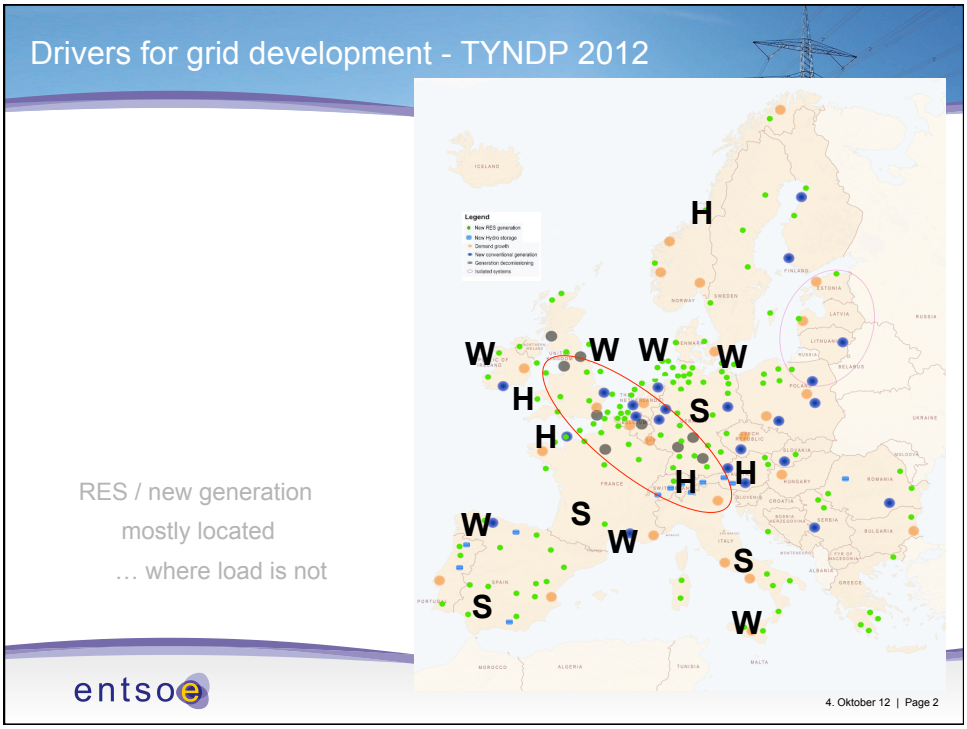
Reliable Sustainable Connected


Drivers for grid development - TYNDP 2012
RES / new generation
mostly located
… where load is not
H
W
W
W
W
H
S
H
H
H
W
S
W
S
S
W
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Long term planning is a key for power transmission

- Technical solutions shape the grid for a long time
  - Power transmission capital intensive
  - Grid assets with a long life expectancy, 50y +
  - 1 system shared by thousands of users
- Social acceptance is a critical concern
  - Ex: 10 years to build new 400 kV lines in W-Europe
  - 3-8 years permitting processes + 2 years for works
- ⇒ The ENTSOE 10-year Network Development Plan
  - A vision for the pan-European grid
    derived from the Scenario Outlook & Adequacy Forecast
  - A basis for exchanges between all stakeholders
- + the “2050 Electricity Highways” project

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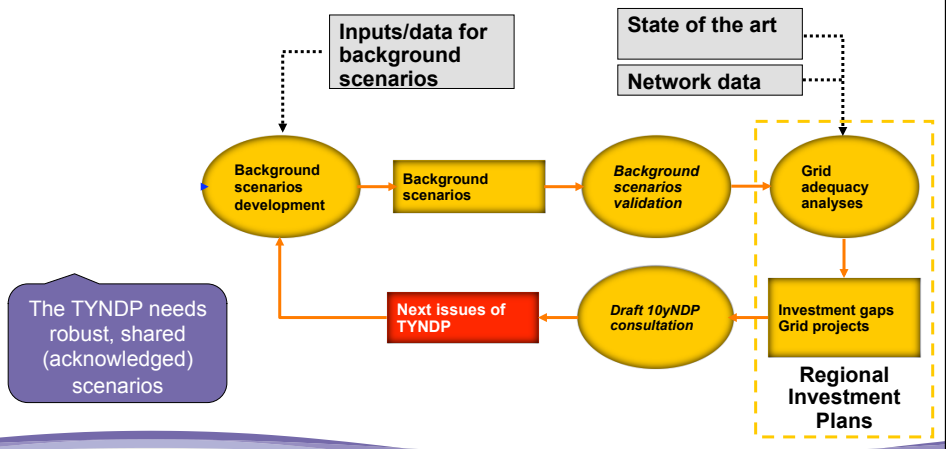
A looping elaboration process, constantly improving, involving stakeholders consultation

