
TYNDP 2016 – Consultation review of Project Candidate list and Regional Investment Plans 2015

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Contents

Contents	2
1. Background.....	3
2. Consultation response on draft Regional Investment Plans 2015.....	4
Ofgem	4
TU Delft.....	5
(Private person).....	7
(Independent consultant).....	8
Nacionalinė Lietuvos elektros asociacija (Nacional Lithuanian Electricity Association)	9
Fortum Power and Heat Oy	10
APREN (Portuguese Renewable Energy Association).....	15
Finnish Energy	23
NorthConnect KS.....	27
Central Europe Energy Partners (CEEP).....	29
National Grid Interconnector Holdings Limited.....	31
EDF.....	37
3. Consultation response on draft list of TYNDP2016 Project Candidates.....	46
AGZOS, S.L.....	46
Ofgem	47
Lietuvos energijos gamyba, AB.....	49
PSE S.A.	50
Fortum Power and Heat Oy	51
Friends of the Supergrid.....	53
Finnish Energy	57
URE	59
Axpo.....	61
Iberdrola.....	63
National Grid Interconnector Holdings Limited.....	67
Shetland Islands Council.....	69
Hydrocosmos, international consulting company.....	70
Red Eléctrica de España.....	72
Enel S.p.A.	74
RTE.....	75

1. Background

This document presents the feedback received in the public consultations on the six draft Regional Investment Plans, and the list of TYNDP2016 project candidates, which both ran from 24 June to 10 September 2015^{1,2}.

Section 2 gives the suggestions given by stakeholders on the 6 draft Regional Investment Plans. On each comment or suggestion for improvement an ENTSO-E response is provided, based on input from all six regional groups and a coordinating task force.

Section 3 gives the comments expressed by various stakeholders (ENTSO-E member promoters, non-member promoters, regulators, NGOs, and others) on specific project candidates as published in June 2015. These comments were reviewed by the relevant promoters and in specific cases by ENTSO-E, whose feedback is provided as such in this document.

This document is published alongside the updated final Regional Investment Plans, and formal list of projects for TYNDP2016 assessment.

ENTSO-E appreciates all the feedback received, and hopes this document clarifies the updates made.

¹ https://consultations.entsoe.eu/system-development/regional-investment-plans/consult_view

² https://consultations.entsoe.eu/system-development/have-your-say-to-the-tyndp-2016-candidate-projects/consult_view

2. Consultation response on draft Regional Investment Plans 2015

Ofgem

Is the structure and the information in the report easy to read and understand? - Overall impression

On the whole, yes. The information relating to the GB specific PCI candidate projects is incorrect for a number of projects. Please refer to Ofgem's response to the Entso-e consultation on PCI candidate projects for the updated information.

- The updated information has been taken into account.

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

Yes.

Additional info for RegIPs and the TYNDP2016-report?

See below.

Regional Investment Plan North Sea - RG NS

Given the role North Sea coordinated projects will play in realising many of the aims of a pan-European system, the Regional Investment Plan – North Sea should include more reference to the importance of coordination and cooperation between the relevant TSOs and NRAs when planning and developing a coordinated grid. Moreover, reference should be made to the work done by the Northern Seas Countries Offshore Grid Initiative (NSCOGI), and an explanation of how this fits into the investment plan. This is alluded to on page 20 however it should be expanded on further.

- The 2014 RGNS Regional Investment plan included a whole chapter on the North Seas Grid Infrastructure (chapter 10), where the topic is described in detail on more than 10 pages, also comparing NSCOGI results to TYNDP and recent EC studies. This work has been complemented in the 2015 RegIP by the conceptual project called “Long-term conceptual North Seas Offshore Grid Scheme”, covering the High RES scenario (based on TYNDP2014 Vision 4). In addition to that, both, the 2014 and the 2015 RegIP also propose a number of projects crossing the respective waters, leading to evaluating the Costs and Benefits of the North Sea Grid Infrastructure based on these identified projects.

TU Delft

Are the principles and methodologies used for the common planning studies run well explained?

1 - A definition of the SEW components and calculation is needed.

- A definition on the SEW approach can be found in the CBA methodology (<https://www.entsoe.eu/Documents/SDC%20documents/TYNDP/ENTSO-E%20cost%20benefit%20analysis%20approved%20by%20the%20European%20Commission%20on%204%20February%202015.pdf>). The same definition has been applied in the TYNDP planning studies. The CBA method mentions the possible approaches to calculate SEW, as well as the assumptions taken.

2 - The data used (network data, nodes, technology generation costs) for the market and network models can be indicated in an appendix and provided in electronic format.

- The planning studies build on the earlier TYNDP2014 as explained in the methodologies. Much of the data used in this last TYNDP is accessible on the ENTSO-E website:
 - Scenario data: <https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Documents/TYNDP2014%20Visions%20data.xlsx>
 - Market modelling data: <https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Documents/TYNDP2014%20market%20modelling%20data.xlsx>
 - Network data: <https://www.entsoe.eu/publications/statistics/network-dataset/TYNDP-2014-input-datasets/Pages/default.aspx>
- Also for TYNDP2016, ENTSO-E strives to provide such datasets and assumptions, also before finalization of the report. We strongly acknowledge that transparency of data and methodologies, can only aid understanding of the studies performed and key conclusions drawn.

Additional info for RegIPs and the TYNDP2016-report?

SEW costs and changes for each project should be presented in the appendix (if the TYNDP2014 reference column is the SEW it should be better explicited). Also, SEW change distribution by TSO area / country should also be presented for each project and for aggregate data.

- The studies performed in the planning phase and presented in the Regional Investment Plans explain the main drivers for new grid infrastructure. These planning studies highlight need for new capacity, and explain possible barriers. The conclusions guide all project promoters and ENTSO-E Regional Groups in the proposals for TYNDP project candidates. The explicit assessment of each TYNDP project will be done in the next phase of the TYNDP process. This assessment is done based on a clear and sound CBA methodology which has been developed by ENTSO-E, ACER and EC in past years with valuable input from stakeholders. This CBA assessment will give a wide set of indicators, based on common scenarios, which will allow a transparent and non-discriminatory comparison of all TYNDP projects.

Regional Investment Plan North Sea - RG NS

1. Separate onshore and offshore wind capacity and generation data. .

- A very valid recommendation. This split will be given in future publications of the ENTSO-E TYNDP scenario data sets.

2. The presentation of interconnector utilization with 5 and 95 percentiles does not provide information on the usual operation conditions - average utilization should also be provided.

- Percentiles 5% and 95% give an indication about the extreme flows on the border in the two directions. These extreme flows correspond to the most stressed situations, in and out of the considered border. These highly stressed periods need to be covered by the grid in order to unlock the full potential of the market exchanges
- Average utilization of a border would not give a relevant picture of how the border is stressed (e.g. we could imagine a border highly stressed 50% of the time in import, and 50% of the time in export, then the average utilization would be close to zero).
- The usual operation conditions on a border is given through yearly duration curves, published on figure 4.7: "Power flow duration curves on the AC borders within the Continent". People can find there the load on the border linked to the percentage of time it represents.

3. Numerical comparison of corridor capacity expansions between RegIP NS 2016 and the e-Highway 2050 results would reinforce the RegIP results.

- eHighway has a dedicated deliverable on the intermediate 2040 step between TYNDP2014 (latest available TYNDP at time of the study) and the 2050 corridors. This information will soon be available on <http://www.e-highway2050.eu/e-highway2050/>, though was not yet available at the time of the regional planning studies.

4. Denmark HVDC savings should be represented in % of total investments, for the savings must be weighed against the listed risks of the project.

- The study has screened the SEW benefits and the capital expenditures of potential interconnectors, including interconnectors to Denmark. The interconnectors, which in the screening have shown the largest benefits in comparison to the capital expenditures, have been selected for further grid studies, i.e. proposal of topology, grid-connection substations, grid reinforcements, grid calculations, identification of more accurate cost figures etc. For Denmark, the capital expenditures of potential interconnectors have further been compared for two possible grid-connection configurations which are 1 - point-to-point connectors and 2- multi-terminal system. The multi-terminal system have been assigned so that the SEW benefits are not affected, i.e. the market cross-border flows remain unchanged. The study has shown that the multi-terminal HVDC system will be with reduced cost, as well as it will have more operation advantages for the HVAC transmission system, in comparison to the point-to-point connectors. Thus, the multi-terminal system shall be seen as a possible cost-efficient configuration of the proposed HVDC connectors to Denmark, but not as any fixed project itself. The connectors are possible and beneficial from the SEW vs. cost comparison, and the multi-terminal configuration will just make the cost lower. From the explained above, It does not make sense to include risks into assessment of the proposed and assessed connectors to Denmark at this stage of work. The figures of the capital expenditures of both grid-connection configurations and those of the cost savings by the multi-terminal system are fully covered in the RegIP in M€. The same information in % will be redundant.

(Private person)

Is the structure and the information in the report easy to read and understand? - Overall impression

I have not read the full 130 pages, however, the structure seems good.

There seems to be room for improvement in making the document more oriented towards citizens. The document is not that easy to fully comprehend and why not make it more interactive, so that the point of departure is the single citizen and his/her environment? It would be fantastic if the starting point would be an overview of how the infrastructure might impact me and what my role in this process is! (what is the room for influence?)

- This should indeed be the fundamental perspective of a grid infrastructure plan intended to serve all European consumers. ENTSO-E is constantly working on further improving stakeholder involvement and transparency of processes and data. Various forums are used to engage with all interested parties, such as a dedicated Network Development Stakeholder Group (<https://www.entsoe.eu/major-projects/ten-year-network-development-plan/long-term-network-development-stakeholder-group/Pages/default.aspx>), as well as regular workshops and webinars.
- The purpose of the Regional Investment Plans is to share key messages of the region (as seen from an ENTSO-E and TSO perspective) and to present the results of a pre-feasibility study for future project candidates. The impact, these possible future projects could have for the society, under which the electricity consumers are a part, is the center piece of the assessment phase results. These will be presented in the TYNDP2016 report, to be published in Q4 2016. All ideas on how our reports can be made more interactive, easy to read and adapted to different stakeholders are very welcome and will be considered in future publications.

In terms of the environmental issues (cf. Directive 2001/42/EF), the document lacks transparency. As an example, I cannot find "biodiversity" in the document although it has been pointed out in the CBA methodology document that biodiversity should be a separate indicator. Is this indicator forgotten or just found not important?

- The main focus of the Regional Investment Plans was on presenting the results of our pre-feasibility study for potentially new interconnection project candidates. The method used has primarily focused on socioeconomics to determine which project candidates should be investigated more closely during the assessment phase. The impact, these possible future projects could have for the environment an integral part of the assessment phase and will be presented in the TYNDP2016 report, to be published in Q4 2016.

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

Yes

Additional info for RegIPs and the TYNDP2016-report?

More transparency on the scoping of environmental impacts.

More transparency on the room for citizen influence

- See response above.

(Independent consultant)

Is the structure and the information in the report easy to read and understand? - Overall impression

Yes, when you spend a lot of time diving in the methodology

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

Yes in general. But I would appreciate more information on how to become a stakeholder and how to get more information about the projects, especially the storage ones

- ENTSO-E strives to let any interested party engage in the process. In order to facilitate greater stakeholder involvement in the TYNDP process, and enable the stakeholders to play an active role in the TYNDP deliverables, ENTSOE created the Network Development Stakeholder Group (<https://www.entsoe.eu/major-projects/ten-year-network-development-plan/long-term-network-development-stakeholder-group/Pages/default.aspx>). Regional workshops and public consultation have been regularly organized during the process, where stakeholders can give input and take part in the process.

Additional info for RegIPs and the TYNDP2016-report?

I would like to motivate more the storage projects explaining how the projected facilities will contribute to the management of the grid. Maybe this analysis will be carried on with the CBA phase, but an initial assessment about the size and the location specifically in relation with the grid necessities and other general criteria will be enough to get an initial idea and could help to compare between projects even in different regions

- This information will be provided during the second phase of the TYNDP process in which storage projects, as well as the rest of projects, will be assessed with a CBA analysis. This analysis will be realized based on the data delivered by project promoters during the first phase of the TYNDP process (an application window was opened for an official introduction of projects).

I think also that more information can be provided about the sponsors for the private promoted projects. Who are they?

- The promoter names of all storage and transmission infrastructure projects will be added in the final TYNDP project list.

Nacionalinė Lietuvos elektros asociacija (National Lithuanian Electricity Association)

Regional Investment Plan Baltic Sea - RG BS

National Lithuanian Electricity Association expresses support to Lithuanian projects that are part of Baltic Sea regional investment plan:

- The LitPol Link project, the electricity interconnector between Lithuania and Poland, is the initial step to integrate the Baltic and Western European power infrastructures. LitPol Link is a part of Baltic Energy Market Interconnection Plan (BEMIP) aimed at connecting the energy systems of the Baltic Sea region countries and eliminating energy islands in the European Union. The elimination of energy islands is a priority having in mind current geopolitical developments in the closest neighbourhood of the EU. The further development of the project (LitPol Link stage 2) in timely manner will expand the possibilities for Lithuanian market players. The opening of the additional part of Lithuanian interconnection with Poland will increase benefits for market participants, enhancing the trading possibilities for market players in Lithuania and in Poland. LitPol Link is PCI project.
- Baltics Synchronization with Continental European power systems is perceived as an important geopolitical milestone in ensuring power system stability and reliability of the region by both politicians and engineers of the electricity transmission grid operators. The Baltic States still remain as part of IPS/UPS (Estonia, Latvia, Lithuania, Belarus and Russia are connected into one common synchronously operated electricity system, called BRELL. This is not acceptable politically, strategically and technically, because some parts of BRELL are weak due to insufficient investments). Synchronisation with continental Europe will remove impact from third countries, foster and ensure fully-fledged market integration of the Baltic States electricity transmission network into the reliable and modern EU power network. The Baltic States share a common position that the electricity systems of the Estonia, Latvia and Lithuania must operate synchronously with the systems of the Continental Europe. This will not only ensure security of supply to the region, but will contribute to the implementation of Internal Energy Market, the core element of the Energy Union concept. Synchronization is a PCI project.
- NordBalt is a DC interconnector between Lithuania and Sweden and includes internal investments in Lithuania, Latvia and Sweden. The project will connect the Baltic and Nordic grids and ultimately will integrate the Baltic and Nordic electricity markets. This project will also increase security of supply. Phase 1 covers investments before 2016. The second phase of the project covers remaining investments until 2023 and includes network reinforcements and investments that are required in Sweden and in Lithuania to be able to fully utilize the 700 MW interconnector between the two countries. Investments include new 330 kV OHL in Lithuania and new 400 kV OHL in Sweden. NordBalt (phases 1 & 2) is PCI project.
- Kruonis Pumped Storage Power Plant (Kruonis PSPP) is intended for balancing electricity production and consumption, preventing and liquidating accidents in the energy system, as well as securing the system's reserve and regulating frequency and voltage. The extended Kruonis PSPP will contribute significantly to the flexibility and reliability of the whole Baltic transmission system as well as will contribute to the integration of RES and increase of the security of supply:
 - integration of renewable energy generation in the region
 - increase of energy trade in the region
 - expansion of new production capacities in the region.

Fortum Power and Heat Oy

Is the structure and the information in the report easy to read and understand? - Overall impression

Yes, but background knowledge of the issues is required.

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

In principle yes. However, it is unclear which all components are included as socioeconomic welfare benefits. E.g. benefits in ancillary services and in relieving internal congestions could be substantial.

- A definition on the SEW approach can be found in the CBA methodology (<https://www.entsoe.eu/Documents/SDC%20documents/TYNDP/ENTSO-E%20cost%20benefit%20analysis%20approved%20by%20the%20European%20Commission%20on%204%20February%202015.pdf>). The same definition has been applied in the TYNDP planning studies. The CBA method mentions the possible approaches to calculate SEW, as well as the assumptions taken.

Additional info for RegIPs and the TYNDP2016-report?

Regional maps on the proposed projects would be informative. More analysis of alternative projects would also add transparency of the plan.

- We have analyzed all borders equally and we seek to further improve transparency of potential projects. The essence is displayed in the reports. More insight on all projects (of which some very long-term projects can be mutual alternatives) is provided in the more detailed CBA assessments. This will feed into the final TYNDP2016 report.
- Maps showing the projects will be included in the final TYNDP2016 report.

Regional Investment Plan Baltic Sea - RG BS

The Regional Investment Plan for the Baltic Sea region gives a good summary of the planning process and results. Our detailed comments to the plan are presented in the attached document. The main comments are summarised here:

- The market simulation does not show the benefits that new interconnectors give in relieving internal congestions. These benefits should be taken into account in determining the project profitability.

- Market models (without integrated grid models) do not consider internal congestions. This could be improved in future models. Internal projects in the TYNDP2016 project will be assessed in line with a standard CBA methodology, as to show their value to fullest extent while allowing for non-biased comparison of all projects.

- The 3rd 400 kV line from northern Sweden to Finland should be built by 2020, when this transmission route from northern Scandinavia through Finland and the Baltics to Poland is strengthened on the EE-LV and LT-PL borders, too. This line would decrease pressure on the Swedish internal grid and reduce investment needs in Sweden.

- A third AC connection between Sweden and Finland is not possible to complete by 2020 due to permission processes. Svenska Kraftnät and Fingrid have initiated a joint study to assess the future need for interconnection capacity between the countries where both a 3rd AC connection

and replacement and upgrades of HVDC cables are analysed. Results from this study is expected within a year.

- As a new cable to the SwePol Link shows clear benefits, it should be included in the plan.

– The reasons for some exclusion of projects as this one is explained in the Regional Investment plan Baltic Sea chapter 5.6 *Long term perspective, remaining challenges and gaps*.

- Studies of new alternative NO-DK interconnectors could include a link from Norway to eastern Denmark, too.

– During the screening process all feasible projects have been investigated, including a potential new interconnector between South Norway and Eastern Denmark. More information about the screening process and results from it can be found in Appendix 7.2 in the Regional Plan for Baltic Sea. Chapter 5.6 of the Regional Investment Plan Baltic Sea lists the long term perspective and remaining challenges of the region. In this chapter a number of arguments are mentioned why it is infeasible to build additional interconnectors out of Norway beside the already known projects.

- Each bidding zone border between Norway and Sweden should be analysed more thoroughly.

– All feasible new connection between Sweden and Norway was analysed. The only one removed was the SE1-NO4 border where a new overhead line (Ofoten-Ritsem) would need to be built in the world heritage national park “Laponia”. The Swedish regulator has already denounced such plans. For consistency reasons only one weather year was analysed however even if the whole ensemble of weather years is used new interconnections between Sweden and Norway still show very low benefits. The low benefits is due to that planned new interconnections between both Sweden/Norway to the continent will to a large extent remove the price difference between the countries.

