NETWORK DEVELOPMENT STAKEHOLDER GROUP MEETING (ND SG)

ENTSO-E

13th ND SG meeting

06 April 2016

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Reliable Sustainable Connected

1 News from the Brussels' scene

2 Report availability of technologies

3 TYNDP 2016

4 TYNDP 2018 : CBA 2.0 and scenarios

5 Guidelines for the inclusion in TYNDP 18

6 3RD PCI process – latest status

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Agenda:

10:30 – 10:45 - News from the Brussels' scene:

- Advisory Council on transparency;
- Network codes;
- EC sustainable energy security package;

10:45 – 11:20 - Report Available technologies

11:20 – 12:20 - TYNDP 2016

- latest status - TYNDP PMO – 15 min
- what do you what to see in the TYNDP 2016 – open discussion all – 45 min

12:20 – 12: 40 – TYNDP 2018 : CBA 2.0 and the 2018 scenarios– Irina
12:40 – 12:55 - EC status on the guidelines for the inclusion on the TYNDP =
12:55 – 13:10 – 3RD PCI process – latest status
13:10 – 13:30 – Conclusions and the next meetings

News from the Brussels' scene

Advisory Council on transparency launched 8 March 2016:

- **Objective:**
  - provide independent and legally non-binding advice to the Board of ENTSO-E on main work products and main policy statements

- **Composition**: 10 members (each one representative):
  - European Commission DG ENER, ITRE Committee of the European Parliament, IFIEC, EURELECTRIC, EFET, BEUC, SEDC, European RES organisations, Non-Governmental Organisation appointed by RGI, European DSO appointed jointly by EDSO/EURELECTRIC/Geode/CEDEC