2012 and further



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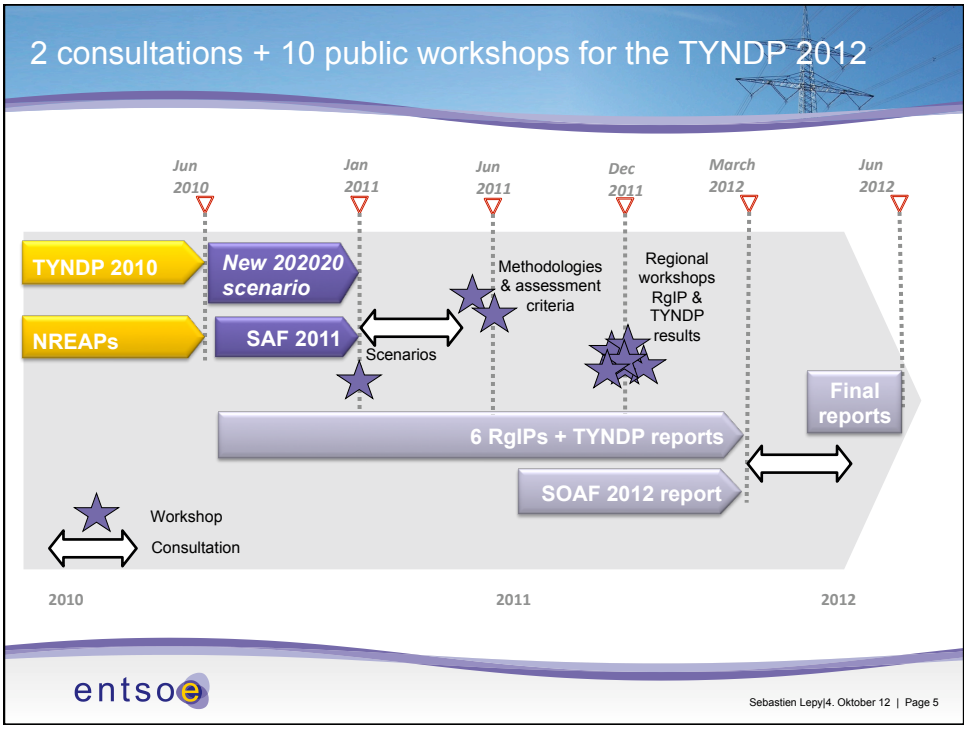
Jean Verseille | 23 May 2011


2 consultations + 10 public workshops for the TYNDP 2012
Jun 2010
Jan 2011
Jun 2011
Dec 2011
March 2012
Jun 2012
TYNDP 2010
New 202020 scenario
NREAPs
SAF 2011
Scenarios
Methodologies & assessment criteria
Regional workshops RgIP & TYNDP results
Final reports
6 RgIPs + TYNDP reports
SOAF 2012 report
Workshop
Consultation
2010
2011
2012
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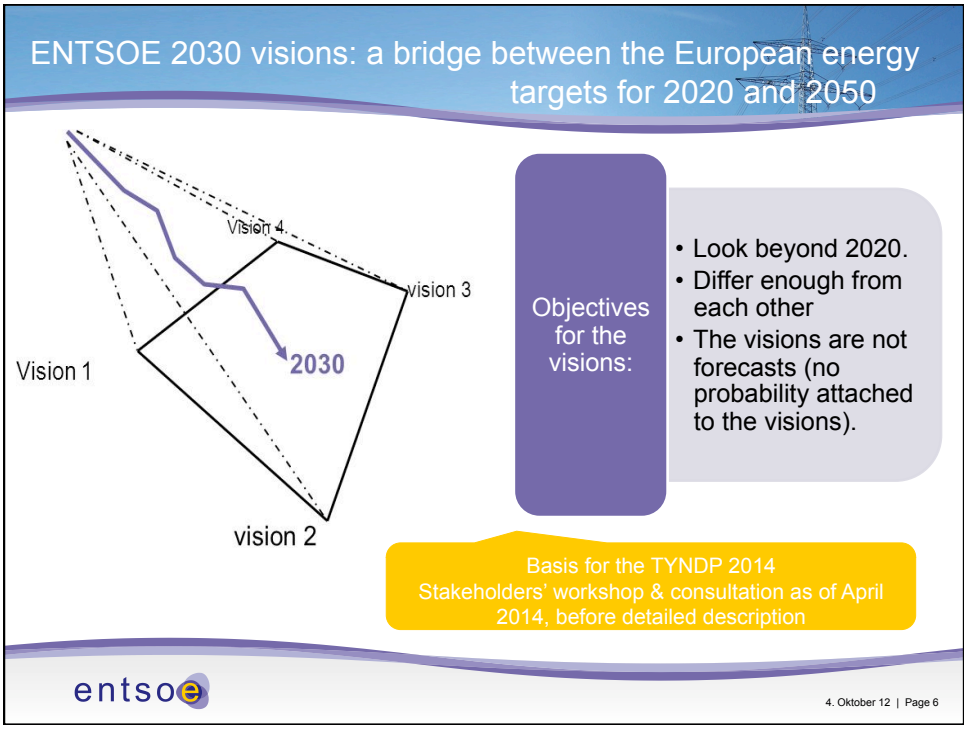
Sebastien Lepy|4. Oktober 12 | Page 5