- Strengthening of the existing NO-FI 220 kV line should be studied for enabling commercial transmission.

– Statnett and Fingrid are both working on long term solutions for the northernmost grid. Statnett is currently working on a concept study for future grid development in northern Norway (Finnmark). In this study, one of the conceptual solutions for the future grid of Finnmark includes a reinforcement between Norway and Finland. Such a reinforcement could mean an introduction of commercial trade between the countries.

- The e-Highway 2050 scenarios should analyse cross-Nordic connections NO-SE, SE-FI and NO-DKE, too

– The eHighway 2050 project is mentioned and referred to in the Regional Investment plan Baltic Sea but is not a part of the plan. Please see eHighways web site for more information (www.e-highway2050.eu).

- The analysis of a future option based on a multi-terminal HVDC system of Danish interconnectors is much welcomed, showing quite considerable cost reductions compared to a traditional alternative.

However, this analysis should be extended in the future to further alternative interconnectors, e.g. from Norway or the Swedish bidding zone SE3 to eastern Denmark.

- The multi-terminal HVDC development has shown benefits and been based on the market results, i.e. using the market flows between the Danish and neighbouring areas. Each market flow corresponded to a potential connection between Denmark-East and a neighbouring area. The market analysis has also included potential market flows between Denmark-East and Norway-South as well as between Denmark-East and Sweden-3. The market results have not shown SEW benefits of such potential flows to Norway-South or to Sweden-3 on top of the market flows to Germany, Denmark-West and Poland. Therefore such connections have not been assessed in the network studies of the Common planning studies-2015. Nevertheless potentials of more additional connections may be assessed in future work beyond TYNDP-2016 Phase II.

RG BS attachment

https://consultations.entsoe.eu/system-development/regional-investment-plans/consultation/download_file?squid=question.2015-06-24.5878110640-filesubquestion&user=ANON-3JZC-9QGP-U

Regional Investment Plan Continental Central East - RG CCE

The Regional Investment Plan for Continental Central East region gives a good summary of the work done for identifying and selecting the proposed new grid projects. However, some further improvements would be needed:

- The use of Vision 4 as the only scenario determining the socioeconomic benefits is questionable, as in some other scenarios the power flows on some borders might be considerably bigger, e.g. with a surplus generation in Germany instead of the German deficit situation of Vision 4. The benefits of new interconnectors in relieving internal bottlenecks within bidding zones should also be taken into account in the project valuation.

- The use of Vision 4 from TYNDP2014 as the basic scenario for Common Planning Studies to explore the possible candidate projects was approved by all regional groups through the ENTSO-E. The regions were there given free to carry out sensitivity analysis. As the CCE region is highly densely meshed, it was decided to use only basic scenario for Common Planning Studies where extremely high flows were already indicated in the transmission systems. In the light of past incidents with gas supply restrictions and nuclear phase out in Germany, CCE decided to carry out sensitivity analysis where the generation of nuclear and CCGT power plants was decreased and the level of Security Of Supply with import export flows change of each CCE member TSO was checked.
- The benefits of the projects, those from TYNDP2014 together with those identified in the Common Planning Studies will be assessed in the new visions of TYNDP2016 through the CBA indicators.

- The target capacity map (Figure 4-3) shows for the Germany-Poland border a target capacity between 0-999 MW. This is not in line with the reference capacities (Figure 5-2) and seems not to correspond with a socioeconomic optimum capacity level on this border.

- Yes, we have noticed that the value of the target capacity for the German-Poland border in the Figure 4-3 is not in line with the reference cross-border capacities the Figure 5-2, and should be higher. Therefore we corrected the German-Poland cross-border span of target capacity value in the Figure 4-3 map.

- It is unclear why the German-Polish reference capacities are kept unchanged between years 2020

and 2030, although a Poland-Germany Project "GerPol Power Bridge I" with a provisional GTC capacity of 1500/500 MW is planned to be commissioned in 2022.

- The reference capacities in 2020 time horizon includes all mid-term projects. Projects with commission dates till 2022 are signed as mid-term. Therefore the "GerPol Power I" is already included in the reference capacity value in 2020.

- It is unclear why in the standard cost data (Table 7-2) there is no data given for new PL-SK interconnectors, and why the cost value for the PL-CZ reinforcements is very high, although cheaper options could perhaps be available by upgrading existing 220 kV lines to 400 kV.

- The costs for the PL-SK profile are included in the PL import profile, where only the costs of investments on the Polish side are included. Additional increasing of transmission capacity about 1500 MW is possible only in PL import, in this case there is no change of capacity on the PL synchronous profile in opposite direction. The PL-DE/CZ/SK synchronous Polish profile cannot exceed PL Export 3000 MW and PL Import 2000 MW. If the 1500 MW capacity increase of the synchronous PL-DE/CZ/SK profile will cause 200 MW increase on PL-SK profile, in that case there are no additional costs needed on the SK side. The line with the PL-SK costs (which are in fact not mentioned there) in the Table 7-2 will be deleted.
- Based on results of the studies in TYNDP2012, TYNDP2014 and Common Planning Studies in TYNDP2016 process, the new additional investments on the PL-SK cross-border profile are not needed, therefore PSE and SEPS don't expect planning any strengthening of the PL-SK cross-border profile.
- Information regarding the costs on PL-CZ profile needed are already clearly explained and included in CCE Regional Investment Plan 2015 on page 64: *"Higher costs than standard appeared when potential increased power flows in direction from Poland to Germany exceed the level of 3000 MW. This additional expected flow creates additional needs for infrastructure and then higher costs than standard. Export from Poland to Germany in such quantity could be realized not only by Polish – Germany profile, but also by Polish – Czech border and it requires in consequence a lot of additional reinforcement necessary to integrate the additional power flows in the Polish grid especially in southern part of Poland (of course also in the Czech grid). Polish experts find out, that to achieving this goal it is necessary to build in the Polish transmission system:*

- New double circuit tie-line in the mountainous terrain (over standard cost of construction) with upgrading existing or building new substation.
- New 400 kV lines in south - western part of Poland with new 400 kV substations.
- New 400 kV lines in central - southern part of Poland with upgrading of existing stations.
- The costs on the Polish side were evaluated on the level of 1 000 Mil. Euro."

- It would be informative to analyse how much the coming phase-shifting transformers on the DE-PL and DE-CZ interconnectors increase the available commercial transmission capacity compared to the present situation both on these borders, and also on other borders (e.g. PL-CZ, PL-SK, CZ-AT, SK-HU, AT-HU) through eliminating the current loop-flow problems in the region.

- The impact of the PSTs on the neighboring TSOs and on the transmission capacities values of the cross-border profiles between particular TSOs was not the scope of the Common Planning Studies. The scope of the Common Planning Studies was to explore the new possible candidate projects which are valuable to place in the particular transmission systems. The impact analysis of DE-CZ and DE-PL PSTs on the transmission capacities values, commercial capacities values and loop-flows will be the scope of other relevant studies. The assessment of the projects, where PSTs are included will be assessed through the CBA indicators in the TYNDP2016 report.

- The maps on socioeconomic welfare (SEW) and standard costs (Figures 4-5, 7-5 and 7-6) are otherwise very informative, but the SEW variation is not visible on borders with favourable low costs.

- Depiction of the socioeconomic welfare (SEW) value and standard costs value was intentionally planned to be informative in the Regional Investment Plans 2015, as the costs values of the possible projects are very sensitive and uncertain data of the particular TSOs, while some of the possible future projects costs are not officially approved and included in the national investment plans. Detailed SEW assessment of the projects will be assessed in the TYNDP2016 report with the cost values figures.

APREN (Portuguese Renewable Energy Association)

Is the structure and the information in the report easy to read and understand? - Overall impression

We only focus our analysis in the CSW region.

We think the report is well structure and easy to understand.

- Your feedback is appreciated.

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

1. The market models must be improved.
2. The re-sizing and re-allocation of hydro is not well explained and no evidence of practical results
3. The RES-reallocation top-down scenario which optimize installed RES capacity across Europe does not show credible results.

- The reference scenario used in the first phase of TYNDP 2016 was the Vision 4 from TYNDP 2014 (whose scenario building process started in 2012). Other scenarios were also used to perform sensitivity analysis, namely Visions 1 and 3, also from TYNDP 2014, and a first draft of the new Vision 3 from TYNDP 2016.
- The new scenarios for TYNDP 2016 were in public consultation during the period from 21 May 2015 to 22 June 2015, and it is expected that they will be finalized in October, considering the new reference capacities resulting from the final publication of the RgIP 2015. Visions 1 and 3 are bottom-up scenarios developed with inputs from the TSO's. Visions 2 and 4 are top-down scenarios that take the bottom-up scenarios as starting references and are then centrally worked by ENTSO-E to incorporate a stronger European framework.

Additional info for RegIPs and the TYNDP2016-report?

The generation scenario used for the different four Visions will, in principle, embrace the more probable electric system generation trajectory of each country or region.

However, the dynamic of energy policy of each country can have changed from the beginning of the Regional Investment Plans studies and some mismatch between the scenario data used and the actual policy targets can occur.

So we think it will be of great interest to publish in the Regional Investment Plans and in TYNDP 2016 the updated generation scenarios forecast by each National Government.

- The Common Planning Studies carried out in the Regional Investment Plans 2015 development are built on past TYNDP2014, on recent national plans, and follow a consolidated European network planning approach. The RGs were free to carry out sensitivity studies, in addition to mandatory basic TYNDP2014 Vision 4, to cover the dynamic of energy policies of member countries which could change from the end of the TYNDP2014 till now and could cause influential changes in the whole process and to minimize possible mismatch between the scenario data used and the actual policy targets. In the scenario building process for TYNDP2016 assessment phase, different views of particular stakeholders on the energy sector evolution (generation, load, interconnectors ...) as TSOs, 3rd parties stakeholders and European Commission were included. Therefore, in order to cover most of the uncertainties of the energy sector evolution. the chosen approach includes two time horizons and four "extreme" visions, where two of which bottom up and two top down.

Regional Investment Plan Continental South West - RG CSW

APREN congratulates ENTSO-E and the Regional Group for the general quality of the work presented in the document “Regional Investment Plan for Continental South West region” for public consultation and the clear and transparent information used as well as the overall set of scenarios analysis carried out.

Specifically, we would like to emphasize the improvements made in this RegIP2015 concerning the previous one, driven by the Declaration of Madrid of the Energy Interconnection Links Summit on 4 March 2015 among the Governments of Spain, France, and Portugal, to which the EC and the EIB gave support to ongoing regulations and TSOs studies.

Nevertheless we would like to comment some topics that should be improved, namely the ones referring to the overall strategic approach, to the weakness forecast for the Iberian Peninsula interconnections and to the inconsistent Portuguese generation scenarios. Consequently, the final result and investment proposals of the CSW Plan are not quite in line with the EC objectives to improve the security and diversification of supply, to facilitate the market integration and to push to a swift transition for a low carbon cost-effective economy.

On the other hand we do not comment the network reinforcement projects proposed because it is out of the scope of our mission and we do not have special knowledge about their effectiveness.

1. Iberian Peninsula overall interconnection capacity

According to the CSW RegIP2015 in public consultation the interconnection capacity between Portugal and Spain will increase from the current 2020 target of 3,2 GW to 4,2 GW in 2030 which will lead to a lower number of hours of market congestions, result that seems reasonable.

On the other hand the Iberian Peninsula interconnection capacity with France will rise from 5 GW, foreseen in the previous RegIP in the 2020 horizon, to 8 GWh in 2030, due “two new cross-border investments with 1,5 - 2 GW capacity each”, which were identified as essentials in order to guarantee a more efficient market coupling in the CSW region. However the ambitious goal of attaining the interconnection objective of 15% by 2030 is far from being achieved, as stated in the document: “with all projects in the plan, the (interconnection) ratio is higher than 10% (although not reaching the 15%) in Visions 1 and 2, but still lower in Visions 3 and 4”.

In this document under consultation is not properly considered that Portugal and Spain constitute an “electric island” being the same common market – MIBEL. Therefore, Portugal is facing the same restrictions as Spain concerning the Spain-France border constrains, that will continue to happen in 2030, according to the CSW RegIP, with significant congestion hours, around 20%, mainly in the exports from Iberian Peninsula to France.

The document refers that in 2030 the interconnection capacity of Spain will be in the range of 7 - 9% of the installed capacity, considering in these calculations the interconnection lines of Spain with Portugal, France and Morocco. However, since the whole Iberian Peninsula functions as a common market (adding the generation capacity of both countries), its interconnection capacity ratio with the rest of Europe would be only around 4 - 5%.

We consider these high restriction figures unacceptable for 2030 horizon. So, other actions and approaches must be addressed, namely a top-down European position, requiring the total fulfillment of the 15% interconnection objective ruled by EU.

According to EH2050 studies it would be desirable that the interconnection capacity between the Iberian Peninsula and France must be in a range between 12 and 24 GW, and the figure proposed of 8 GW is quite far from this goal.

- The analysis performed in the first phase of TYNDP 2016 took into consideration the objectives defined by the European Council, as stated in section 3.3 of CSW RgIP. These objectives include “the needs for all Member states to reach at least 15% by 2030. At the same time, differences between Member States in terms of geographic location and structure of energy mix and supply mean that a case by case approach based on a thorough assessment of the bottlenecks, taking into account the costs, is needed”. The study evaluated for the scenario under study, the benefits arising from the increases in the interconnection capacities. As presented in the report, for the case of Spanish-French border it has been preliminarily identified potential profitability for an increase from 5 GW to 8 GW, in the high RES scenario (TYNDP2014 Vision 4). The costs and benefits of the proposed projects will be more thoroughly assessed in the TYNDP2016 report that will be published next year.
- As stated in the report we consider that one of the main drivers for grid development in the region is the insufficient cross border capacity between the Iberian Peninsula and the mainland Europe, and we also consider that although the situation will improve with the new projects proposed (when compared with TYNDP2014), there is still a gap to fulfill the objectives. Nevertheless, the fulfillment of these gaps takes also into consideration the cost-benefit efficiency of the investments which, in turn, depends a lot of the demand/generation scenarios foreseen for 2030. This way, this issue will continue to be monitored in next TYNDP editions to ensure the full compliance with the European Council directives. In this respect, ENTSOE will follow with much attention the communication of the European Commission on “*the progress towards the completion of the list of the most vital energy infrastructures and on the necessary measures to reach the 15% electricity interconnection target for 2030*” expected for 2016.

2. Strategy Interconnection reinforcements approach

2.1. Concerning the existing two AC interconnection cables Spain – Morocco, the Plan only makes a short statement that “Current NTC values with Morocco have not changed since the commissioning of the second cable in 2006. These NTC values are 600 MW from Morocco to Spain and 900 MW from Spain to Morocco. Additionally, this border experiences high flows from Spain to Morocco for almost all the hours of the year. This situation is expected to remain similar in the following decade.”

We think it is of great importance that ENTSO-E evaluates possible scenarios of interconnection capacity reinforcement projects between Iberian Peninsula and North Africa, in line with the EC solidarity and cooperation principles with MENA countries. Under this topic it is also relevant to highlight the studies conducted by Medgrid Consortium which have identified cost efficient electricity interconnection projects connecting Portugal to Morocco, for instance. It is worth noting that in the overall Mediterranean region some other projects are referred like a Tunisia-Sicily connection and a link between Israel-Cyprus-Greece and thus the argument used “The Continental South West region is also interconnected with Morocco, which is a non-ENTSO-E country. Current NTC values with Morocco have not changed since the commissioning of the second cable in 2006. These NTC values are 600 MW from Morocco to Spain and 900 MW from Spain to Morocco. Additionally, this border experiences high flows from Spain to Morocco for almost all the hours of the year. This situation is expected to remain similar in the following decade” is not coherent. This is another reason to support our recommendation to include in the scenarios and studies carried out to support this Regional Plan this particular interconnection project evaluating.

- The specific issue of new interconnections between Continental South West region and North Africa is being discussed and studied in other fora, with the support of EC and for the time being they are outside of the scope of the TYNDP 2016 elaboration. In future TYNDP releases, if the hypothesis and methodologies are compatible with ENTSOE's and decisions are taken about these kind of projects, new projects between Europe and North Africa could be incorporated and evaluated.
- Stronger interconnections with these regions still lack for deeper analysis, especially namely on market and regulatory framework. In addition, issues such as considering CO2 cost or not in the Moroccan power plants has a high impact in the results. ENTSO-E will continue following this issue and accommodate it in the TYNDP framework when conclusions on these interconnections are mature, in alignment with EC strategies for energy in this field.

2.2. Possible new interconnectors Spain Italy or Spain-UK were analyzed and discarded with the argument they did not show enough profitability. “They have a high cost due to the high length of the links (900-1200 km) that have to be adapted to particularities of the seabed regarding depths, slopes, canyons, while also considering socio-environmental constraints like protected areas, commercial ports and leisure marinas”.

However the justification just finishes with the sentence: “Apart from the cost, there are also additional considerations that could impact the feasibility of such connections, especially the connection to Italy”, which is quite vague.

So we suggest a more straightforward support study and justification results, namely to the interconnection Spain-Italy and the analyze of possible alternatives , taking advantage, why not, of intermediate points in the corridor, like Corsica and/or Sardinia which are very weakly connected with the EU mainland.

- The sentence in the report refers to the high depth of the Mediterranean Sea, combined with sharp slopes in the sea bed that would make such subsea links very difficult to build. Furthermore, there is a technical limit from which cable routing costs increase at a level that makes the project unfeasible.

3. Portuguese electricity energy flows trend

Taking into consideration the following RegIP a. and b. statements that have our fully support:

a. “...the need to develop the Iberian integration in the internal electricity market, also taking into consideration the importance of the existing projects for interconnection between Portugal and Spain, to enable:

- The Iberian Peninsula to fully benefit from the advantages of the internal electricity market.
- The central European market connected through some countries with the Iberian Peninsula to benefit from some of the comparative advantages present in the Spanish and Portuguese markets, such as the

availability of cleaner electricity at competitive prices (e.g. wet winters).

- To increase security of supply through the internal electricity market, taking advantage of the existing generation capacity already installed in the Iberian Peninsula, largely based on RES and also on low carbon technologies (CCGT), these last ones well supported by the presence of half of the LNG facilities available in Europe.

b. “...This RES generation came mainly from wind, solar and hydro within the whole CSW region. The decrease in nuclear generation in France and central Europe as result of political decisions and some pump storage potentials in the Iberian Peninsula are also some of the outstanding characteristics that will challenge the whole future electricity system in the region, especially transmission.”