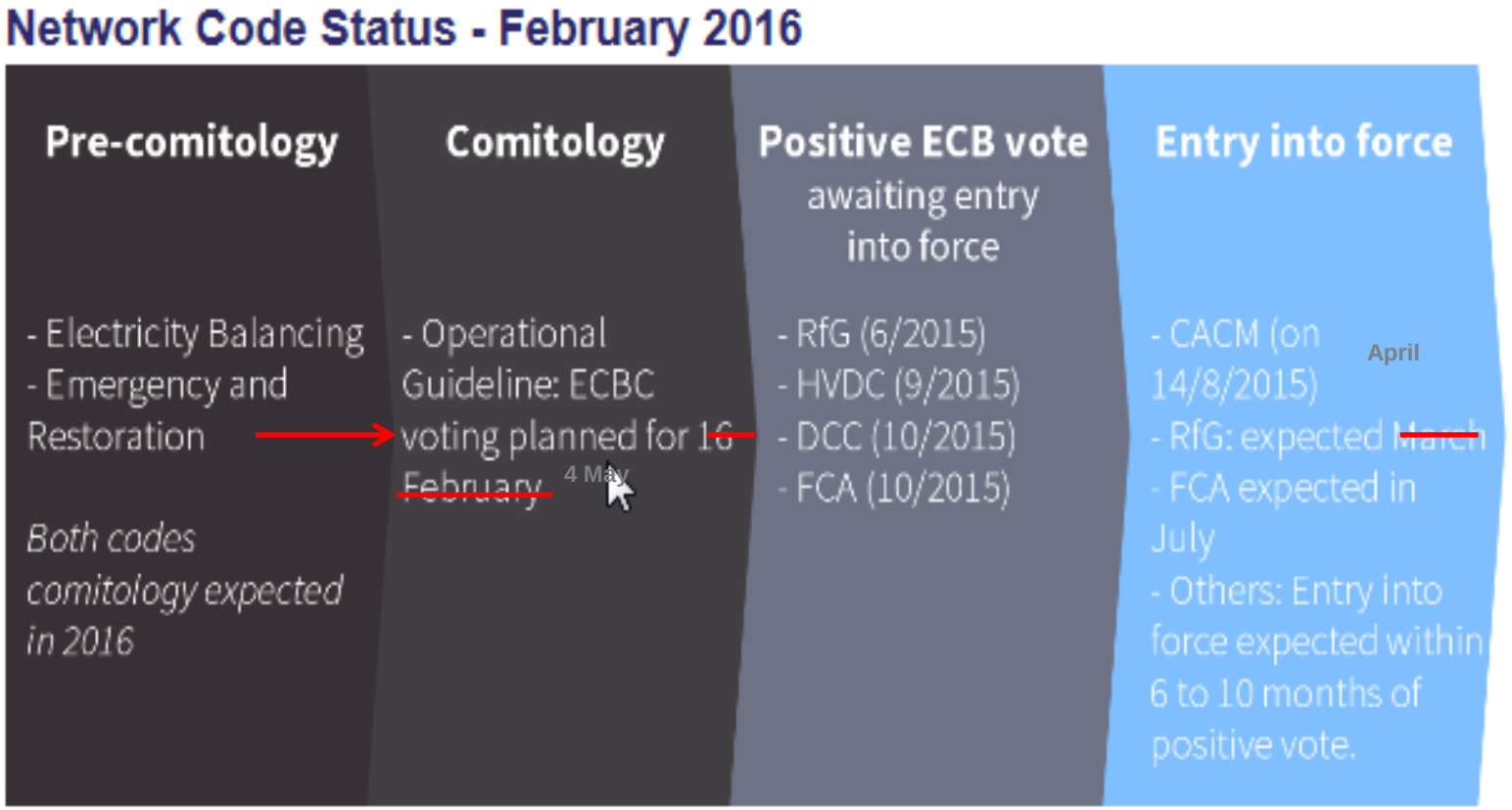
- **Meetings:** twice a year

- **TOR:** available on ENTSO-E website

News from the Brussels' scene

Network codes:

- **RfG entry into force- expected in April/May 2016**
- **DCC and HVDC entry into force Autumn 2016**
- **System Operations Guideline: ECBC voting expected 4 May 2016**
- **NC Emergency and Restoration: agenda ECBC 4 May 2016**



News from the Brussels' scene

- EC sustainable energy security package published 16 February 2016:
- Package of energy security measures to equip the EU for global energy transition to address possible energy supply interruptions
- Focus:
  - Security of gas supply regulation
  - Intergovernmental Agreements in energy
  - Liquefied natural gas (LNG) and gas storage strategy
  - Heating and Cooling strategy

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What was done by now

- **Members:**
  - Orgalime, T&D Europe, FOSG, Europacable , ENTSO-E
- **2 meetings +1 workshop in Q1/2016**
- **Draft report available but too long(25 pages)**
  - The main messages still to be streamlined
- **Next steps:**
  - Revision of the current draft
  - Physical meeting on 16 April
  - Final report end April

Insight report content

Contents

1. Introduction
2. AC technologies

2.1 OHL

2.2 AC cables

2.2.1. HVAC land cable technology – Level 1: Technology in Service or scheduled for service

2.2.2. HVAC submarine cable technology – Level 1: Technology in Service or scheduled for service

2.2.3. AC Gas insulated lines

2.3 Substations

Phase Shifting Transformers (PSTs)

HVAC Static VAR Compensators (SVC)

HVAC STATCOM

Real Time Thermal Rating

WAMS, Synchrophasors and PMU

3. High Voltage Direct Current (HVDC) power transmission

3.1. Introduction

3.3. Extruded XLPE HVDC Cables

3.4. LCC technology

3.5. VSC technology

4. HVAC / HVDC Hybrid Lines

4.1. AC – DC system interaction

4.2. Asset management

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TYNDP2016 timeline

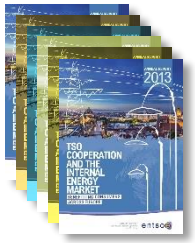
	2015					2016			
Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Scenario development

Scenario Development Report

Coordinated planning

Regional Investment Plans & draft list
TYNDP2016 Project Candidates



Project identification

CBA assessments and drafting

Final TYNDP2016

Public consultation

TYNDP 2016 - Key Steps

Stage 3 - TYNDP Packge 2016	**DEC 2016**
▫ Scenario Outlook and Adequecy Assessment (SOAF) ▫ TYNDP 2016	
Stage 2 - Project Assessment	**JUN 2016**
▫ Cost benefit analysis of projects.	
Stage 1 - Planning	**OCT 2015**
▫ Common Grid Planning ▫ Scenario Development ▫ Project Submission	

- Report TYNDP Package 2016 (Forthcoming)
- Consultation TYNDP Package 2016 (Forthcoming)
- Reports 6 TYNDP Regional Investment Plans (Final & Download)
- TYNDP 2016 list of projects (Final & Download)
- Consultation TYNDP Regional Investment Plans + TYNDP 2016 Candidate Project list
- Report Scenario Development (Final & Download)
- Consultation Scenario Development (Concluded)