ENTSOE 2030 visions: a bridge between the European energy targets for 2020 and 2050
Vision 4
vision 3
Vision 1
2030
vision 2
Objectives for the visions:
• Look beyond 2020.
• Differ enough from each other
• The visions are not forecasts (no probability attached to the visions).
Basis for the TYNDP 2014
Stakeholders' workshop & consultation as of April 2014, before detailed description
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ENTSOE proposes to set up a stakeholders' group

- # 15 active participants
  - Representing all kinds of European stakeholders associations generators, industrial consumers and households associations, environmental associations, suppliers, local authorities… & others?
  - Balanced
  - Under the supervision of ACER and EC
- Overviewing the TYNDP process
- Common position papers (1conferences, articles…)
  - Increasing the public acceptance
  - Improving the permitting process
  - Technical solutions for grid development
  - Etc.
- Starting Nov/12

Additionnally to consultations and public workshops

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Thank you for your attention!

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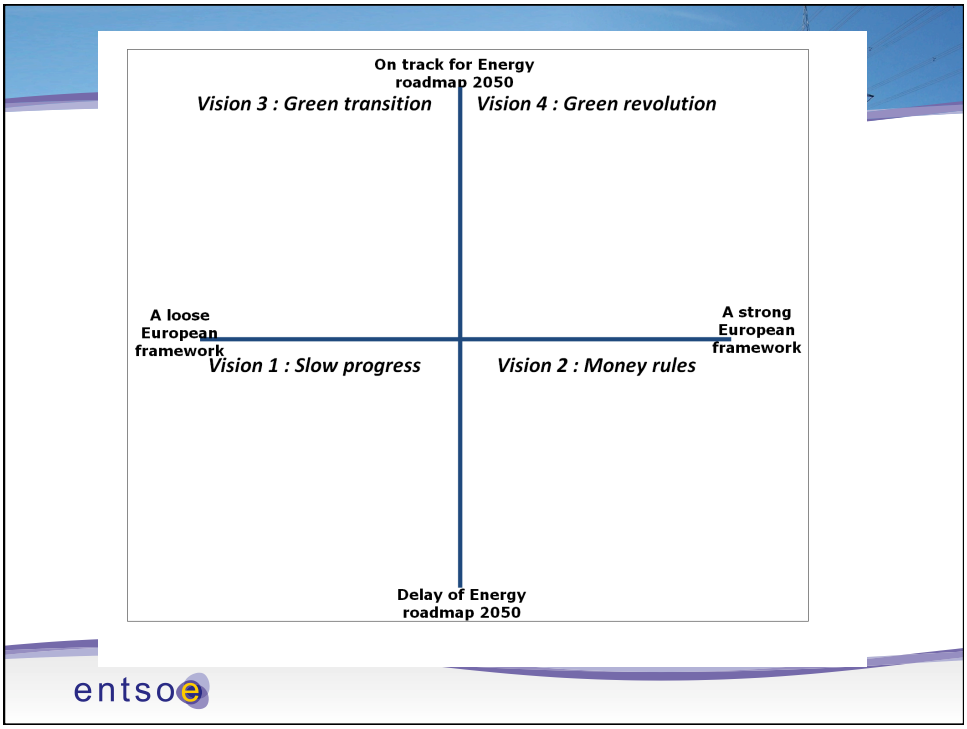
On track for Energy roadmap 2050
Vision 3 : Green transition
Vision 4 : Green revolution
A loose European framework
A strong European framework
Vision 1 : Slow progress
Vision 2 : Money rules
Delay of Energy roadmap 2050
entsoe

2030 Visions: a bridge between the European energy targets for 2020 and 2050
VISION 3: "GREEN TRANSITION"
VISION 4: "GREEN REVOLUTION"
VISION 1: "SLOW PROGRESS"
VISION 2: "MONEY RULES"
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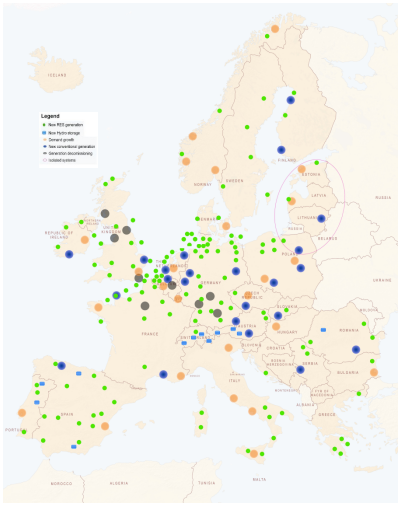
Background scenarios matching EU 2020 goals