We can conclude from the reading of the report that Iberian Peninsula has the ideal conditions for RES production and hydro pump storage as well as an adequate CCGT portfolio including LNG facilities. On the other hand we see a progressive phase out of nuclear and coal, keeping eventually CCGT as the most cost efficient strategic reserve. These two factors lead inevitable to an export trend flow from Iberian Peninsula to rest of Europe, trend which is not revealed or evident from the results. The CSW RegIP show that Portugal and Spain are always net importers, no matter the Vision, and even more then today! We cannot understand or agree with this kind of conclusion.

The conclusion is contradictory with the premises, jeopardize the EU objectives to decarbonize and avoid the reduction of the EU high level fossil fuels imports and energy dependence. So we are convinced that the market scenarios and simulations should be ameliorate.

– The reference scenario used in this first phase of TYNDP 2016 was the Vision 4 from TYNDP 2014. In chapter 4.1.3 of the CSW RgIP 2015 it is presented the results from the Market Studies considering the initial and the final situations (with reinforcement of the interconnections), and in both the situations Portugal is a net importer and Spain and France are net exporters. In the second phase of TYNDP 2016 (assessment phase) other generation/demand scenarios will also be analyzed. As a general comment, the import/export situation of each country depends of the generation mix not only in this countries but also in other European countries.

4. Portuguese generation portfolio scenario

One of the reasons that can contribute for the contradictory result explained in the previous paragraph can be found in the Portuguese RES penetration scenarios. Actually, in general terms, they are quite low and even significantly below the more recent Portuguese governmental perspectives. Currently the Portuguese goal for 2030 is 80% of RES in the total electricity consumption, comparing with a 60% target to 2020 almost reached today. This 80% target is already included in the Portuguese Government policy already approved.

Even in the two more greenest Visions (3 and 4) we found that the Portuguese RES E share referring to net electricity consumption is only 62,4% and 69,2%, respectively. In terms of the EC Renewable Directive, these values are still smaller because the RES-E penetration ratio is referred to the gross electricity consumption, and, thus, very far from the Portuguese goal of 80%.

So, the CSW RegIP under consultation must be revised in this matter.

Concerning wind power we must refer that Portugal in 2014 reached 4 925 MW installed and there are more 700 MW in pipeline, 200 MW under construction, which that will be implemented until the end of 2016, and remaining 500 MW in final administrative procedures. Thus we really believe that a minimum figure of 5 700 MW will be reached in 2020. So the 2030 estimations in Visions 1 and 2 will be overpassed before 2020.

Solar PV, in Vision 3, is clearly low and not aligned with the Visions elaboration methodology.

We must also refer that the wind load factor consider in the CSW RegIP for Portugal is 24.8% quite below the current figures that are 28%. It is also expected this load factor can slightly increase in the future.

The PV load factor consider is 17.1% throughout the various scenarios and Visions. But currently in Portugal we have a load factor of 18.3% and it is expected it will reach 25% until 2030.

Once again the CSW RegIP must be revised taking into account these more accurate and realistic values, that are effective and not a simple speculation.

- The reference scenario used in the first phase of TYNDP 2016 was the Vision 4 from TYNDP 2014 (whose scenario building process started in 2012). Other scenarios were also used to perform sensitivity analysis, namely Visions 1 and 3, also from TYNDP 2014, and a first draft of the new Vision 3 from TYNDP 2016.
- The new scenarios for TYNDP 2016 were in public consultation during the period from 21 May 2015 to 22 June 2015, and it is expected that they will be finalized in October, considering the new reference capacities resulting from the final publication of the RgIP 2015. Visions 1 and 3 are bottom-up scenarios developed with inputs from the TSO's. Visions 2 and 4 are top-down scenarios that take the bottom-up scenarios as starting references and are then centrally worked by ENTSO-E to incorporate a stronger European framework.
- The data for the Portuguese generation on the bottom-up scenarios were based on the most updated official data provided by the Directorate of Energy, that was available at the beginning of the scenario process construction.

5. Portuguese network adequacy to integrate RES-E

5.1. The Portuguese National Plan for Renewable Energies issued in 2013, meanwhile updated in some chapters by the Portuguese National Climate Change published in 2015, foresees an important share of hydro pump storage, representing 12% of total generation volume in Portugal in 2020. We do think this value is reachable and even exceeded, representing a key factor for the effective market and network simulation of the whole CSW EU system.

However we do not see any evidence of this important storage/production complementary behavior of the Portuguese hydroelectric plants in the simulation process. Maybe this is just one of the reasons for the so poor Portuguese export results.

Portugal has a high RES wind and solar competitive potential, adding also the unique (in relative terms) hydro pump characteristics in the CSW region, so it is incomprehensible how this RES producing capacity is not reflected in the final results of the entire region behavior.

Taking into account the top down approaches made in the preparation of this Plan we think it is also weird the non-consideration of any other new pump storage facility until 2030 in Portugal due

precisely to the ideal conditions existing in the country.

- The deployment of new pumped-hydro power plants in Portugal is considered in ENTSO-E Visions according to the Portuguese energy policies and also the known licenses/plans related with this subject (in line with National Directorate for Energy).

5.2. The PV scenario growth in Portugal is quite under estimated even in the greenest Vision 4. Actually the Portuguese Government estimates now the central scenario for 2030 will be around 6 000 MW installed capacity.

But in Vision 4 is only considered around 3 000 MW, that means a half what the Portuguese Ministry of Energy estimates.

Consequently the network reinforcement projects in Portugal, mainly in the South, where the solar potential is greater, are not sufficient to accommodate the production foreseen and desirable for 2030. So, it is vital to reinforce this South Portugal regional network and take it into consideration in the international energy flows and import/export scenarios making the necessary adjustments either on cross borders interconnection lines or on the internal national network projects reinforcements.

- The network reinforcements considered in the RgIP 2015 for Portugal are in line with the recent proposals for the Portuguese Transmission Network Development Plan (subject to public consultation), which in turn are in line with the Portuguese national policies for RES taking also into consideration the compromises established between the Portuguese TSO and the different stakeholders.

6. Main messages

Taking into account the explanations above, we must highlight as conclusions:

6.1. The CSW RegIP under consultation does not properly consider the fact that Portugal and Spain constitutes an “electric island” belonging to the same common market – MIBEL managing a strong RES power plant portfolio and facing, as a whole block, severe restrictions concerning the Spain-France border constrains that, according the RegIP, will continue to happen in 2030, mainly in the export situations from Iberian Peninsula to France.

6.2. The whole Iberian Peninsula functioning as a common market will have in 2030 an interconnection capacity ratio with the rest of Europe around 4-5% of the installed power capacity in the Iberian Peninsula, still far from the EC objectives of 15%.

6.3. The Iberian Peninsula has ideal conditions for producing electricity from RES and hydro pump storage, as well as an adequate CCGT portfolio including LNG facilities, factors that will lead, inevitable, to an export trend flow from Iberian Peninsula to the rest of Europe, associated with a phase out of nuclear and coal power plants, mainly situated in central and north Europe. This energy trend is not revealed in any of the scenarios analyzed, which constitutes a severe handicap for the Iberian Peninsula.

6.4. There is no simulation for future trading or electric energy exchanges between Iberian Peninsula and Morocco, nor any kind of network reinforcements, situation not acceptable in this kind of projection study until 2030.

6.5. The Portuguese RES forecast for 2030, either in terms of electric power installed or in terms of energy produced is clearly underestimated, mainly in solar PV and wind. Also there is no evidence of the important Portuguese hydroelectric pump storage plants behavior for the general balance and operational optimization of the system.

6.6. Even in the two more greenest Visions (3 and 4) the Portuguese RES E share referring to net electricity consumption in 2030 will be only 62,4% and 69,2%, respectively, very far from the Portuguese goal of 80%, referred to the gross electricity consumption, included in the Portuguese Government energy policy already approved.

6.7. The network reinforcement projects in Portugal, mainly in the South, where the solar potential is greater, are not sufficient to accommodate the production foreseen and desirable for 2030. So, it is vital to consider complementary network reinforcements in South Portugal regional network and take it into consideration in the international energy flows.

In synthesis, we can conclude that the CSW RegIP 2030 horizon neither identify and considerer adequate RES E scenarios' evolution for Portugal, nor identify properly the electric energy flows in the Iberian Peninsula and its international interconnections with France and Morocco.

So the network reinforcements decided or proposed in the CSW RegIP 2030 are not the most adequate to fulfil the EC objectives to improve the security and diversification of supply, to facilitate the market integration and to push to a swift transition for a low carbon cost effective economy, and last but not the least it is not achieved sufficient interconnection capacity for MIBEL market with Europe in 2030.

- See our answers to detailed comments above.
- ENTSOE welcomes all input and will organize regular interaction with stakeholders in the course of the TYNDP2016 process in the coming months; this should be an opportunity for further discussion.

RG CSW attachment

https://consultations.entsoe.eu/system-development/regional-investment-plans/consultation/download_file?squid=question.2015-06-24.7285171395-filesubquestion&user=ANON-3JZC-9QGN-S

Finnish Energy

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

Yes.

The market simulation results give good information, but it should be acknowledged that all benefits of the interconnectors have not been included in this calculation. As the Nordic countries are calculated as single nodes in the market simulation, the benefits of interconnectors that relieve internal bottlenecks are not shown in the calculation. Interconnectors from northern Sweden to Finland and from Norway to Eastern Denmark would relieve internal congestions in Sweden, and interconnectors from Norway to Sweden the internal congestions in Norway. It is also unclear if all contributions from delivering cross-border balancing services have been included in the calculation of the social-economic welfare.

- Market simulations carried out in the Baltic Sea region in the Common Planning Studies have applied a more granular area distribution that roughly corresponds to price areas in the Nordic market. Performed market simulations assessed day-ahead market and therefore the assessment focuses on the benefits reached in the day-ahead market as well.
- The explicit assessment of each TYNDP project will be done in the next phase of the TYNDP process. This assessment is done based on a clear and sound CBA methodology which has been developed by ENTSO-E, ACER and EC in past years with valuable input from stakeholders. This CBA assessment will give a wide set of indicators, based on common scenarios, which will allow a transparent and non-discriminatory comparison of all TYNDP projects.
- All feasible new connection between Sweden and Norway were analysed. The only one removed was the SE1-NO4 border where a new overhead line (Ofoten-Ritsem) would need to be built in the world heritage national park “Laponia”. The Swedish regulator has already denounced such plans. For consistency reasons only one weather year was analysed however even if the whole ensemble of weather years is used new interconnections between Sweden and Norway still show very low benefits. The low benefits is due to that planned new interconnections between both Sweden/Norway to the continent will to a large extent remove the price difference between the countries.
- Svenska Kraftnät and Fingrid have initiated a joint study to assess the future need for interconnection capacity between the countries where both a 3rd AC connection and replacement and upgrades of HVDC cables are analysed. Results from this study are expected within a year.

Additional info for RegIPs and the TYNDP2016-report?

The TYNDPs have improved, but their execution measures remain poor. Too many important grid enforcements have been either cancelled or delayed. We urge ENTSO-E to take a closer look in the reasons and make a work plan how to tackle these deletions and delays.

The TYNDP 2016 should include in each Regional Plan a section where the reasons for delays of individual grid projects are listed and complemented with action plan how the project responsible TSOs area planning to tackle the issues having led to delay.

- Monitoring of TYNDP project/investment implementation is provided in a separate document (https://www.entsoe.eu/Documents/TYNDP%20documents/TYNDP%202014/TYNDP%202014%20monitoring%20update_statistics%20and%20table_FINAL.PDF). This monitoring update of past TYNDPs is provided yearly and gives all interested parties a progress view per investment, as well as some overall statistics. The conclusions correspond with the comment made, that many proposed investments of pan-European relevance face delays and rescheduling for various reasons.

The summary results of the market simulations on the project candidates are presented well, but more detailed results and comparisons between alternative projects would be needed. The selection of the projects to the TYNDP 2016 list would also need more thorough analysis. Some projects on the Swedish borders seem now to be dismissed or delayed based on Swedish internal grid issues, although the Swedish bidding zone structure should cover the internal congestion management without limiting future cross-border projects.

- TYNDP studies are set to complement national and regional planning, however the objective has not been to establish a ranking list of project candidates or to study an optimal order of construction. Duration of permitting processes and national prioritization affects the timing and order of projects.
- All feasible new connections between Sweden and other countries were analysed. The reasons for some exclusion of projects as this one is explained in the Regional Investment plan Baltic Sea chapter 5.6 *Long term perspective, remaining challenges and gaps*.

Regional Investment Plan North Sea - RG NS

The draft does not at all mention possible needs for strengthening the interconnection capacities between Norway and Sweden. The market simulation results do not show here any socio-economic benefits, but this simulation does not take into account the bidding zone divisions and the internal bottlenecks in these countries. Thus each of the Norway-Sweden bidding zone borders should be analysed more thoroughly. Further, the analysis doesn't seem to take into account the benefits of market's cohesion and the possibilities a more coherent market structure and stronger grid could deliver to the Nordic market, for example by enabling the mergers of existing bidding zones into larger.

Please also find the recent letter from Nordenergi addressing the issues of congestion within Nordic market, <http://nordenergi.org/wp-content/uploads/2012/05/Nordenergi-letter-on-Nordic-markets-internal-congestion.pdf>.

- All feasible new connections between Sweden and Norway were analysed. The only one removed was the SE1-NO4 border where a new overhead line (Ofoten-Ritsem) would need to be built in the world heritage national park "Laponia". The Swedish regulator has already denounced such plans. For consistency reasons only one weather year was analysed however even if the whole ensemble of weather years is used new interconnections between Sweden and Norway still show very low benefits. The low benefits is due to that planned new interconnections between both Sweden/Norway to the continent will to a large extent remove the price difference between the countries.

Regional Investment Plan Baltic Sea - RG BS

The investments plans for the coming decade are the core content of TYNDP. We regret to see, that the investments needs remain under-estimated compared to the needs.

The cohesion of Nordic and Baltic Sea markets suffers from various bottlenecks in the area. Although many important investments have been carried out as scheduled, other important investments have either been cancelled or delayed in to the future. We encourage TSOs to further improve their cooperation in order to strive for a common and more coherent market. Although TYNDPs have improved over time, they still have too strong national focus. In the Baltic Sea region this seem to cause underestimation of the need to strengthen market area's cohesion with east-west capacities and a tendency to look keenly on internal projects instead of also proceeding with cross-border-projects. In TYNDP 2016 this is shown by the fact that Swedish internal interconnectors are given a higher priority than cross-border projects connecting Sweden to neighboring countries. Fostering

interconnector capacity between Northern Sweden and Northern Finland will ease the congestion between areas SE1 and SE2 and further between SE2 and SE3. “3rd AC Finland-Sweden” would be a relatively low cost and fast project compared to time consuming Sweden’s internal reinforcements. Both are needed.

- TYNDP studies are set to complement national and regional planning, however the objective has not been to establish a ranking list of project candidates or to study an optimal order of construction. Duration of permitting processes and national prioritization affects the timing and order of projects.
- Svenska Kraftnät and Fingrid have initiated a joint study to assess the future need for interconnection capacity between the countries where both a 3rd AC connection and replacement and upgrades of HVDC cables are analysed. Results from this study is expected within a year.

Although the market simulations have been done on several possible project candidates, the choice and timing of the projects to the TYNDP 2016 list is not quite transparent. Now it seems that some projects have been delayed or dismissed from the list without adequate comparison between alternative projects. The timing of the projects is not either always based on the needs of the market. On some borders, higher reference capacities for both 2020 and 2030 could well be justified.

- TYNDP studies are set to complement national and regional planning, however the objective has not been to establish a ranking list of project candidates or to study an optimal order of construction. Duration of permitting processes and national prioritization affects the timing and order of projects.

The projects "3rd AC Finland-Sweden" (TYNDP 2014 project 111) and "Keminmaa-Pyhänselkä" (TYNDP 96) should be moved from Long-term Projects to Mid-term Projects, as they are urgently needed both based on the increasing renewable generation in northern Sweden, security of power supply in Finland, and as the border between northern Finland and Sweden is a major bottleneck in the transmission from northern Scandinavia through Finland to the Baltic states, Poland and southern Scandinavia. These projects should be built by 2020 when the transmission capacities on this route between Estonia and Latvia (TYNDP 62) and Lithuania and Poland (TYNDP 123) are further strengthened, too. The increased capacity through Finland could also reduce or delay the needs for Swedish internal north-south grid reinforcements ("SE North-south reinforcements", TYNDP 126).

- A third AC connection between Sweden and Finland is not possible to complete by 2020 due to permission processes. Svenska Kraftnät and Fingrid have initiated a joint study to assess the future need for interconnection capacity between the countries where both a 3rd AC connection and replacement and upgrades of HVDC cables are analysed. Results from this study is expected within a year.

The draft does not at all mention possible needs for strengthening the interconnection capacities between Norway and Sweden. The market simulation results do not show here any socio-economic benefits, but this simulation does not take into account the bidding zone divisions and the internal bottlenecks in these countries. Thus each of the Norway-Sweden bidding zone borders should be analysed more thoroughly. Further, the analysis doesn’t seem to take into account the benefits of market’s cohesion and the possibilities a more coherent market structure and stronger grid could deliver to the Nordic market, for example by enabling the mergers of existing bidding zones into larger.

Please also find the recent letter from Nordenergi addressing the issues of congestion within Nordic market, <http://nordenergi.org/wp-content/uploads/2012/05/Nordenergi-letter-on-Nordic-markets-internal-congestion.pdf>.

- All feasible new connections between Sweden and Norway were analysed. The only one removed was the SE1-NO4 border where a new overhead line (Ofoten-Ritsef) would need to be built in the world heritage national park “Laponia”. The Swedish regulator has already denounced such plans. For consistency reasons only one weather year was analysed however even if the whole ensemble of weather years is used new interconnections between Sweden and Norway still show very low benefits. The low benefits is due to that planned new interconnections between both Sweden/Norway to the continent will to a large extent remove the price difference between the countries.

NorthConnect KS

Regional Investment Plan North Sea - RG NS

NorthConnect welcomes the opportunity to contribute to this consultation and hope that our views will help inform investment planning going forward.

Our first area of comment is in regard of Section 1.3, which states:

“The Norwegian TSO Statnett has already built and are planning to build several interconnectors out of southern and western part of Norway in a succession up until 2021: NorNed (2008), Skagerrak 4 (2014), NordLink (2020) and NSN (2021). Prior to the assessment of a further increase in capacity out of southern Norway, there is a strong need for Norwegian investigations of internal grid challenges when having implemented all these interconnectors”.