Consultation Publication

Current status

- **TYNDP 2016 :**
  - currently in the assessment phase for 2030 visions
  - Started the drafting phase for the TYNDP main report and the 14 specific insight reports(see following slide)

- **Released the assessments for the 2020 scenario to all the project promoters**
  - The assessments for 2030 to be delivered to the promoters end April/May

- **Plan to have a public webinar on the preliminary assessment results beginning of May**
- **End June the release of the draft TYNDP 2016 for consultation**

TYNDP 2016 report drafting

- **Main approach**

  - Executive report (“ eH2050 style”)
  - Additional insight reports (stand-alone leaflets on single key messages)
  - Enhanced website (interactive map)
  - Complemented CBA assessment sheet (free description, link with CPS and SEW/GTC, CBA, and complementary studies)

- Report : Executive report (1)
- Report : Insight Report - 2030 Pan-European Capacity Analysis (1)
- Report : Insight Report - A push for Projects of Common Interest (2)
- Report : Insight Report - Baltic synchronization (1)
- Report : Insight Report - Data and expertise as key ingredients (1)
- Report : Insight Report - Engagement with all involved actors (1)
- Report : Insight Report - Future system perspectives (2)
- Report : Insight Report - Getting projects built (1)
- Report : Insight Report - Nordic and Baltic sea - regional planning (1)
- Report : Insight Report - North Seas - regional planning (1)
- Report : Insight Report - North-South interconnections in Central-East and South-East Europe - regional planning
- Report : Insight Report - North-South interconnections in Western Europe - regional planning (1)
- Report : Insight Report - System adequacy (1)
- Report : Insight Report - Technology (1)
- Report : Insight Report - Viability of Energy mix (2)

Draft

Project number – Project name

[project description

…

…

…

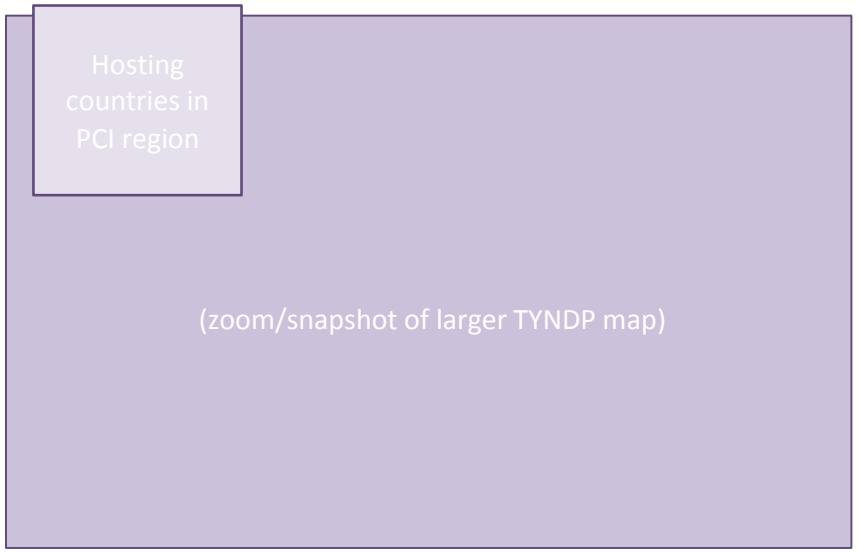
…]

PCI label …

Promoted by …

Classification …

Boundary …



Project details

Investment Index	Description	Substation (from)	Substation (to)	GTC contribution (MW)	Expected commissioning date	Present status	Evolution since TYNDP 2014	Evolution driver

Useful information

Example:

- *Project website (TSO subsite, or dedicated PCI page)*
- *Information on clustering approach (why is it essential to see it as one project). In case of different clustering in 2nd PCI list, why?*
- *Other relevant links, e.g. EIA, consultation, national plan, agreement*

Investment needs

Regional planning

[free text explanation]

Capacity analysis

[free text explanation]

Project Cost Benefit Analysis

CBA approach
(generic reference to CBA methodology)
(This project is assessed by simple / multiple TOOT/PINT)
(This project is assessed taken into account the particular methodology of … (if any))
(if relevant a statement on impact of late project description change)