- Peak load growing by about 8% by 2020
  - energy efficiency, economic crisis…
  - switch from fossil fuels to electricity, development of electric devices…
- Renewable energies boom providing by 2020 as much as 38% of the electricity demand
  - mostly wind, photovoltaic
- CO2 emissions of the power sector also sink from 26% to 57%
  - Depending on the share of gas and coal-fired units in the mix



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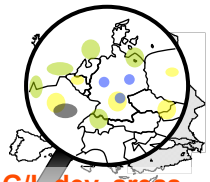
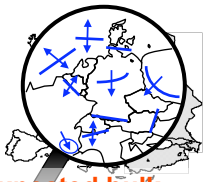
TYNDP main deliverables
Achieving an adequate grid transfer capability

present situation



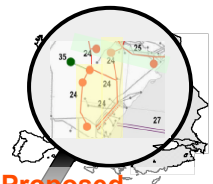
G/L dev. areas + technical needs

Market studies



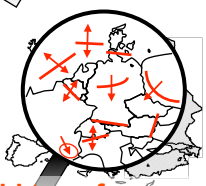
Expected bulk flow patterns

202020 in 2020 (+)



Proposed projects

Network studies



Grid transfer capability increases

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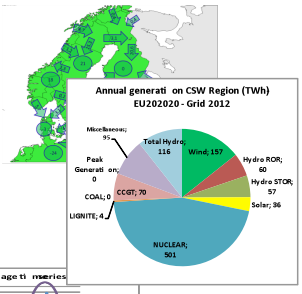
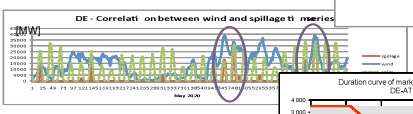
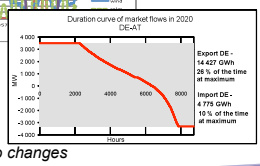
The TYNDP elaboration : a dense 2-year long study process

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







↳ at stake

timely delivery

consistent results

limited resources

Presently being investigated

↳ *Subject to adaptations &/o changes*

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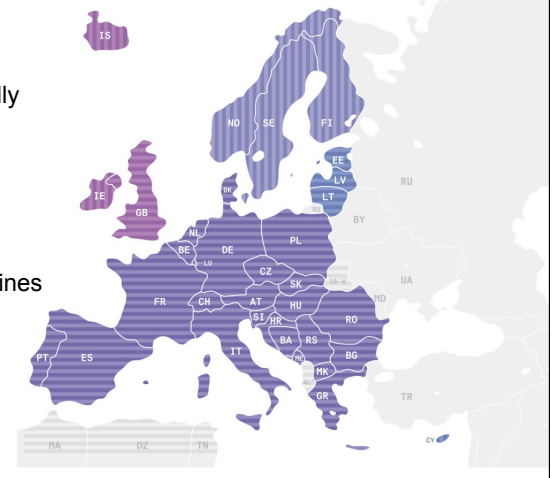
We are ENTSO-E

- **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
- Legal mandate, among which TYNDPs, based on Reg. (EC)714/2009



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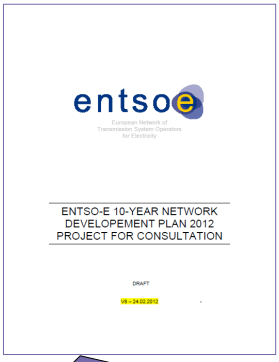
ENTSOE releases the TYNDP 2012 package

A vision for the future European extra high voltage grid

- A non-binding plan, updated every 2 years by ENTSO-E
- A modeling of integrated networks
- A generation adequacy outlook

A comprehensive and synthetic 8-document suite

- Ten-Year Network Development Plan report
- Scenario Outlook & Adequacy Report
- 6 Regional Investment Plans



In consultation until 26th April

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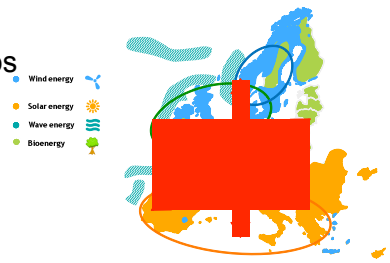
Towards Electricity Highways 2050

- ENTSOE leading a large consortium
- An EC Master Plan to prioritize EH corridors
- Special permission rules for timely implementation
- Appropriate financial incentives
  - Breakthrough technologies
- ACER to overcome regulatory gaps
- Key expertise of TSOs
  - planning
  - implementation
  - Operation
  - ownership



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