We would argue that there is no reason to wait for experience from planned interconnectors, since it is already clear from a capacity and system perspective that further Norwegian interconnection is feasible. This is based both on NorthConnect’s internal technical assessment of the grid challenges, but is also supported by the Statnett report "Kraftsystemets evne til å levere til utenlandskabler" (2012). This report presented no show-stoppers or adverse implications, either in terms of network transmission capacity or system operation, for up to 2 GW of further interconnection out of southern Norway. In addition, the current Statnett (2015) Grid Plan already caters for necessary capacity upgrades by 2021 for NorthConnect’s grid connection point further north at Sima.

We agree there will be grid challenges, but these will apply to all interconnectors and are an implication of the EU’s climate and energy policy, so consequently Statnett, NorthConnect, hydro generators in Norway and interconnected TSO’s, will all have to adapt to the changes. Our own studies show that the grid issues could be addressed through the use of new market structures, better time resolution and operating processes, and most importantly, the responsiveness of modern VSC interconnector technology means it can be designed and operated to enhance system stability and security of supply. However, this needs to be investigated now and built into the design and development of ALL the forthcoming interconnectors in order to benefit Norway and the EU.

The consequences for not pursuing NorthConnect and addressing the challenges of further Norwegian interconnection right now, will be 10-15 years delay (no new cables until 2035) and lost opportunity for value creation, security of supply and carbon reduction for both Norway and the EU.

In light of this, we find the above statement in Section 1.3 to be at odds with overall Energy Union objectives, and would ask that ENTSO-e review it accordingly for the next draft of the TYNDP-16.

- The Regional Investment Plan does not say that there is a need to wait for operational experience for the already decided interconnectors, before adding more interconnectors out of the Norwegian system. However, the plan states that there is a need for further investigations before adding more capacity out of the Nordic system. This investigation needs to be done by the all the Nordic TSOs, as such increased capacity potentially will influence the security of supply of the whole Nordic Synchronous system. Neither the Norwegian nor the Nordic Grid development plan has so far published such an investigation.
- The Nordic synchronous system will by 2021 reach an interconnector-capacity of about 10.000 MW, normally going from full import to full export in 2 hours twice a day. This causes a change of 20.000 MW on the production system in a short period, which is on top of the normal demand pattern. In sum this might stress the Nordic synchronous system to a too high level. As this happens in a time when many thermal and nuclear power plants are expected to be replaced by Renewables, this is a potential concern for the Nordic system. Before adding new interconnectors there is a need for further investigations.

We would also encourage the TYNDP-16 investment plan should take greater cognisance of the recent EU Communication 340 (15.7.2015): Launching the public consultation process on a new energy market design, which states:

“Completing the infrastructure links still missing for a truly integrated internal market, and enabling the necessary investment for this to come forward, is therefore one of the key priorities in implementing the Energy Union strategy.

The projects of common interest (PCIs) are the principal instrument to physically integrate the national electricity markets and to diversify their energy sources. Many of the proposed infrastructure links will play a key role in coping with the variability of renewables sources between countries like Norway and the United Kingdom, France and Spain, or Norway, the Netherlands and Germany”.

Coupling this statement with the UK DECC-Baringa (2013) report that, “...up to 4GW of interconnection between UK and the hydro-focussed areas of northern Europe (Nordic region) would be socio-economically optimal”, makes the case for more cables than the existing planned TSO schemes between the two countries a compelling one.

- We agree and take note of the comment. Regarding the speed of implementing eg. new interconnectors, please also see the answer above.

Finally, in general we welcome NorthConnect’s inclusion in the draft RgIP and we look forward to your further communications and hopefully to our further participation in the process.

Central Europe Energy Partners (CEEP)

Regional Investment Plan Baltic Sea - RG BS

Central Europe Energy Partners expresses its support for Lithuanian projects that are part of the Baltic Sea's regional investment plan.

LitPol Link is a PCI project. The importance of the LitPol Link project (stages 1 & 2) is acknowledged at European level, in the Baltic Energy Market Interconnection Plan, BEMIP. The project is dedicated to integrating electricity markets of the Baltic States and Continental Europe (CE) through interconnection from Lithuania to Poland. This will also increase the possibilities for electricity market players to participate in the electricity market of the interconnected system between the Baltic States and Poland.

The Baltic Synchronisation with CE is a PCI project. The aim of the project is to end the energy isolation and ensure energy security and security of supply of the Baltic States' power system, by enabling reliable synchronous interconnectivity of the Baltic States' electricity grids with the Continental Europe Network. It will remove the impact from third countries, foster and ensure fully-fledged market integration, as well as integration of the Baltic States' network to the EU's power network. The project is not fully implementable without even one of its investment items.

NordBalt is a PCI project. NordBalt (phases 1 & 2) is a DC interconnector between Lithuania and Sweden, and includes internal investments in Lithuania, Latvia and Sweden. The project will connect the Baltic and Nordic grids, and ultimately will integrate the Baltic and Nordic electricity markets. This project will also increase the security of supply. Phase 1 covers investments before 2020. The second phase of the project covers remaining investments until 2023, and includes network reinforcements and investments that are required in Sweden and in Lithuania, to be able to fully utilize the 700 MW interconnector between the two countries.

Kruonis Pumped Storage Power Plant (Kruonis PSPP) is intended for balancing electricity production and consumption, preventing and liquidating accidents in the energy system, as well as securing the system's reserve, whilst regulating frequency and voltage.

8 units were planned in the original design of Kruonis PSPP, but only 4 units of 225 MW (900 MW in total) are currently installed. The Project comprises the planned expansion of Kruonis PSPP, by installing a new 5th 225 MW unit. The current infrastructure of Kruonis PSPP is completely suitable for the installation of the new hydro unit. As much as 75% of all construction works were performed when developing the current infrastructure, thus allowing it to reduce the project's costs by more than twice, compared to greenfield investments of such a kind.

The 5th hydro unit would be considerably more efficient and flexible, when compared with the existing ones. It is planned that the new unit would operate within a 110-225 MW range in pump mode (compared to a fixed 220 MW of the existing 4 units) and within a 55-225 MW range in generation mode (compared to a 160-225 MW of the existing 4 units). Such an increase in Kruonis PSPP's flexibility would enable the plant to offer additional regulation services for the electricity market, by offering new range regulation capacities (e.g. regulations of minor fluctuations +/- 50 MW). Furthermore, the targeted overall efficiency factor of the new unit cycle is 78%, which is as much as 4% higher than that of the current units, thus, significantly reducing the needs for power in pump mode, as well as requiring considerably less water to generate equivalent electricity volumes, compared to the current units.

The positive regional effect of the new flexible asset of Kruonis PSPP will become most significant once the LitPolLink and NordBalt interconnections are built. The extended Kruonis PSPP will contribute significantly to the flexibility and reliability of the whole Baltic transmission system, as well as contributing to the integration of RES and increase of the security of supply:

- Integration of renewable energy generation in the region. The new hydro unit of Kruonis PSPP will provide more flexibility in balancing power fluctuations from renewables, primarily for wind farms, in real time. It is supposed that power fluctuations will become more common for the regional Eastern Baltic countries, as the proportion of renewable generation in the region increases.

- Increase of energy trade in the region. By launching NordBalt and LitPol Link interconnections, a difference in prices in the neighboring countries would allow Kruonis PSPP to use its capacities economically, in electricity trading, i.e. by converting electricity generated at night into peak load electricity.
- Expansion of new production capacities in the region. With the emergence of new production capacities in the region, the generation of base load electricity should increase, and demand for electricity reserves should grow. Thus, the flexible units of Kruonis PSPP would ensure the largest share of the secondary active power reserve.

Feasibility and environmental impact assessment studies have been already conducted, as part of the Kruonis PSPP Expansion Project. Preparation of all tender documentation necessary for the acquisition of: (I) EPC works; (II) technical supervision services; and (III) a loan, have also been prepared.

Currently, the project has been temporarily suspended: the FID will be taken after the review of the Lithuanian National Energy Strategy is complete, in order to assure alignment between the Project's implementation timeline and national strategic goals, as well as the completion of regional interconnection projects, NordBalt and LitPol Link, allowing for assessment of their effects on the Kruonis PSPP project's business case.

RG BS attachment

https://consultations.entsoe.eu/system-development/regional-investment-plans/consultation/download_file?squid=question.2015-06-24.5878110640-filesubquestion&user=ANON-3JZC-9QG8-3

National Grid Interconnector Holdings Limited

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

In general the principles and methodologies are well explained; however please see our more detailed comments in response to question 7. Our comments made in relation to RgIP North Sea may be equally applicable in all regions.

We suggest that greater clarity could be brought to the process around use of the common planning studies to flag additional investment needs and provision of a level playing field opportunity for proponents (including third party developers) to respond to those signals of need inside the timeframe of the TYNDP biennial process.

- ENTSO-E welcomes all ideas on how we could improve our transparency and the usability of our results even more.

Additional info for RegIPs and the TYNDP2016-report?

Please see our detailed response to question 7. In it we raise a question of transparency around how ENTSO-E performs its TOOT and PINT analysis. We propose ENTSO-E should start its TOOT analysis at the lesser of the reference capacity or the capacity corresponding to the sum of all real project candidates. One could expect that each boundary would likely have a different reference capacity in each vision, however the spreadsheet “160624-TYNDP2016 project candidates - draft for consultation.xlsx” appears to show a single reference capacity common to all visions. The reader is left wondering precisely how the studies have been carried out and therefore uncertain what reliance/insight to take from the results.

- The CBA method with the PINT and TOOT is based on the Guideline for Cost Benefit Analysis of Grid Development Projects and is in compliance with Regulation (EC) 347/2013 (<https://www.entsoe.eu/Documents/SDC%20documents/TYNDP/ENTSO-E%20cost%20benefit%20analysis%20approved%20by%20the%20European%20Commission%20on%204%20February%202015.pdf>)
- To allow for non-biased comparison of the impact of this proposed TYNDP grid architecture across a wide set of future scenarios, a constant set of reference capacities is proposed.

We suggest that to overcome these limitations and increase transparency ENTSO-E could provide the following additional information – perhaps in spreadsheet or database format:

For each of Visions 1 to 4 please provide:

i) The reference capacities that have been used on each boundary for all years studied for the vision under consideration, and supporting evidence justifying these values;

- Referring to the regional investment plans The input reference capacities data of Market Studies are aligned to Vision4 TYNDP14 and projects assessed in the TYNDP14, including several updates.
- The planning studies build on the earlier TYNDP2014 as explained in the methodologies. Much of the data used in this last TYNDP is accessible on the ENTSO-E website:
 - Scenario data: <https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Documents/TYNDP2014%20Visions%20data.xlsx>

- Market modelling data: <https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Documents/TYNDP2014%20market%20modelling%20data.xlsx>
- Network data: <https://www.entsoe.eu/publications/statistics/network-dataset/TYNDP-2014-input-datasets/Pages/default.aspx>

- Also for TYNDP2016, ENTSO-E strives to provide such datasets and assumptions, also before finalization of the report. We strongly acknowledge that transparency of data and methodologies, can only aid understanding of the studies performed and key conclusions drawn.

ii) the discrete hours of the year that have been selected as the representative hours (planning cases) used in network and market studies, and what duration has been ascribed to each to form a representative year;

- The expected outcome of the Common Planning Studies was a list of potentially profitable new project candidates. Details about the studies of each project candidate will be included in the TYNDP2016 report.

iii) the magnitude and direction of cross boundary transfer flows (MW) corresponding to these reference planning cases; and

- The expected outcome of the Common Planning Studies was a list of potentially profitable new project candidates. Details about the studies of each project candidate will be included in the TYNDP2016 report.

iv) the TYNDP projects that are included / excluded from these reference planning cases

- A new aspect in the TYNDP2016's project list is the classification into mid-term, long term and future projects. This classification responds to earlier requests from ACER and stakeholders to have three main sets of investments in a TYNDP depending on commissioning date and maturity of the projects. This has also a strong link with the reference architecture on which a project is assessed with the CBA methodology. The methodology provides for a Take-Out-One-at-a-Time approach - TOOT - (by which a project is assessed by checking the impact of taking it out of the reference), or a Put-IN-one-at-a-Time approach - PINT - (assessed by putting it in).
- The three categories proposed in this list are:

- Mid-term projects: are projects to be commissioned by 2022 and acknowledged in the latest national plans or having intergovernmental agreement - these will be assessed by TOOT method against the expected 2020 network, and against the expected 2030 network.
- Long-term projects: are projects to be commissioned by 2030 and acknowledged in the latest national plans or having intergovernmental agreement - these will be assessed by PINT method against the expected 2020 network, and by TOOT method against the expected 2030 network.
- Future projects: cover all other projects which do not fall under the previous categories - these will be assessed with PINT method against the expected 2030 network.

- The expected 2020 and 2030 network results in reference cross-border capacity assumptions for market studies (and later on, datasets for grid studies), and mainly cover the present grid and projects covered in national plans and intergovernmental agreements. In other words, the 2020 expected network covers mid-term projects; the 2030 expected network covers mid-term and long-term projects. Note that 'future projects' are assessed via PINT (i.e. on top) of the reference grid, and are thus not part of the reference capacities. As such each TOOT assessed project

impacts the others; while a PINT assessed project does not directly impact another project's assessment.

- This explanation as well as the classification of TYNDP2016 project candidates was provided in the list under public consultation (https://consultations.entsoe.eu/system-development/have-your-say-to-the-tyndp-2016-candidate-projects/consult_view)

Regional Investment Plan North Sea - RG NS

We refer to section 1.3 “New project candidates identified in Common Planning Studies TYNDP 2016”. The outcome of the studies has led to the identification by ENTSO-E of additional project candidates of 700MW to 1000MW capacity each on 8 specific borders. In addition the same common planning studies support identification of the following included projects with unspecified transfer capacities: (a) “Conceptual West East Corridor in North Sea” project around the boundary “Great Britain – Continental Europe” and (b) “Conceptual North Seas Offshore Grid Infrastructure” project affecting “countries around the Northern Seas.”

- In general we believe it is important that proponents are given an appropriate opportunity to respond (within the timeframe of the production of the TYNDP 2016) to the signals of need arising from the common planning studies.

We have a number of comments / questions in relation to this process and its outcomes:

i) We welcome ENTSO-E’s communication of the investment signal that there is a stronger than ever need case for flows from EIR/UK to Continental Europe (West-East power flow) and exchanges on the North-South axis of the Region (Norway/NL/Denmark/Germany);

ii) We propose that an additional project candidate is included of up to 2000MW across the Great Britain – Germany border (see attached details). This specific boundary does not appear to have been considered by ENTSO-E (no results mentioned in body or appendices). We are currently undertaking our own studies of the need case for this boundary and our initial view is that in various credible future scenarios GB-DE interconnection could be equally or more effective in CBA terms compared to alternative combinations of increases to GB-FR, GB-BE and GB-NL and/or the conceptual projects which ENTSO-E has identified;

iii) It should be recalled that inclusion in TYNDP is the sole pathway to PCI status and its attendant benefits including eligibility for CEF funding assistance – and, some of these processes being biennial, the journey of a new investment idea through this process can itself take four years. This means it is particularly important that TYNDP 2016 includes the broadest range of credible projects to address pan-European needs. By including our proposed candidate GB-DE project at this stage in the TYNDP process the subsequent CBA analysis will be able to confirm (positively or negatively) the magnitude of potential benefits. To the extent analysis is positive and the project is retained in the finally published TYNDP 2016 then the project will be eligible to subsequently apply for PCI status;

- ENTSO-E has analyzed your request to include a 2 GW third party project GB-DE. In agreement with ACER and EC, and as communicated via the network development stakeholders group, ENTSO-E applies the draft guidelines for inclusion of projects in the TYNDP in a non-discriminatory manner. These guidelines stipulate that in order for a project to be eligible for inclusion in the TYNDP16, a request must be filed during the official submission window. Since no such request has been submitted by NGIHL during the submission period organized by ENTSO-E in April 2015, ENTSO-E has to consider this request as non-eligible.

- Nevertheless, ENTSO-E wants to stress that the potential for the development of interconnection capacity between Great-Britain and Germany mentioned by NGIHL is duly considered within the framework of the TYNDP16 via the long-term concept of a “West-East” corridor, studied within the perimeter of the Regional Group North Sea. Indeed, the Common Planning Study phase as carried out by the Regional Group North Sea has identified this potential.
- This potential has resulted into the inclusion of the second Great-Britain – Belgium interconnector (1GW), which was already listed as future project candidate in the TYNDP14, as well as the inclusion of two new future project candidates between Great-Britain – France (1GW) and Great-Britain – Netherlands (1GW).
- Acknowledging the upper range of the potential as per the analyzed “High-RES” scenarios, together with the perspective that transiting the corresponding large west-east bulk power flows between Great-Britain and Germany would trigger substantial onshore reinforcements in the France – Belgium – Luxemburg – Netherlands networks, the Regional Group North Sea has identified the interest to develop further views on the most efficient grid architecture.
- The inclusion of the long-term concept of a “West-East corridor” in the TYNDP16 allows developing this view hand in hand with the assessment of the aforementioned future project candidates. Its assessment will be done in line with the TYNDP16 guidelines, implying an evaluation in PINT against the TYNDP16 2030 scenarios.
- As such, the TYNDP16 will include an economic evaluation of developing transmission capacity on the boundary Great-Britain – Germany, in the same way as it will include an economic evaluation of developing transmission capacity on the boundaries of the aforementioned future project candidates.
- The technical evaluation will be conducted on architectural level, taking into account that multiple locations could serve as connection points.

iv) We are concerned that there is a procedural/sequencing issue between the ENTSO-E TYNDP business of identifying future transfer capacities which have a sensible need case (published in draft RGIP 24th June 2015) and the desire to provide a level playing field for proponents (including third party developers) to propose candidate projects for inclusion in TYNDP (window for submitting candidates closed 30th April 2015). In order to continue to respect the level playing field commitment we suggest that all credible new project ideas to address the higher than previously signalled need case should be admitted (i.e. both non-ENTSO-E and ENTSO-E member projects);

v) An alternative approach to maintain the level playing field (but not favoured by us because it impedes the pathway to PCI and CEF and therefore potentially delays worthwhile projects) could be to exclude from TYNDP 2016 the “new” project candidates arising from the common planning studies and instead simply refer to the perceived need for capacity on transmission boundaries / borders (for which specific projects & proponents have yet to come forward). However, we would reiterate that it is essential that all parties have equal opportunity to propose new investment solutions;

- All project candidates, no matter if identified during ENTSO-E’s Common Planning Study or proposed from outside of ENTSO-E, will be equally assessed during the Assessment phase.

vi) A related issue around this process concerns lack of clarity around the precise role that ENTSO-E is attempting to perform. We suggest that ENTSO-E’s role should not be to engineer projects to fit the precise reference capacities that are deemed to be required. Instead ENTSO-E should say what transfer capacities are required to satisfy pan-European needs (i.e. the results of the common planning studies) and proponents should propose what actual projects they are developing to satisfy such need. It is perfectly legitimate, and indeed desirable from a competition point of view, that the number of candidate projects for a given boundary far exceeds the need on a given boundary. It would be expected that not all projects will be realised and hopefully the best projects will be the ones that come through. We suggest this aspect of process is considered further in the context of continual improvement for the TYNDP 2018; and

- The role of ENTSO-E and its constituent members in delivery of Regional Investment Plans and a Community wide TYNDP is provided for in Regulation (EC) 714/2009 and Regulation (EU) 347/2013. It is indeed correct that the regional plans published for consultation give insight in common planning studies performed within ENTSO-E's regional groups, which result in the identification of investment needs (target capacities) and barriers to overcome (regulatory, financial, technical bottlenecks). The application process for all promoters to add projects on a TYNDP list was organized by ENTSO-E following the EC's draft guidelines for inclusion of projects in the TYNDP 2016 ("European Commission Guidelines on equal treatment and transparency criteria to be applied by ENTSO-E when developing its TYNDP as set out in Annex III 2(5) of Regulation (EU) No 347/2013"), and supervised by EC, ACER and the Network Development Stakeholders Group. These projects are proposed for CBA (Cost Benefit Analysis) based assessment in the TYNDP2016 report, starting in October 2015. The CBA methodology explicitly allows for analysis of competing projects, with an outcome that is based on non-biased technical studies.

vii) Finally, there is a lack of transparency around how ENTSO-E does its TOOT and PINT analysis. Given the example above that the sum of all project candidates could far exceed total need on a given boundary; we propose ENTSO-E should start its TOOT analysis at the lesser of the reference capacity or the capacity corresponding to the sum of all real project candidates. One could expect that each boundary would likely have a different reference capacity in each vision, but we are unsure if ENTSO-E has in fact used a single reference capacity across all visions. This leaves the reader unsure precisely how the studies have been carried out and therefore uncertain what reliance/insight to take from the results. We suggest that in the interests of greater transparency, please could ENTSO-E clarify for each of Visions 1 to 4:

a. The reference capacities that have been used on each boundary for all years studied for the vision under consideration, and supporting evidence justifying these values;

- Data that will be used for the assessment of projects for TYNDP2016 will be made available together with the TYNDP2016 report, Q4/2016. The draft reference capacities are already available at the ENTSO-E webpage. All projects will be assessed in all visions with the same reference capacities.

b. Which discrete hours of the year have been selected as the representative hours (planning cases) used in network and market studies, and what duration has been ascribed to each to form a representative year;

- See earlier response above.

c. What is the magnitude and direction of cross boundary transfer flows (MW) between Great Britain and its neighbouring countries corresponding to these reference planning cases – i.e. what are the reference capacities?