General CBA indices	
GTC contribution in 2020	… MW (or … / … MW)
GTC contribution in 2030	… MW (or … / … MW)
Cost (M€)	(range)
Cost information background	…
S1	
S2	
B6	
B7	

Scenario specific CBA indices	EP2020	2030 V1	2030 V2	2030 V3	2030 V4
B1 SoS (MWh/yr)					
B2 SEW (MEuros/yr)					
B3 RES integration					
B4 Losses (GWh/yr)					
B4 Losses (MEuros/yr)					
B5 CO_2 Emissions (kT/year)					

[interpretation/explanation of CBA results]

Complementary info	EP2020	2030 V1	2030 V2	2030 V3	2030 V4
Generation margin increase					
Generation ramping challenge					
Price differential (average absolute value)					
Price differential (standard deviation)					
Other…					

[interpretation of complementary info]

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TYNDP 2018

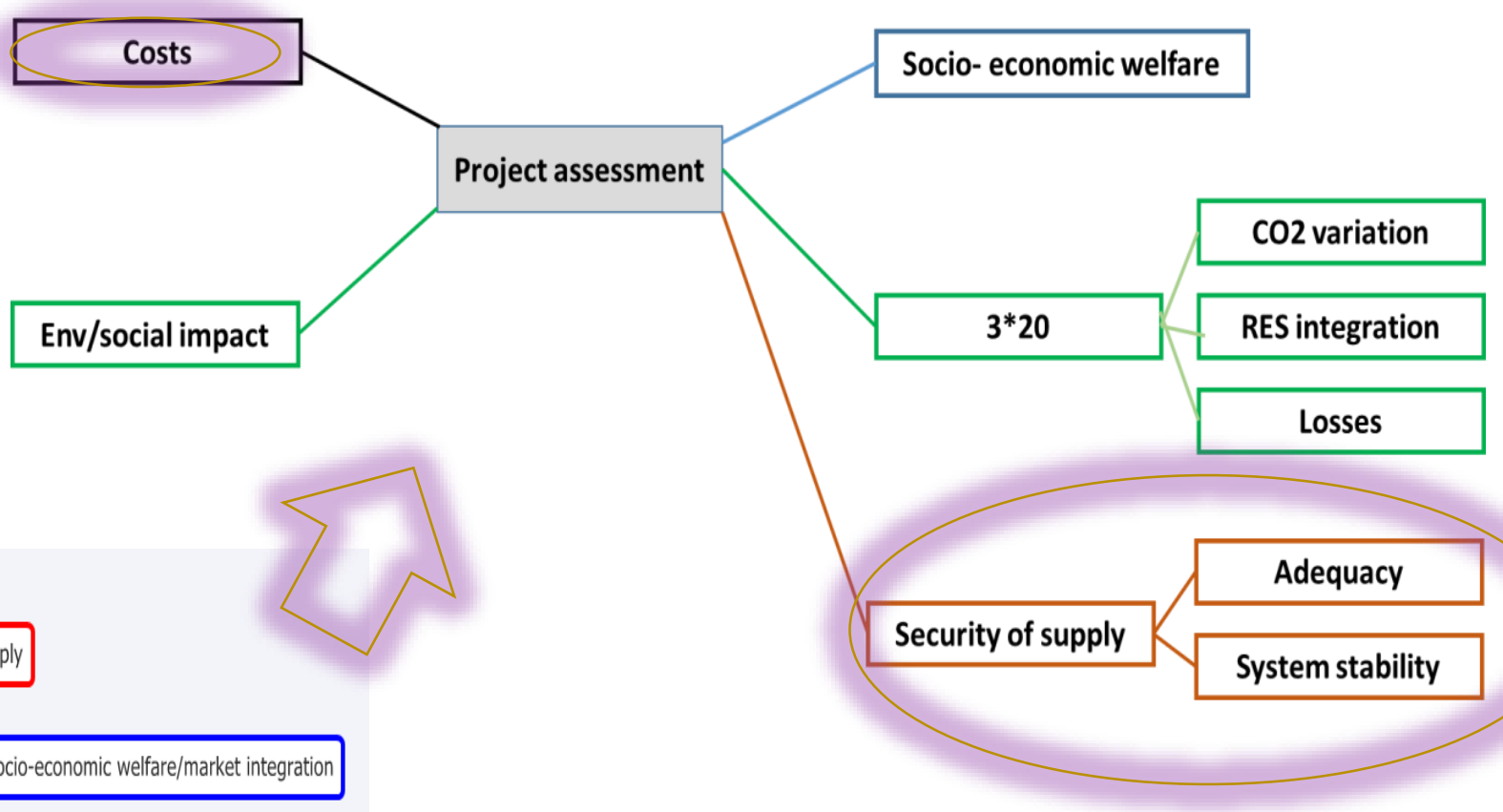
- **work already started**

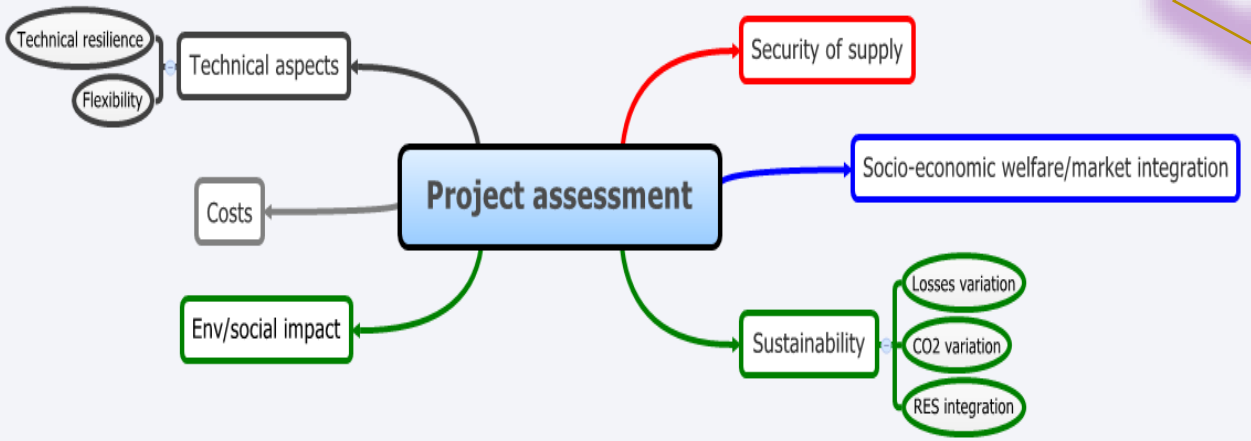
- **CBA 2.0:**
  - 16 March 2016 – public workshop to collect initial feedback
  - End April – end May - public consultation on the draft CBA 2.0

- **TYNDP 2018 scenarios:**
  - End April – end May- first request for input on scenarios assumptions
  - End May – public workshop to gather more feedback and give first insight on the received input
  - Further interactions on the methodology, data and draft scenarios to follow after summer

- **TYNDP 2018 main principles:**
  - aimed to be consulted in Summer after the release of TYNDP 2016

CBA 2.0





CBA 1.0

Major change compared to 1.0

TYNDP 2018 scenarios