- See earlier response above.

d. Which TYNDP projects are included / excluded from these reference planning cases?

- See earlier response above.

RG NS attachment

https://consultations.entsoe.eu/system-development/regional-investment-plans/consultation/download_file?squid=question.2015-06-24.2845204512-filesubquestion&user=ANON-3JZC-9QG1-V

EDF

Is the structure and the information in the report easy to read and understand? - Overall impression

- General remarks:

You will find our general remarks attached at the end of the questionnaire (attachment to the Continental South East Plan).

- Please find below our answers to the questionnaire:

EDF welcomes the inclusion of maps and summary

Are the principles and methodologies used for the common planning studies run well explained? - method+ principles

On the calculation methodology of the interconnection ratio:

EDF considers that the 10% interconnection objective by 2020 and the 15% interconnection objective by 2030 should be nuanced by the economical benefits to develop transfer capacities on a case by case basis. The development of interconnections should be promoted when it is economically efficient: cost-effectiveness is namely a decisive parameter to ensure the sustainable competitiveness of the energy supply in Europe. We support in this view the NS Plan quoting the EC Communication: “to aim at 15% for 2030 “while taking into account the costs aspects and the potential of commercial exchanges”. In this view, we consider that the consequences on all stakeholders should be taken into account, in particular when the construction of new interconnections would imply an increase in network tariffs.

- ENTSOE would like to remind that the interconnection goals are set by the European Council and not by ENTSO-E. In this respect, the Council Declaration from October 2014 and EC Communication from February 2015 recognize the relevance of a case-by-case approach. ENTSOE will follow with much attention the communication of the European Commission *on “the progress towards the completion of the list of the most vital energy infrastructures and on the necessary measures to reach the 15% electricity interconnection target for 2030”* expected for 2016. The Regional Investment Plans list key messages (as seen from an ENTSO-E and a TSO perspective) of each region as well as the results of a pre-feasibility study for potential new project candidates. This study has primarily been based on socioeconomic welfare considerations. Selected project candidates will be assessed during the following Assessment phase, and costs and benefits will be presented in the TYNDP2016 report, to be published for consultation by mid-2016. The assessment of projects includes a number other indicators beside the socioeconomic welfare as well.

Concerning the different criteria used to calculate the interconnection ratio, EDF welcomes the use of the peak load criteria, considered as more appropriate than the NGC criteria to assess the target capacity, necessary to ensure the security of supply (cf. chapter 5.5 of the NS Plan). The available transfer capacity can namely evolve along the year, depending on the season or peak periods. (For instance, in SO&AF 2015, Belgium import capacity in 2020 is estimated at 3,7 GW in winter (January, 19:00), but rises at 4 GW in summer (July, 19:00)).

Furthermore, EDF noted that the NGC criteria can sometimes overestimate the generation capacity of a Member State, in particular when it is characterized by a high level of RES penetration or unavailable capacities (such as in Spain for instance, which has an interconnection ratio below 10% in

2030, but would stand above 15%, when the peak load criteria is used).

EDF therefore suggests considering the use of an alternative criteria: the “NGC – Unavailable Capacity (UC)” as defined in the SO&AF 2015, in order to better integrate the unavailability of capacity in the calculation methodology of the interconnection ratio.

- “NGC – UC” is indeed another possibility to inform on the interconnectivity of countries. ENTSOE welcomes this suggestion that we will consider for our future publications.

On the market studies methodology:

Compared to the previous version, EDF appreciates the efforts made to improve transparency on the methodology used to run the market studies (in particular the practical example provided in the NS Plan) and its harmonization towards the different Regional Plans.

However, EDF wishes to stress that ENTSO-E should pursue its efforts on the sensitivity analyses run in addition to the assessment made under the TYNDP 2014 Vision 4 (V4). Sensitivity analyses provides additional drivers, than those identified in the Vision 4 of TYNDP 2014 (essentially focused on the RES penetration), and can thus demonstrate additional or different interconnection capacity needs.

- In general, we agree on the fact that sensitivity analyses can reveal additional potential investment needs. The inclusion of additional sensitivities was decided region-by-region on the basis of regional needs and specificities. The timeframe for such analyses is however limited due to the global very tight time schedule of the whole TYNDP process.

While some sensitivity analysis are well described and itemized such as in the NS Plan (which integrates TYNDP 2016 assumptions), some other Regional Investment Plans are less detailed and do not quantify the impact on investment needs (neither in target capacities nor in the list of projects). For example, in the Continental South East (CCE) Plan, the sensitivity analysis identifies a decrease of nuclear and gas generation capacities in Czech Republic and Poland and a tighter supply-demand balance. These elements should have an impact on cross-border capacity needs, but no results on the evolution of cross-border capacities are provided in the plan.

- The results of the sensitivity analysis did not show any further need of additional projects or investment needs compared to the results of the Common Planning Studies to be implemented in the CCE grid. Therefore the sensitivity analysis verify and confirm the results of the Common Planning Studies. The conclusion text in the chapter 4.2.2 Sensitivity analysis description is updated, based on above mentioned statements.

In our view, sensitivity analyses should thus be further harmonized across the six Regional Plans.

On the network studies methodology

Contrary to market studies, EDF noted a high heterogeneity in the methodology used to run the network studies. This is understandable if considering the different specificities of concerned networks (network size or the presence of islands), but the description of the network studies could be further improved:

- concerning the selection of PIT (“Points In Time”) used as a reference to make the network simulations, it is crucial to ensure the relevance of the chosen points. The description of the selection process of PITs and their specificities should be further explained and justified in all regional plans. The description made for instance in the Continental South West (CSW) plan (p.79) represents a good example that could be generalized;

- The CSW example is indeed a good way to describe the methodology used to select the representative cases. This methodology (based on duration curves) is harmonized among the regions but the number of PiT and the relevant parameters could differ depending on the specificities in order to match as much as possible the annual curves (compromise between the quality of matching and the resources). This process will be detailed in the TYNDP 2016 report.

- the notion of PTDF (“Power Transfer Distribution Factors”) is often mentioned in the plans, but the description of the way PTDF are used and taken into account in the analysis should be further improved and detailed;

- This method is a tool to have a Yearly Round Calculation. Other scripts can do that, providing directly in the Load Flow tools the different market outputs, hour per hour, and then run the load flows for all the hours of the year. Finally, during the assessment phase, the different regions will use Yearly Round Calculation (based on PTDF or other scripts) and the way it is used will be detailed in the TYNDP report.

- the presentation of the load-flow studies in the NS Plan (pp.24-25) with the associated maps is appreciated but similar presentations should be included in other regional plans;

- We will consider this suggestion for our future publications.

- the impact of the integration of HVDC lines on network stability and on the operations of the grid should be investigated, especially where several projects are envisaged in the same area (e.g. on France-Spain borders in the CSW Plan). A preliminary assessment of the impact of the integration of HVDC systems on the other electricity market actors should also be included to ensure a complete and unbiased approach.

- The study of the dynamic behavior of the system was not in the scope of the documents, nevertheless such issues should be taken into account in complementary studies, especially the connection of the Iberian Peninsula to continental mainland. This is already mentioned in section 4.1.4 of RgIP CSW.

Additional info for RegIPs and the TYNDP2016-report?

EDF welcomes ENTSO-E efforts to improve transparency, but still considers that the publication of network and generation data used for the network analysis should be ensured (in compliance with confidentiality restrictions) in order to enable stakeholders to analyze and fully understand TYNDP deliverables.

- The planning studies build on the earlier TYNDP2014 as explained in the methodologies. Much of the data used in this last TYNDP is accessible on the ENTSO-E website:

- Scenario data: <https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Documents/TYNDP2014%20Visions%20data.xlsx>
- Market modelling data: <https://www.entsoe.eu/major-projects/ten-year-network-development-plan/tyndp-2014/Documents/TYNDP2014%20market%20modelling%20data.xlsx>
- Network data: <https://www.entsoe.eu/publications/statistics/network-dataset/TYNDP-2014-input-datasets/Pages/default.aspx>

- Also for TYNDP2016, ENTSO-E strives to provide such datasets and assumptions, also before finalization of the report. We strongly acknowledge that transparency of data and methodologies, can only aid understanding of the studies performed and key conclusions drawn.

In addition, while assumptions on standard costs are crucial for the assessment of the results of cross-border capacity needs, they are not homogeneously described in the different regional Plans. The tables presented in the CCS Plan (p. 85) or Baltic Sea (BS) Plan (p. 64), providing the standard costs assumptions per border and cost drivers, is a good example that should be generalized.

Beyond standard costs, the costs assumptions per project are also very interesting, when available. A clear breakdown of the costs structure for each project gives the possibility to evaluate more accurately the coherence of the standard costs per border as well as the significance of the costs of the internal network reinforcements needed for the realization of the interconnection projects concerned. An improved transparency on project costs would also allow to comparing different cost components (line, converter, damage compensation,...) or to identifying the costs of the different projects within a cluster. Thus, a dedicated paragraph with a detailed description of new projects and their associated costs should be included, when available, in the Regional Investment Plans and in the list of TYNDP projects.

- ENTSO-E is constantly working on increasing our transparency of data and processes as well as unifying our regional plans without losing room for implementation of regional specificities. How to provide more information on standard costs in the Common Planning Studies, could definitely be an item to be looked at for further plans. For the assessment phase, costs of project candidates will be updated compared to the ones estimated for the Regional Investment Plans, taking into account the more recent available information on each project.
- Planning studies explore general investment needs and barriers, and aim to propose suitable projects to address these situations. For this reason cost assumptions in planning studies are of a more general nature, which ENTSO-E aimed to explain as detailed and as transparent as possible. In the next TYNDP phase, actual project proposals will be assessed case-by-case in line with a CBA methodology. In such assessment phase, the cost appraisal of projects will be more detailed based on proposed investments. Very recently, ACER has provided a proposal for unit investment costs (as prescribed by Regulation 347/2013) which may be used by promoters, NRAs and other institutions

Furthermore, the common planning studies and the list of candidate projects should be completed to fully integrate the third party projects to ensure the equal treatment of projects promoted by non-ENTSO-E members, as recalled in ACER Opinion on the draft TYNDP 2014.

- The goal of the Common Planning Studies was to screen for potential new project candidates for the future European grid. This screening has been done with a transparent and technical approach, based on a common dataset of a green and European future (vision 4). In parallel to that, stakeholders were invited to promote their own project candidates and both will be assessed equally during the next phase of the TYNDP2016.

Finally, taking into account the progressive implementation of the Flow Based capacity calculation methodology pursuant to the CACM Guidelines, it would be interesting to describe the way TSOs intend to integrate this evolution in their planning studies.

- The CACM guideline allows for both flow-based and coordinated NTC approaches, while indicating that flow-based should be the primary approach for day-ahead and intraday capacity calculation where cross-zonal capacity between bidding zones is highly interdependent. The same argument can be used in long-term planning studies, and ENTSO-E is analyzing the value ('benefit') and the modelling needs ('cost') of such approach in planning environment. It should be noted that while flow-based may give grid usage efficiency gains, this should be compared with the inherent uncertainty in long-term planning (as opposed to intra-day and day-ahead markets) as well as the computational/modelling efforts.

Regional Investment Plan North Sea - RG NS

Concerning the NS Plan, we noted on the interconnections between Continental Europe and Great Britain that the target capacity increases by 7 GW compared to TYNDP 2014 V4 (table 4.6), but then it appears that only 3 GW is needed under the sensitivity analysis, using the Visions 3 and 4 of TYNDP 2016 assumptions. This shows how the scenarios can change significantly from one TYNDP to another and demonstrate once again the necessity to conduct sensitivity analysis.

It would also be helpful to have a high-level summary comparing and contrasting the differences from one TYNDP to another so that the differences can be clearly highlighted and understood, as the results can vary significantly.

- This is very valid proposal, and we aim to provide such insights more in future publications.

For example, the description of the projects related to the 7 GW increase (cf. table 4.6 of chapter 4) and the description of the 3 GW increase presented in another table (cf. table 1.1 of chapter 1) should be better summarized and highlighted to facilitate the reading of the report.

EDF also recalls that the more TSOs move away from the current system state, the higher would be the uncertainties on the completion of these projects in terms of technical feasibility or economic benefits.

Regional Investment Continental South West - RG CSW

Concerning the CSW Plan, we noted also on the France-Spain border, that the target capacity increases from 5 GW (TYNDP 2014 V4) to 8 GW. To reach this target, two additional HVDC projects across the Pyrenees Mountain are mentioned by ENTSO-E, leaving also some rooms for third party projects (i.e. a multiterminal ES-FR-GB link of 1 GW promoted by a non ENTSO-E project promoter as included in the TYNDP 2014).

On this point, EDF would like to raise the following comments:

- This sharp increase, probably driven by the 15% interconnection target and the use of the NGC criteria, could be the outcome of an over estimation of the future installed capacity in Spain, characterized by high RES penetration;

- The 15% interconnection target was not the driver, as suggested. This increase from 5 GW to 8 GW stemmed from RG CSW Common planning studies for the long term high RES scenario. In addition, this border is already congested with significant market price differences and CPS simulations showed confirmed this, even with 5 GW capacity, for the long Term high RES scenario. The other driver was the EC 10% objective which would allow to have the adequate conditions for a competitive market, as stated in the Madrid Declaration. Cost and benefits of increasing the FR-ES capacity will be more thoroughly investigated in the upcoming assessment phase of TYNDP 2016, taking into consideration updated scenarios.

- Multiplying HVDC projects across the Pyrenees mountains is also questionable considering the difficulties encountered by the recent France-Spain HVDC project;

- The France-Spain project between Santa Llogaia and Baixas was under discussion for more than 15 years, with an original proposal of 400kV overhead double circuit. The intervention of the European Coordinator to boost the project resulted in an underground solution that lead to HVDC technology. Since this decision was taken in 2008 the project was built quite fast without encountering big problems. The European Coordinator also recommended to take into account the decision process for the following projects in the border. For the new French-Spanish projects, different alternatives have been studied from the technical and physical implantation feasibility point of view (including both AC and DC, and overhead, underground and submarine solutions) before concluding the ones presented in the document are the best option to increase the interconnection capacity.

- Finally, an increase of HVDC projects in an AC network could raise some issues of network stability.

- As it is said in the document in section 4.1.4, the study of the dynamic behavior of the system is not in the scope of the document, nevertheless such issues must be taken into account in complementary studies, especially the connection of the Iberian Peninsula to continental mainland before a final decision is taken on specific projects.

Therefore, further elements on the costs and the expected economic benefits of such a development should be presented in the Plan in order to enable stakeholders to assess the actual opportunity of the proposed investments.

- This information will be presented in the second phase of the TYNDP 2016 process. The aim of this second phase consist of assessing the project candidates list to obtain information about the benefits of each project not only from the economic point of view but also technical, environmental, etc.
- Outcomes will also be reported to the High Level Group on the Iberian Peninsula Interconnectivity.

Regional Investment Plan Continental Central South - RG CCS

Concerning Italy-Austria (1000 MW / 1100 MW) and Italy-Slovenia (800 MW / 700 MW) already included in TYNDP 2014: we consider important to develop detailed impact assessments on the Italian transmission system (in particular, in terms of related internal congestions) of the simultaneous development of those interconnections.

- In the TYNDP 2014, ENTSO-E already assessed in detail the impact of these projects, verifying also the existence of any possible cross-border and internal congestions due to the development of both projects in the same timeframe.
- We do not expect any additional internal congestion in the updated scenarios and network model to be used in the TYNDP 2016. Anyhow ENTSO-E confirms detailed assessments will be performed also in the TYNDP 2016.

Concerning Italy-Tunisia (600 MW), as already expressed concerning its inclusion in the TYNDP 2014, ENTSO-E could identify North Africa as a region of potential market integration between European market and third countries rather than as a bottleneck which needs to be solved through specific investments. This interconnection could namely lead to higher imports of green energy than exports from Tunisia towards Italy, which should be assessed very carefully in relation to the current system needs in Italy and the current context already characterized by overcapacity and difficulties to integrate large amounts of renewable generation.

- ENTSO-E considers North Africa as a region of potential market integration; this is why new interconnections between Europe and North Africa have been planned in the TYNDP. Concerning in particular project 29, detailed network and market simulations will be performed also in the next TYNDP in full compliance with the ENTSO-E CBA Guidelines. Such analyses allow assessing, under the different planning scenarios, the different market conditions leading to import or export power exchanges all along the provisional target years.

Concerning Italy-Montenegro (1200 MW) , as already commented on the TYNDP 2014, careful analysis should be done on the price differential between both countries connected by this project. Overestimating this price differential could lead to the development of new interconnections that are not necessary for the system, considering also that Italy is already experiencing overcapacity and difficulties to integrate large amounts of renewable generation. The development of such infrastructure might therefore deteriorate the current situation instead of mitigating it

- Concerning project 28 (new HVDC interconnection between Italy and Montenegro) careful market and network analyses were performed in the TYNDP 2014, in full compliance with the ENTSOE CBA guidelines. Based on the results of these analyses, which are published in the TYNDP, it is possible to state that the project is of major importance for the development of a common pan-EU electricity market, the sustainable evolution of the power system and the improvement of the security and resiliency in the CCS and CSE Regions. In particular, the realization of this new interconnection will make possible further power exchanges leading in all the different planning scenarios to a significant increase of the SEW and the integration of

RES and will contribute alleviating any balancing problem in the interconnected systems in the above mentioned Regions.

- Therefore the pan-European importance of the project has been duly justified in the correct perspective, through detailed regional market and network studies.
- We confirm the same detailed analyses will be performed to assess the project also in the TYNDP 2016.

Concerning Battery storage in South Italy (250 MW), particular attention should be given to the role of the regulated TSO in developing electricity storages under a regulated framework and in competition with conventional generation (market players). The development of such technologies is currently under assessment by the Italian Regulator through relatively small pilot projects. The candidate project for the TYNDP 2016 is a large-scale project (250 MW), compared to those relatively small pilot projects. We consider therefore important to wait for the results of ongoing pilot projects before developing new ones.

- A high level of innovation marks out this project, which was also included in the first PCI list under the Regulation 347/2013. The involved TSO (Terna) confirmed the proposed project is planned to be developed after the conclusion of a preliminary pilot phase.

Regional Investment Plan Continental South East - RG CSE

Concerning Italy-Montenegro (1200 MW) , as already commented on the TYNDP 2014, careful analysis should be done on the price differential between both countries connected by this project. Overestimating this price differential could lead to the development of new interconnections that are not necessary for the system, considering also that Italy is already experiencing overcapacity and difficulties to integrate large amounts of renewable generation. The development of such infrastructure might therefore deteriorate the current situation instead of mitigating it.

- Concerning project 28 (new HVDC interconnection between Italy and Montenegro) careful market and network analyses were performed in the TYNDP 2014, in full compliance with the ENTSOE CBA guidelines. Based on the results of these analyses, which are published in the TYNDP, it is possible to state that the project is of major importance for the development of a common pan-EU electricity market, the sustainable evolution of the power system and the improvement of the security and resiliency in the CCS and CSE Regions. In particular, the realization of this new interconnection will make possible further power exchanges leading in all the different planning scenarios to a significant increase of the SEW and the integration of RES and will contribute alleviating any balancing problem in the interconnected systems in the above mentioned Regions. Therefore the pan-European importance of the project has been duly justified in the correct perspective, through detailed regional market and network studies. We confirm the same detailed analyses will be performed to assess the project also in the TYNDP 2016.

Concerning Battery storage in South Italy (250 MW), particular attention should be given to the role of the regulated TSO in developing electricity storages under a regulated framework and in competition with conventional generation (market players). The development of such technologies is currently under assessment by the Italian Regulator through relatively small pilot projects. The candidate project for the TYNDP 2016 is a large-scale project (250 MW), compared to those relatively small pilot projects. We consider therefore important to wait for the results of ongoing pilot projects before developing new ones.

- A high level of innovation marks out this project, which was also included in the first PCI list under the Regulation 347/2013. The involved TSO (Terna) confirmed the proposed project is planned to be developed after the conclusion of a preliminary pilot phase.

full EDF answer to the consultation:

https://consultations.entsoe.eu/system-development/regional-investment-plans/consultation/download_file?squid=question.2015-06-24.8849975336-filesubquestion&user=ANON-3JZC-9QG4-Y

3. Consultation response on draft list of TYNDP2016 Project Candidates

AGZOS, S.L.

Are the TYNDP 2016 project list elaboration principles clear to you?

Is there an investment need that you are aware of that is not described in this list?

Not Answered

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

Reversible pumped-storage hydro-electric exploitation "MONT-NEGRE" power 3300 MW Zaragoza, Spain

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No answer.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

No answer.

Any other remark/s?

No answer.

Promoter's own remark.

Ofgem

Are the TYNDP 2016 project list elaboration principles clear to you?

Yes.

Is there an investment need that you are aware of that is not described in this list? There are a number of investment items in the incomplete applications list that we believe should be reconsidered for inclusion in the full TYNDP candidate list and considered in the CBA process. Without them, the TYNDP risks being incomplete and not reflecting an accurate depiction of the infrastructure landscape in the coming years. We will contact the relevant project promoters to make sure that they are aware of their omission, and, if they intend to do so, that they submit the relevant information in a timely manner to ensure they are considered. Specifically, these projects are:

- Gridlink – 1.5GW interconnector between UK and France
- Greenlink – 700MW interconnector between Ireland and GB
- MAREX – 1.5GW interconnector between Ireland and GB

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

See response below.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

There are a number of GB specific candidate projects where we consider the information to be inaccurate. These are outlined below.

- AQUIND Interconnector – The expected commissioning year is 2020, this should be classified as a near-term project.
- EWIC interconnector between Ireland and GB is included in the list but is already connected and operational.
- The South Western Cluster is due to be commissioned in 2022, should this therefore not be classified as a mid-term project? In the 2014 TYNDP, the project is due to be commissioned in 2019.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

The TYNDP needs to reflect the future grid as accurately as possible, so project promoters that failed to submit the correct information must be given the opportunity to amend their mistakes. We support that projects can still be assessed in the CBA process even if they have been rejected in the first instance.

Any other remark/s?

No.

ENTSO-E response:

In order to be labelled "mid-term" in the TYNDP 2016 a project has to be commissioned by 2022 and acknowledged in the latest national plans or having intergovernmental agreement.

Aquind and South Western Cluster are to be commissioned by 2022 but currently are not included in the National Development Plans nor are subject to any intergovernmental agreement. As such Aquind and South Western Cluster are labelled "future projects".

With respect to Greenlink and Marex, these two projects fulfilled the legal and technical criteria and therefore are accepted for inclusion and assessment in the TYNDP 2016.

Regarding the Gridlink project, by 10 September 2015 ENTSO-E did not receive the necessary legal proof requested by the EC guidelines; nevertheless this project will be assessed in the TYNDP2016 based on the Network Development Stakeholders Group recommendations.

Concerning EWIC, this project is currently commissioned and therefore deleted from the TYNDP.

Lietuvos energijos gamyba, AB

Are the TYNDP 2016 project list elaboration principles clear to you?

Yes.

Is there an investment need that you are aware of that is not described in this list?

Even though several pumped storage projects are included in the TYNDP 2016 list, possibilities for such projects to access EU funding is limited. Pumped storages play a key role in the EU energy system, guaranteeing SoS and system flexibility. Having in mind the growing share of renewables in the electricity generation sector, the role of pumped storages in the upcoming years will likely to increase. Nevertheless currently in EU financial accessibility perspective pumped storage projects are overshadowed by the transmission projects. Such situation should be changed creating opportunities for the pumped storage projects to receive grants.

Promoter's own remark.

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

Did not assess.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

Some data provided in the pumped storage templates by some countries are misleading: in particular requirement to indicate "total storage capacity [GWh] and defining it as the total energy delivered to the grid when reservoir is totally emptied, starting at reservoir full condition: should be amended or at least commented, because in some cases when the reservoir is, for instance the basin of the sea or river, the indicated total storage capacity becomes irrelevant because in such cases the primary determining factor becomes the storage capacity of the mine or lower basin, but not the reservoir's capacity.

So even though the requirement of the template is fulfilled the data does not allow to assess the generation potential which was the primary goal of such template's requirement.

ENTSO-E response:

ENTSO-E will consider this suggestion when preparing the new template for TYNDP 2018.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

Yes.

Any other remark/s?

Muuga pumped storage plant project which is being planned in the Republic of Estonia will highly contribute to the SoS and system flexibility in the Baltic region also creating possibilities for the market players and citizens of the Baltic and Scandinavian countries to receive financial gains from regional interconnections (FI-EE and SWE-LT, PL-PL in particular).

Promoter's own remark.

PSE S.A.

Are the TYNDP 2016 project list elaboration principles clear to you?

Not Answered

Is there an investment need that you are aware of that is not described in this list?

Not Answered

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

Regarding to project candidate 170 Baltic synchronization with CE, where anticipated GTC of 0-600 MW is theoretical and not correct due to lack of cross border investment which is cover of this capacity target. This project have not background for consideration in TYNDP 2016, because not fulfill CBA criteria (very high costs of investments in comparision to benefits) which not recommend project for TYNDP list. Moreover, the commissioning year is not consisted with type of project and should be beyond 2030 or unknown, because second connection with CE is possible only throughout third countries territory outside EU.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No answer.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

No answer.

Any other remark/s?

No answer.

Promoter response:

- We do agree that for additional throughput capacity additional lines are needed. Accordingly, Lithuanian TSO is planning additional line to Poland to ensure Baltic States synchronization with Continental Europe. Baltic States synchronization with Continental Europe project absolutely necessary to ensure the security of supply of the Baltic States. Security of supply criteria monetization is under intense discussions today between European Commission, ACER and ENTSO-E and most probably will be included in ENTSO-E CBA 2.0 in the nearest future which might bring totally different socioeconomic results to the Baltic States synchronization with Continental Europe project. We should underline, that according to realistic project implementation plan provided by Gothia Power consultants, Baltic States synchronization with Continental Europe technically is feasible by 2025, if the right political and technical decisions are made soon. The year 2030 is pessimistic, but still is the ENTSO-E TYNDP 2016 planning time frame. Second connection of Lithuania with Continental Europe throughout third countries is not and never will be acceptable to Lithuania due to the same security of supply issues we are facing whilst synchronously operating with IPS/UPS
- To our knowledge, Svenska Kraftnet on behalf of the LITGRID sent a common message to ENTSO-E and the European Commission concerning removing of the Nordbalt phase 1 from the TYNDP 2016 project list and moving of the remaining investments to the Nordbalt phase 2, because the Nordbalt link will be commissioned by the beginning of 2016.

Fortum Power and Heat Oy

Are the TYNDP 2016 project list elaboration principles clear to you?

Yes.

Is there an investment need that you are aware of that is not described in this list?

In the Baltic Sea Region, the market situation requires that two projects are advanced from Long-term Projects to Mid-term Projects, and that two additional projects are included:

- The projects Finland-Sweden "3rd AC Finland-Sweden north" (TYNDP 111) and Finland North-South "Keminmaa-Pyhänselkä" (TYNDP 96) should be built already by 2020 as these would alleviate the present severe congestion on the transmission route from northern Scandinavia through Finland to the Baltic states, Poland and southern Scandinavia. These projects would reduce the internal investments needs (TYNDP 126) in Sweden and enable better use of the Estonia-Latvia (TYNDP 62) and Lithuania-Poland (TYNDP 123) that will be commissioned in 2020, too.
- As new projects, a 2nd cable to the SwePol Link (Sweden-Poland) should be added, as it shows considerable socio-economic benefits, and a link between Norway and eastern Denmark should be considered, reducing the present congestions on existing interconnections and internal Nordic lines.

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

Yes.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

The commissioning year of the project Lithuania-Sweden "NordBalt phase 1" (TYNDP 60) should be set to 2015 (2020 in the draft).

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

Yes.

Any other remark/s?

The Reference Capacities list should be checked in the following points:

- The SE-FI and FI-SE capacities should be increased already for the year 2020, as the project to increase these capacities should be advanced to be commissioned in 2020 (see the response to question 5).
- The SE-PL and PL-SE capacity should be increased by a new project to be built during the plan period (see the response to question 5).
- The DE-PLI and PLI-PL reference capacities are in the list unchanged between 2020 and 2030. However, the plan includes for year 2022 a Poland-Germany Mid-term Project "GerPol Power Bridge I" with a provisional GTC increase of 1500/500 MW. This increase should be included in the year 2030 reference capacities.

Promoter response:

- A third AC connection between Sweden and Finland is not possible to complete by 2020 due to permission processes. Svenska Kraftnät and Fingrid have initiated a joint study to assess the future need for interconnection capacity between the countries where both a 3rd AC connection and replacement and upgrades of HVDC cables are analysed. Results from this study is expected within a year.
- Related to the SwePol Link (Sweden-Poland), the promoters say the following: The reasons for some exclusion of projects as this one is explained in the Regional Investment

plan Baltic Sea chapter 5.6 Long term perspective, remaining challenges and gaps.
Included in NordBalt phase 1 are also internal reinforcements in Latvia even though the interconnection in itself is planned to be taken into operation year 2016.

Friends of the Supergrid

Are the TYNDP 2016 project list elaboration principles clear to you?

The transparency of TYNDP project list elaboration principles have improved since the preparation of the first TYNDP list in 2010. Friends of the Supergrid (FOSG) welcomes the increased transparency efforts made by ENTSO-E. The elaboration of the TYNDP is a process that should be periodically reviewed in consultation with stakeholders in order to ensure that the principles are clear and transparent. FOSG is a member of the Network Development Stakeholders Group which has been consulted during the elaboration process of the TYNDP 2016. We encourage the efforts made by ENTSO-E to support this group which provides a good platform to discuss the TYNDP elaboration principles.

FOSG has consulted its members in order to gather suggestions on how to improve the elaboration process of the TYNDP. As stated before, the elaboration principles are relatively clear, even though complex, and have generally improved since the first TYNDP list. Nevertheless, we consider that there is still room for improvement when it comes to the approach followed by ENTSO-E for the preparation of the TYNDP. In particular we would like to emphasize the following issues:

- Gradually move towards a top-down approach:

Under the current elaboration principles, the TYNDP 2016 will always remain a list of independent and non-coordinated projects. The projects are assessed against several scenarios and are then put together in a single document (i.e. TYNDP) that is organized according to ENTSO-E's regional groups. This bottom-up approach cannot provide a pan-European view. The current elaboration principles are therefore far from being a top-down coordinated European Network Development Plan that considers the result of pan-European optimization tools to combine future energy generation-transmission-consumption scenarios. This should be improved.

- Need to revise the assignment of projects' categories and definition of projects' "maturity"

Another important element of the principles that we would like to see improved are the considerations regarding the project categories proposed by ENTSO-E for the TYNDP 2016. It is essential to guarantee that the cost-benefit analysis (CBA) of all candidate projects is done objectively. The new three project categories: mid-term; long-term and future projects should not be based on political components, as this may affect the CBA result and therefore constitute an equal treatment breach. The current legal eligibility criteria used by ENTSO-E at the time of TYNDP candidate projects' submission takes into account certain political dependencies. This is used to evaluate the projects' grade of "maturity". ENTSO-E then uses this political dependency criterion to assign the projects to the different categories (mid-term, long-term or future project). So-called "political criteria" are too vague and can negatively impact otherwise valid projects.

Each project category is then considered under a different reference network (2020 including mid-term and 2030 including mid-term + long-term) and methodology (TOOT and PINT). This means that the assignment of a category to a project will have a very important impact at the time of applying the CBA methodology and therefore on the assessment of the benefits of the project.

To illustrate this, we can use the example of a potentially interesting project that could be commissioned by 2021 and that is looking for political support. Since the project does not have political support yet at the time of TYNDP submission to ENTSO-E, this project would be categorized by ENTSO-E as "future project". It will then be assessed against a 2030 reference network, which already includes all other preliminarily "politically-supported" projects commissioned by 2030 (i.e. all those other projects that fall under the category of "mid-term" and "long-term" projects). Therefore, the project used in this example, would be in clear disadvantage with a 2027 commissioning date planned project that showed a preliminary political support at the time of TYNDP submission. The last one (commissioning date: 2027) would be assessed against a 2020 reference network (only with "mid-term" projects) despite of its later commissioning date, while the first one (commissioning date: 2021) would be assessed against a 2030 reference scenarios that already includes all the "mid-term" and "long-term" projects.

It should be noted that these criteria for projects to be included in each of the categories were not established, and therefore were not consulted, either in the CBA Methodology approved by the EC in

2015 or in the EC draft guidelines on equal treatment and transparency criteria to be applied by ENTSO-E in its TYNDP.

According to ACER's opinion on TYNDP 2014 of January 2015, which seems to be ENTSO-E's motivation to classify projects in 3 categories, the only clear references to set up the categories are time horizons, where instead of the dates considered by ENTSO-E, the following 5 year timeframes should apply for TYNDP 2016:

- Mid-term 2017-2021 (project expected commissioning date by 2021)
- Long-term 2022-2026 (project expected commissioning date by 2026)
- Future (project expected commissioning date from 2027 onwards)

This political support could be used for projects which otherwise would not be selected but are nevertheless needed for political or social reasons. These projects should be added on top of the otherwise selected projects and should not take the place of projects which positively answer all the objective criteria.

Additionally, the term "maturity" which we understand is the complement ENTSO-E is trying to incorporate as criterion in addition to the commissioning dates, is not well defined yet. Until an agreement is reached prior to its application, it is considered that present attempt to establish categories incorporates undesired political influences at this technical CBA stage. As such this term will create additional confusion and significantly weaken the legal validity of the whole process. In our opinion, the CBA results of the TYNDP 2016 have to remain absolutely objective for all the projects and leave the changing political decisions out of ENTSO-E's technical assessment results. The objectiveness of the technical assessment is a must, as the resulting indicators will be the only basis and source of data to be used at the time of building up the regional PCI rankings (Reg. 347/2013 Art. 4.4 "...each Group shall assess each project's contribution to the implementation of the same priority corridor or area in a transparent and objective manner..."). The political supports will then, based on the rankings, be required as a last step for final PCI inclusions.

Is there an investment need that you are aware of that is not described in this list?

There could be some investment needs not described in the TYNDP list. However, this cannot be confirmed as the TYNDP, in its current format, is not sufficient to identify these needs. There is no clear link between the TYNDP and the implementation of the priority corridors established by the TEN-E Regulation (Reg. 347/2013).

One way to improve this, could be to add an additional component to the CBA methodology of the TYNDP 2016. This component would allow to make an assessment on whether the proposed TYNDP projects fulfill the requirements of the priority corridors identified by the TEN-E Regulation. This would be in line with article 11.8 of the Regulation and would bring more transparency to the PCI process, to the benefit of European citizens.