2025

best TSO estimate?

2030

2- 3 scenarios

EC-commission scenarios (external reference)?

Other scenario

2035

2040

2-3 scenarios top down

2045

2050

eH2050

!!! Initial thoughts - to be further consulted with the stakeholders

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Guidelines status

- Currently we have no insight from the EC on this matter
- The only draft available is the one from February 2015
- The next collection of projects is envisaged for spring 2017

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EC – Common TYNDP/PCI Platform

- **EC established a Cooperation Platform with EC/ACER/NRAs/ENTSOs to smoothen the process for the 3rd PCI list.**
  - Kick-off meeting on 5 February.

- **Aims to:**
  - achieve a common understanding of the issues involved
  - deliver practical solutions to address the PCI process based on the previous lessons learned

3rd PCI process

- **process starts early:**
  - Based on last PCI selection experience: First TEN-E Cross-Regional and Cross-Thematic Groups Meeting 4 February 2016

- **3rd PCI list to be adopted in 2017**
- **Next Meeting 4 May 2016 (tbc):**
  - Cross-sectoral Regional Groups' workshop
  - Topic: Infrastructure fit for Europe's energy needs
  - Presentations by stakeholders about their visions on the energy systems in the future

Next meetings

May meeting: http://doodle.com/poll/cxif4whch32grgey

June meeting: http://doodle.com/poll/ukrc6mfbxzepz4i8

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