In case the CBA assessment conducted by ENTSO-E shows that there are investment needs not described in the TYNDP list, ENTSO-E could provide additional information or make suggestions on these additional investment needs (ENTSO-E itself or other entity/association might propose such a project in case not already submitted by any promoter or rejected after submission).

Additionally, when analyzing the potential investment needs, it would be preferable that the ENTSO-E Regional Groups are aligned with the EC Regional Groups established for the elaboration of the Project of Common Interest (PCI) list. In FOSG's opinion, it would make sense that the Member States considered in each group would be the same in both processes both from a political and technical perspective.

Finally, projects' synergies could also be identified and promoted, as part of the TYNDP.

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

To some extent, the technical features of the projects are sound. However, there is some room for improvement in this area. The current technical features are mainly structured to be filled in by point to point interconnectors and are not adequate for single coordinated multi-terminal projects. Under the current structure, projects that might include more than two countries cannot be included in one

project unless detrimentally split into several investment items. We consider that this aspect should be further analysed and potentially improved in the next version of the TYNDP.

A comment or indicator identifying whether a project is of “pan-European interest” or not (according to the technical criteria of the TEN-E Regulation), would also be welcomed after the CBA assessment of the projects. This would facilitate the PCI 2017 selection process, which is purely based on the results of the CBA performed by ENTSO-E.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No answer.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

The TYNDP is the first step of a long process to become part of the list of PCIs. The TYNDP prepared by ENTSO-E is therefore the basis for the PCI selection projects. PCIs will benefit from preferential treatment in accordance with the European legislation (TEN-E: EU Regulation 347/2013). Given the importance of the TYNDP as a tool to select projects that will be essential to achieve the EU's long term energy and climate policy goals, the TYNDP selection process must be based on objective and transparent criteria that ensure no discriminatory treatment between project promoters. This implies that the criteria used by ENTSO-E to select or reject a project must be known for all potential candidates well in advance of the deadline to submit the documents. This would allow all project promoters to know what are the detailed requirements needed to fulfil the legal and technical criteria to be applied for inclusion (at least six months before application window according to last EC draft legal criteria).

Not complying with the EC guidelines criteria could have been enough motivation to reject candidate projects if these guidelines (expected by 16 January 2014) would have been in place by the time of submission of the projects to the TYNDP. However this was not the case.

The EC's Guidelines had not been adopted and therefore were not enforceable at the moment when the projects have to be submitted to ENTSO-E. FOSG considers that in the current situation, the draft EC Guidelines do not offer sufficient motivation to reject any of the projects. For those projects where ENTSO-E has till some “doubts” on whether they are eligible or not to be part of the TYNDP, there is today no legal basis for ENTSO-E to reject them. Since ENTSO-E cannot legally make a selection based on subjective analysis, in case of doubt, it is advisable to include all the candidate projects in the TYNDP. The PCI selection process will do a later and further analysis of all the projects and will be able to select the appropriate ones at a later stage.

FOSG would also like to point out an inconsistency regarding the criteria applied for the selection of the different candidate projects:

- For promoters “A.3” and “B”, being assessed in the previous TYNDP is not included among the options to fulfil the legal criteria to be part of the TYNDP (see point “f” of the Guidelines);
- However, for promoters “A1”, being assessed in the previous TYNDP is an option to fulfil the legal criteria to be part of the TYNDP (see point “d” of the Guidelines)

We find that this discrepancy is not in line with the philosophy of the draft Guidelines: “... the ENTSO for electricity shall, under the supervision of ACER: Organise for the compilation of its TYNDP in a transparent and non-discriminatory process to identify and include all relevant pan-European transmission and storage projects, indifferent of their promoter status (ENTSO-E or non-ENTSO-E Member) in the community wide report. (See penultimate paragraph of the objective of the Guidelines). ...”. We therefore consider that being assessed in the previous TYNDP should also be one of the options to fulfil the legal criteria for “A.3” and “B” promoters.

Furthermore, it is essential to ensure a transparent communication between ENTSO-E and the promoters of candidate projects. In particular, for the preparation of the TYNDP 2016, it would have been appropriate to have identified, described and notified clearly to all the promoters every specific legal and technical criteria issues that make applicants not fulfill the draft EC guidelines during the clarification period that took place in May 2015, described as “Consistency check of technical and legal details”, and in any case:

- before releasing the public consultation the 24th June 2015 (to avoid projects which were still under assessment to be labelled as “application incomplete” in the consultation); and
- before the Network Development Stakeholder Group (acting as ethical committee) meeting by webinar the 11th of June 2015 where the general issues of projects’ application not matching the draft EC guidelines were discussed.

Additionally, “application incomplete” labeled projects are supposed to be assessed via PINT as a precondition to be recommended as part of the final list in order not to affect other projects’ assessment according to the Ethical Committee. This point is not understood, the methodology (TOOT or PINT) to apply in the CBA should not depend on the preliminary compliance with the draft EC guidelines check performed before the consultation period. Furthermore, the CBA has not started yet for any project and therefore, no influence in other projects is expected.

Any other remark/s?

No answer.

ENTSO-E response:

Considering ACER recommendation made for TYNDP 2014 ENTSO-E has grouped the projects in 3 categories based on the expected date of commissioning and the acknowledgement of the project in the National Development Plans or having inter-governmental agreement. As such ENTSO-E makes distinction between the very mature projects and the projects which although advance in planning still need the regulator or if the case ministerial confirmation. The use of PINT and TOOT methodologies in assessing the project are based on the non-discriminatory principle of first implemented first served, therefore the future projects are assessed on top of the midterm and long term projects. Having a criteria based only on the time and not also on the acknowledgment of the national decisional bodies (e.g. as being part of the NDP or having intergovernmental agreement) will pollute the assessment, mainly due to the overcapacity in the reference case. For the TYNDP 2016 ENTSO-E has run within the RgIPs drafting the common planning exercise which resulted in the identification of the European needs. In addition the common planning studies resulted in additional projects identified based on the social and economic screening.

Related to the grouping of the regions according to the EC regional structure the ENTSO-E acknowledges the need of grouping the TYNDP outcomes in a simpler way. As such ENTSO-E will publish the TYNDP 2016 project list and their associated assessment as per EC regional groups. The TYNDP in its purpose is wider than the PCI process. TYNDP is looking at the planning complexity, identifies needs based on the common market and network studies and delivers the list of projects that mitigates the expected European congestions. The PCI process is the process which selects from the TYNDP list the projects for which the promoters requests faster permitting and financing support.

Within the PCI process each promoter is the sole responsible for its own project submission . ENTSO-E does not want to pre-empt the promoters’ legal role and therefore ENTSO-E does not intend to say if a project respects the PCI criteria or not prior to the PCI exercise.

Regarding the comments on the EC draft guidelines, ENTSO-E would like to highlight the fact that this exercise is solely an EC responsibility.

ENTSO-E takes note of the FOSG suggestions in relation to the inclusion of all the TYNDP applicant projects. In fact based on the TYNDP Ethical Committee recommendation the TYNDP 2016 will assess all the projects which delivered the necessary technical data.

Related to FOSG suggestions on improving the communication with promoters ENTSO-E takes note of them when preparing the process for the next TYNDP.

Finnish Energy

Are the TYNDP 2016 project list elaboration principles clear to you?

Yes.

Is there an investment need that you are aware of that is not described in this list? In the Baltic Sea Region, the market situation requires that two projects are advanced from Long-term Projects to Mid-term Projects, and that additional projects are included for Norwegian borders:

- The projects Finland-Sweden "3rd AC Finland–Sweden north" (TYNDP 111) and Finland North-South "Keminmaa–Pyhänselkä" (TYNDP 96) should be built already by 2020 as these would alleviate the present severe congestion on the transmission route from northern Scandinavia through Finland to the Baltic states, Poland and southern Scandinavia. These projects would reduce the internal investments needs (TYNDP 126) in Sweden and enable better use of the Estonia–Latvia (TYNDP 62) and Lithuania–Poland (TYNDP 123) that will be commissioned in 2020, too.
- As new projects grid enforcements on Norwegian–Swedish borders and a link between Norway and eastern Denmark should be considered, reducing the present congestions on existing interconnections and internal Nordic lines.

Please also find the recent letter from Nordenergi addressing the issues of congestion within Nordic market, <http://nordenergi.org/wp-content/uploads/2012/05/Nordenergi-letter-on-Nordic-markets-internal-congestion.pdf>.

Do you deem the technical features of the projects, or one project in particular, are sound (technology, location, commissioning date, anticipated GTC, costs, etc...)?

Yes.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No answer.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

Yes.

Any other remark/s?

The Reference Capacities list should be checked. The SE–FI and FI–SE capacities should be increased already for the year 2020, as the project to increase these capacities should be advanced to be commissioned in 2020 (see the response to question 5).

Promoter response:

A third AC connection between Sweden and Finland is not possible to complete by 2020 due to permission processes. Svenska Kraftnät and Fingrid have initiated a joint study to assess the future need for interconnection capacity between the countries where both a 3rd AC connection and replacement and upgrades of HVDC cables are analysed. Results from this study is expected within a year.

All feasible new connections between Sweden and Norway were analysed. The only one removed was the SE1–NO4 border where a new overhead line (Ofoten–Ritsem) would need to be built in the world heritage national park “Laponia”. The Swedish regulator has already denounced such plans. For consistency reasons only one weather year was analysed however even if the whole ensemble of weather years is used new interconnections between Sweden and Norway still show very low benefits. The low benefits is due to that planned new interconnections between both

Sweden/Norway to the continent will to a large extent remove the price difference between the countries.

Please also find the recent letter from Nordenergi addressing the issues of congestion within Nordic market, <http://nordenergi.org/wp-content/uploads/2012/05/Nordenergi-letter-on-Nordic-markets-internal-congestion.pdf>.

URE

Are the TYNDP 2016 project list elaboration principles clear to you?

Not Answered

Is there an investment need that you are aware of that is not described in this list? Not Answered

Do you deem the technical features of the projects, or one project in particular, are sound (technology, location, commissioning date, anticipated GTC, costs, etc...)?

Not Answered

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No answer.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

No answer.

Any other remark/s?

Concerning project No. 170 - Baltic synchro with Continental Europe

Please note that the assumed GTC after synchronization is 0-600 MW, which in the absence of investment in the second line/interconnection, necessary for the synchronization, the achievement of 600 MW is impossible. Moreover, if the description: GTC 0-600 MW, means that the value 600 MW is assumed transmission capacity from Lithuania to CE, and in the opposite direction (CE to LT) GTC is assumed as 0 MW, such solution will not improve the security of supply for the Baltic states,. Also it is worth to mention, that expected commissioning year of the investment, which is 2025 does not correspond to the type of project - Future project. This type of project is attributed to these investments, for which a commissioning date is assumed later than 2030, which is also the horizon for evaluation of projects in the TYNDP 2016.

Promoter response:

- We do agree that for additional throughput capacity additional lines are needed. Accordingly, Lithuanian TSO is planning additional line to Poland to ensure Baltic States synchronization with Continental Europe. Baltic States synchronization with Continental Europe project absolutely necessary to ensure the security of supply of the Baltic States. Security of supply criteria monetization is under intense discussions today between European Commission, ACER and ENTSO-E and most probably will be included in ENTSO-E CBA 2.0 in the nearest future which might bring totally different socioeconomic results to the Baltic States synchronization with Continental Europe project. We should underline, that according to realistic project implementation plan provided by Gothia Power consultants, Baltic States synchronization with Continental Europe technically is feasible by 2025, if the right political and technical decisions are made soon. The year 2030 is pessimistic, but still is the ENTSO-E TYNDP 2016 planning time frame. Second connection of Lithuania with Continental Europe throughout third countries is not and never will be acceptable to Lithuania due to the same security of supply issues we are facing whilst synchronously operating with IPS/UPS
- To our knowledge, Svenska Kraftnet on behalf of the LITGRID sent a common message to ENTSO-E and the European Commission concerning removing of the Nordbalt phase 1 from

the TYNDP 2016 project list and moving of the remaining investments to the Nordbalt phase 2, because the Nordbalt link will be commissioned by the beginning of 2016.

Axpo

Are the TYNDP 2016 project list elaboration principles clear to you?

Yes. However, we have noticed the following lack of clarity:

According to the 1st draft of “Guidelines on equal treatment and transparency criteria to be applied by ENTSO-E when developing its TYNDP as set out in Annex III 2(5) of Regulation (EU) No 347/2013” a candidate project of a project promoter under category A.1 (ENTSO-E members) must satisfy at least one of the following conditions:

- i. The project has already received the PCI label.
- ii. The project has been assessed in the previous TYNDP;
- iii. The project is listed in the National Development Plan (validated by the corresponding NRA);
- iv. The project stems from ENTSO-E joint exploratory pan-European studies (e.g. Regional Investment Plans, eHighways, etc.);
- v. The corresponding NRA backs up explicitly the proposed project.

According to our understanding a project listed in the National Development Plan (criterion iii) that also satisfies the rest criteria of Annex III 2(5) of Regulation (EU) No 347/2013 should, thus, be included in the TYNDP 2016 as it is named and described in the National Development Plan.

However, the project “Bodensee-interconnector”, which is listed in the extended National Development Plan of Swissgrid (“Bericht zum Strategischen Netz 2025“, Art. 8.5.4, http://www.swissgrid.ch/dam/swissgrid/company/publications/de/sn2025_technischer_bericht_de.pdf#page=31), is not transparently included in the TYNDP 2016. It is supposed to be part of project No. 155 “Swiss Roof II”, which is also vaguely described. This ambiguity causes doubts about the inclusion of the project and the transparency of the process in general.

Is there an investment need that you are aware of that is not described in this list?

The project «Bodensee-interconnector», which has already been communicated to ENTSO-E and is listed in the extended National Development Plan of Swissgrid (“Bericht zum Strategischen Netz 2025“, Art. 8.5.4,

http://www.swissgrid.ch/dam/swissgrid/company/publications/de/sn2025_technischer_bericht_de.pdf#page=31), shall increase the GTC from Germany to the Alps (storage) and Italy (demand) per at least 1 GW. Therefore, the project «Bodensee-Interconnector» is of crucial importance for the integration of the increasing amount of renewable energy in North Germany and further for the completion of the internal energy market.

This project, which is vaguely described under the name “Swiss roof II” (Project No. 155), is defined as a future project. However, we consider its importance as crucial also before 2030.

Do you deem the technical features of the projects, or one project in particular, are sound (technology, location, commissioning date, anticipated GTC, costs, etc...)?

An adequate description of the project No. 155 named “Swiss roof II” is missing. In particular, information about the location and commissioning date of the project are not clear.

The project includes the “Bodensee-interconnector”, which is detailed described within the extended National Development Plan of Swissgrid (“Bericht zum Strategischen Netz 2025“, Art. 8.5.4, http://www.swissgrid.ch/dam/swissgrid/company/publications/de/sn2025_technischer_bericht_de.pdf#page=31). However the project “Bodensee-interconnector” is not mentioned in the TYNDP 2016, whereas it is supposed to be included in the project No. 155 “Swiss roof II”, which is only vaguely described. This ambiguity causes doubts about the non-discriminatory inclusion of the project and the transparency of the process in general.

Moreover, although the commissioning date of project No. 155 “Swiss roof II” is planned for 2022, the project is defined as future project. A specific description of the commissioning date needs to be included.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

A piece of information regarding the project No. 155 between Switzerland and Germany and Switzerland and Austria named “Swiss roof II” is missing.

The project includes the “Bodensee-interconnector”, which is detailed described within the extended National Development Plan of Swissgrid (“Bericht zum Strategischen Netz 2025“, Art. 8.5.4, http://www.swissgrid.ch/dam/swissgrid/company/publications/de/sn2025_technischer_bericht_de.pdf#page=31). However, the project “Bodensee-interconnector” is not mentioned in the TYNDP 2016, whereas it is supposed to be included in the project No. 155 “Swiss roof II”, which is only vaguely described. This ambiguity causes doubts about the non-discriminatory inclusion of the project and the transparency of the process in general.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

Yes.

Any other remark/s?

Concerning candidate projects that fall under category A.1 (promoted by ENTSO-E members) consistency with the National Development Plans should be ensured in order to avoid ambiguity of relevant stakeholders.

Promoter response:

1. The Swiss Strategic Grid 2025 comprises 9 projects as well as 4 legally obligatory projects. The project ‘Bodensee’ is not comprised in the aforementioned projects; it is only mentioned as one of the three European projects under consideration (“Lake Constance interconnector, EU3”).
2. In TYNDP 2014, before the establishment of the Swiss Strategic Grid 2025, the project “Bodensee” was part of the TYNDP 2014 Project ‘Swiss Roof’.
3. In TYNDP 2016, projects are classified into three categories (“mid-term”, “long term” and “future”). Therefore the TYNDP 2014 project ‘Swiss Roof’ was divided into 2 TYNDP 2016 projects:
 - Mid-term project ‘Swiss Roof I’ (comprises Beznau – Mettlen (Swiss Strategic Grid 2025, project 5), Pradella – La Punt (Swiss Strategic Grid 2025, project 3), Bassecourt – Mühleberg (Swiss Strategic Grid 2025, project 6), Mettlen – Ulrichen (Swiss Strategic Grid 2025, project 9).
 - Future project ‘Swiss Roof II’ (comprises the 380 kV lines Rüthi – Meiningen (AT), Rüthi – Bonaduz and Rüthi – Grynau)

Iberdrola

Are the TYNDP 2016 project list elaboration principles clear to you?

Yes, they are clear. We would like to highlight once again the importance of a very sound CBA assessment previous to the inclusion of projects in the final TYNDP project list.

Is there an investment need that you are aware of that is not described in this list? None

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

In the case of projects included under the “applications incomplete”, we assume that these projects are fully rejected since there is a column in the spreadsheet named “Comment on the non-acceptance of the project”. We understand that these projects will not make it to the assessment phase, later this year and they should apply again for the TYNDP 2018. We would appreciate feedback from ENSTO-E on this assumption.

ENTSO-E response:

Considering still the draft nature of the EC guidelines, the TYNDP ethical committee recommended ENTSO-E to assess in the frame of the TYNDP 2016 all the projects which delivered the necessary technical data but which by 10 September do not fulfill the legal criteria.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No, the information we have had access to seems to be correct

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

We consider that the rejection is sufficiently motivated

Any other remark/s?

We would like to take this opportunity to convey Iberdrola's view on the issues raised by some projects.

Regarding projects in the UK:

Cap and Floor Regime

There are a number of interconnector projects between the UK and continental Europe which are at a relatively advanced stage of development. These projects are on the current PCI list and have provisionally been approved by the regulator for a Cap and Floor support regime. Should all these projects be delivered, the UK will reach the 10% interconnection target. We therefore consider that it is important that an assessment is made about whether there is capacity for any further interconnectors to the UK, in addition to those on the current PCI list, before it is possible to quantify the benefits which may or may not arise from these additional interconnectors. In other words, any further interconnection to the UK should be assessed in the context that an additional 5GW of capacity is likely to have been secured by 2020.

ENTSO-E response:

The projects will be assessed according to the CBA methodology via the TOOT/PINT approach based on a reference capacity that includes all mid-term projects (for 2020) and long term projects (for 2030). This approach takes into account the fact that additional projects may only come on top of the most mature projects. ENTSO-E will publish the reference capacity on every border used in the assessment.

Security of Supply

The UK projects proposed for inclusion in the TYNDP are mainly interconnector projects. Given the geographical status of the UK, it is particularly important to consider any potential for security of supply implications as a result of a significant increase in reliance on interconnection capacity.

ENTSO-E response:

For the TYNDP 2016 ENTSO-E will conduct the projects' assessment in line with the CBA methodology approved by the EC in spring 2015. ENTSO-E recognizes that the current SOS indicator does not properly reflect all the benefits in terms of security of supply and is currently investigating how it could be complemented and further improved.

Level Playing Field

The TYNDP aims to ensure the appropriate development of pan-European electricity infrastructure. Increasing interconnector capacity is not the only route to achieve this. It is also important to ensure sufficient local generation capacity. As long as charges faced by generators in different Member States are not equal, this has the potential to distort investment in generation, leaving those countries with high interconnection capacity and high charges faced by local generation, at risk of being in a situation where there is insufficient local generation in times of crisis. This is just as significant as whether an appropriate transmission infrastructure is in place.

Stakeholder's own comment.

Other specific Comments:

Project:

- France-Alderney-Britain (153)

Comment: The general points made earlier in relations to other UK interconnector projects also apply here. However, for this project questions need to be asked about the potential for integrating further renewable energy via this link, and the certainty with which the expected tidal generation will a) develop and b) connect to the interconnector. It could be questioned if this project would still make sense in CBA terms in case no additional tidal generation is developed.

Promoter's response:

Actually the CBA of this project was conducted from the beginning (when launching the project) without taking into account any direct connection of tidal generation. In TYNDP also, the project was assessed as a classical interconnection, with no direct connection of generation. The cap&floor regime was granted by OFGEM in July 2015 also without taking into account any direct connection of generation.

Enabling to transmit tidal generation directly connected will be an additional benefit provided by the project.

- Norway - Germany, NordLink (37)

Comment: Although not directly connecting the UK, it is perhaps worth commenting that should this interconnector be built, and other Norwegian interconnectors, the ENTSO-E Regional Investment plan raises a question over whether there is sufficient internal infrastructure in Norway to service the increased interconnection capacity. This could have an impact on the proposed NSN and North Connect projects (between UK and Norway)

Promoter's response:

As already stated in the Regional Investment Plan, interconnectors out of Norway towards England and Germany are being built; NordLink (2020) and NSN (2021). The necessary internal Norwegian grid investments for these interconnectors are also being realized. Prior to any further

increase in capacity out of southern Norway (after 2021), there is a need for Norwegian investigations of internal grid challenges in the southern part of Norway, as well as Nordic investigations of system adequacy for the Nordic synchronous system.

- Long-term conceptual "West-East corridor" in North Sea
Comment: We would query whether both this and the "Countries around the North Sea" project should be included. Both have a long-term timeframe, similar objectives and project promoters.
- Interco Iceland-UK (214)
Comment: This would seem to be an ambitious, lengthy and costly project so it will be challenging to produce a CBA showing strong overall welfare benefits, when compared to the cost of developing such a link.

Comments regarding interconnection projects affecting Spain:

We certainly support that increasing the interconnection capacity between Spain and France up to "10% target" by 2020 is positive to achieve the integration, sustainability and security of supply targets. However, less costly alternatives should be always considered prior to other expensive developments. We always support projects that fulfil the cost effectiveness criteria and makes economic sense.

In the case of the interconnection with Portugal, the interconnection capacity currently in service is greater than minimum proposed and in only 4% of the hours there is a price difference between Spain and Portugal in recent years. Such an amount hardly justifies the level of investment that some of the projects require. We understand that there is no need for this kind of projects.

ENTSO-E response:

Regarding the projects with France, both Spanish and French TSOs are working together to define the most cost-efficient projects in the border that are able to come to reality. Both TSOs are sensitive to the higher cost of the proposals compared to conventional projects. However, the environmental restrictions (protected areas), natural restrictions (mountainous areas in the Pyrenees) and human restrictions (disperse population, areas with landscape interest, etc) makes unavoidable to consider underground or submarine solutions that lead to HVDC project proposals.

Regarding the Spanish –Portuguese border, indeed the level of congestion is low and therefore one may notice a reduced market split. Nevertheless, the new northern interconnection Galicia – Minho is important for the integration of the new renewable generation being connected and foreseen in Galicia and Minho regions and, most important, to assure that the interconnection levels will not decrease due to the implementation of the previously foreseen and now ongoing important changes on the Portuguese network at Minho area, which would reduce the interconnection capacity unless the new interconnection is built, besides other network infrastructures foreseen in Portugal . Finally, it is worth to mention the additional benefit that the new northern interconnection will provide a reduction of losses in the overall Iberian system. Moreover, the TYNDP analyzes the midterm and long term future, with different hypothesis of demand and generation than today in each country. The results of the studies shows clear needs and benefits for higher capacity in the future to avoid further potential congestions that according to TYNDP 2014 Vision 4 could reach 23% in 2030. The intention of the Spanish and Portuguese TSO is to maintain a proper network to have a well functioning market and secure overall electric system.

Costs and benefits of all the proposed projects will be assessed in the TYNDP2016 that will be published next year.

Regarding storage projects

We understand that according to European regulation (Target Model) in order to fulfil the liberalization and internal market principles, this kind of asset should only be developed by deregulated companies because storage is a market activity. Therefore, we do not support storage projects promoted by TSOs.

ENTSO-E response:

Based on the Regulation (EU) 2013/347 (art. 4), electricity transmission and storage projects are to contribute significantly to at least one of the following specific criteria:

- (i) market integration, inter alia through lifting the isolation of at least one Member State and reducing energy infrastructure bottlenecks; competition and system flexibility;
- (ii) sustainability, inter alia through the integration of renewable energy into the grid and the transmission of renewable generation to major consumption centres and storage sites;
- (iii) security of supply, inter alia through interoperability, appropriate connections and secure and reliable system operation.

ENTSO-E cannot discriminate in the TYNDP any transmission and storage project fulfilling the EU Regulation requirements.

National Grid Interconnector Holdings Limited

Are the TYNDP 2016 project list elaboration principles clear to you?

We welcome the use of the TYNDP process to communicate investment signals – i.e. where the outcome of common planning studies points to a positive need case for additional transmission capability beyond the sum of all project candidates previously put forward by proponents. We believe it is important that proponents are given an appropriate opportunity to respond (within the timeframe of the production of the TYNDP 2016) to the signals of need arising from the common planning studies.

We are concerned that there is a procedural/sequencing issue between the ENTSO-E TYNDP business of identifying future transfer capacities which have a sensible need case (published in draft RGIP 24th June 2015) and the desire to provide a level playing field for proponents (including third party developers) to propose candidate projects for inclusion in TYNDP (window for submitting candidates closed 30th April 2015). In order to continue to respect the level playing field commitment we suggest that all credible new project ideas to address the higher than previously signalled need case should be admitted (i.e. both non-ENTSO-E and ENTSO-E member projects). It should be recalled that inclusion in TYNDP is the sole pathway to PCI status and its attendant benefits including eligibility for CEF funding assistance – and, some of these processes being biennial, the journey of a new investment idea through this process can itself take four years. This means it is particularly important that TYNDP 2016 includes the broadest range of credible projects to address pan-European needs.

An alternative approach to maintain the level playing field (but not favoured by us because it impedes the pathway to PCI and CEF and therefore potentially delays worthwhile projects) could be to exclude from TYNDP 2016 the “new” project candidates arising from the common planning studies and instead simply refer to the perceived need for capacity on transmission boundaries / borders (for which specific projects & proponents have yet to come forward). However, we would reiterate that it is essential that all parties have equal opportunity to propose new investment solutions.

A related issue around this process concerns lack of clarity around the precise role that ENTSO-E is attempting to perform. We suggest that ENTSO-E’s role should not be to engineer projects to fit the precise reference capacities that are deemed to be required. Instead ENTSO-E should say what transfer capacities are required to satisfy pan-European needs (i.e. the results of the common planning studies) and proponents should propose what actual projects they are developing to satisfy such need. It is perfectly legitimate, and indeed desirable from a competition point of view, that the number of candidate projects for a given boundary far exceeds the need on a given boundary. It would be expected that not all projects will be realised and hopefully the best projects will be the ones that come through. We suggest this aspect of process is considered further in the context of continual improvement for the TYNDP 2018.

Is there an investment need that you are aware of that is not described in this list?

Yes. We propose that an additional project candidate is included of up to 2000MW across the Great Britain – Germany border (see attached details). This specific boundary does not appear to have been considered by ENTSO-E (no results mentioned in body or appendices). We are currently undertaking our own studies of the need case for this boundary and our initial view is that in various credible future scenarios GB-DE interconnection could be equally or more effective in CBA terms compared to alternative combinations of increases to GB-FR, GB-BE and GB-NL and/or the conceptual projects which ENTSO-E has identified.

Boundary: Great Britain - Germany

Project Name: Interconnector Great Britain - Germany

Description: HVDC sub-sea interconnector between South East coast of Great Britain and Germany

Provisional GTC [MW]: up to 2000

TYNDP2014 reference (if applicable) or motivation for new project candidate: RES connection,

Market integration

Detailed studies: Common Planning Studies & proponent studies

Expected Commissioning Year: 2030
Classification: Future Project
Project promoter(s): National Grid Interconnector Holdings Limited

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

No Comment

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

In respect of the following projects: (name & TYNDP2014 reference number)

- IFA2 25,
- NSN 110,
- NEMO 74,
- Viking 167,
- Interco Iceland - UK 214,

the name of the National Grid Proponent should read "National Grid Interconnector Holdings Limited" not "NGT". Please correct this accordingly.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

There is an apparent inequality of treatment for (a) project candidates which have come through the prescriptive EC guidelines criteria / April 2015 application window, and (b) project candidates arising from the outcome of common planning studies. We believe new project ideas to address signals of need arising from the common planning studies should be admitted within the timeframe of the TYNDP2016 process.

See out further comments in response to question 4 above.

Any other remark/s?

None

ENTSO-E response:

With regards to the comments on the process and on the investments needs, we noted the same comments were made in the consultation on the Regional Investment Plans. We invite you to read the answers that ENTSO-E provided to the consultation on the Regional Investment Plans.

We are correcting the name of the promoter for projects 25,110, 74, 167 and 214 according to NGIHL request in the TYNDP2016 project list.

Shetland Islands Council

Are the TYNDP 2016 project list elaboration principles clear to you?

Not Answered

Is there an investment need that you are aware of that is not described in this list? No

Comment

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

We agree that project Maali from Shetland to Norway is a sound proposal subject to more details emerging. A connection from Shetland to Norway, in addition to the proposed new connection from Shetland to Northern Scotland, would be beneficial to Shetland, Scotland, UK, Norway and Europe in integrating more renewables and reducing transmission bottlenecks. The project could improving resilience in the pan European Network and provide opportunity for market coupling between countries with hydro and wind generated renewables.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No comments

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

No Comments

Any other remark/s?

No Comments

ENTSO-E response:

Support to the project . No further answer.

Hydrocosmos, international consulting company

Are the TYNDP 2016 project list elaboration principles clear to you?

Not Answered

Is there an investment need that you are aware of that is not described in this list? Not

Answered

Do you deem the technical features of the projects, or one project in particular, are sound? (technology, location, commissioning date, anticipated GTC, costs, etc...)

Not Answered.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

Not Answered.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

I'm the manager director of Hidrocosmos, an international environmental consulting company. My professional experience covers over 15 years based on my expertise in hydrology and ecology of aquatic systems, knowledge areas in which I have extensive technical and scientific references. I have worked for international organizations and governments of different countries in the field of water planning and conservation of ecosystems as Spain, Bosnia & Herzegovina, Mexico, Morocco, Ecuador, El Salvador, Portugal, etc. I have advised the European Commission and the Spanish Government in the review of technical documents related to the implementation of the European Water Framework Directive on the particular issue of water and environment. I contact to you regarding one of the project included in the TYNDP2016 list named "Reversible pumped-storage hydro-electric exploitation "MONT-NEGRE" power 3300 MW Zaragoza, Spain". After a deep environmental and technical analysis we have found critical issues related with the feasibility of the project that you can find in the attached reports. I hope this could be useful for you.

Any other remark/s?

Not Answered

Promoter response:

We acknowledge the reception of your communication in which it is outlined the comments regarding the environmental impact our hydraulic plant would supposedly generate. The sender of the referred communication identifies himself as a representative of HIDRO-COSMOS, SERVICIOS DE CONSULTORIA TECNICA Y AMBIENTAL SOCIEDAD LIMITADA, without mentioning his name nor his relationship with the Company.

We were surprised by the fact that the Company was incorporated in July 13th 2015 (please see Commercial Register extract attached). It is impossible to have drawn the conclusions they seem to be pleading in such a short period of time.

It resembles the incorporation of a legal entity to send allegations while not revealing who is really behind them. Such need to hide disqualifies the allegations, as under no circumstances would they have the minimum needed objectivity to perform an analysis with the required rigor.

The signatory of the comments of which we have received communication who signs as managing director, does not have any position nor power of attorney in the Company, of which D. Rafael Sanchez Navarro is its sole administrator.

In any case, given that up to date we have only received some vague commentaries without any foundations, we remain at your disposal to enlarge this communication in the event that more information is supplied.

We also wanted to reiterate what you already know from the documents provided by Ingeniería Pontificia, S.L. regarding the project "Reversible Pumped-Storage Hydroelectric Exploitation Mont-Negre power 3,300 MW Zaragoza, Spain, which has all the required authorizations, full or in procedure, demanded by the Spanish State.

According to the Project environmental and technical information, it is included in the Environmental Impact Assessment which is in procedure. The mentioned Environmental Impact Assessment was attached on the 29th of April of 2015 to the submission delivered to ENTSO-E through the TYNDP application form.

Red Eléctrica de España

Are the TYNDP 2016 project list elaboration principles clear to you?

Not Answered

Is there an investment need that you are aware of that is not described in this list? Not Answered

Do you deem the technical features of the projects, or one project in particular, are sound (technology, location, commissioning date, anticipated GTC, costs, etc...)?

In Spain, the only transmission projects that can obtain permit to be constructed are those included in one of the Transmission Development Plans approved by the Government. In this moment, the process to approve the Transmission Plan 2015-2020 is in the very last step. It seems very difficult to us that any transmission project not included in this Plan could be commissioned in the period 2015-2020. BRITIB project as well as the connection facilities necessary to connect storage projects ASSS and ANSS are not in the draft of Transmission Plan 2015-2020 that is being handled by the Government. For this reason we consider it very difficult that these projects can be commissioned before 2021.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

No answer.

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

No answer.

Any other remark/s?

No answer.

Promoter responses:

ABENGOA:

Abengoa estimates that ASSS and ANSS are projects of great importance to improve the current performance of renewable generation systems installed in Spain. We also consider that the two proposed locations, Tarifa (Cádiz) and Mesón do Vento (Coruña), as well as the power allocated to each project (225 MW), are one of the best alternatives to improve the performance of the Spanish power transmission grid, because the large presence of renewable power generation in the area, and also because they would require few modifications to adapt the power transmission grid for the implementation of the projects.

On the other hand, if it was considered other location much more convenient than the proposed ones, batteries storage systems (BESS) proposed by Abengoa provide enough versatility to change easily the location, adapting the system to the needs of the network with ease.

Finally, in the case that Abengoa could not introduce both projects in the Spanish Power Transmission Grid Development Plan 2015-2020, the commissioning date could be changed to 2021.

ACS Cobra

With regard to the comment received, we would like to remark that it only refers to the commissioning date of the project which is placed in contrast with the draft Spanish Transmission Development Plan 2015-2020, and under no circumstances is challenging the maturity of the

project (other comments provided during the consultation referred to projects that met the EC criteria before the consultation are not expected to challenge them either). We would like to point out the following considerations:

- Regarding the Spanish Transmission Development Plan:
 - It has not been approved any Transmission Development Plan 2015-2020 in Spain. The first proposal for that period was made public in November 2014 and since then, no updates were made public this year. To be noted that general elections in Spain are scheduled for 20th December this year.
 - Previous draft of the Transmission Development Plan 2012-2020 of August 2011 considered a subsea electricity interconnector between Spain (Basque Country) and United Kingdom (Indian Queens). The approval process of the Plan started in 2010 but it was suspended in 2012.
 - The last approved Transmission Development Plan considers the period 2008-2016.
- There are neither legal nor technical criteria referred to the commissioning date of a project in the draft EC Guidelines and therefore it does not imply any infringement of the legal criteria requested by the EC Guidelines.
- No comments were received from ENTSO-E during the bilateral communications regarding the commissioning date of the project.

However, given the last facts, the comment received and the arguments provided above, we would like to understand if in ENTSO-E's opinion the commissioning date of the project should be modified. In case ENTSO-E recommends it, Cobra anticipates its readiness to establish 2021 as new commissioning date for the project.

Finally, there are no reasons to believe that Britib project is being challenged through the consultation. Given the fulfilment of all legal and technical criteria established in the EC Guidelines, Cobra asks for its inclusion in TYNDP 2016 under no limitations (i.e. best effort basis, no interaction with other projects assessment -biased- as per PINT and 2030 reference network) and therefore to be assessed in the same conditions as the rest of the projects that also meet all the criteria requested by the EC Guidelines in the process.

ENTSO-E clarification to ACS Cobra:

- Commissioning date as other technical data of the project are under the promoter's responsibility. The fact that ENTSO-E made comments or not during the bilateral communications following project application for inclusion in TYNDP does not mean any endorsement or confirmation from ENTSO-E side. According to the Ethical Committee recommendation to assess all the projects that provided the technical documentation, even if they do not fulfill the criteria as per EC Draft Guidelines, BRITIB will be assessed in TYNDP2016.
- The comment involves considerations of the maturity of the project, as it refers to a commissioning date that is not achievable. However the main answer would be that the Spanish Transmission Development Plan 2015-2020 has been approved last 16th of October, and during the whole process (which started in 2012) there was no input regarding this project (3 months in 2012 open to stakeholders to provide inputs) or reaction to the public consultation. The previous draft in 2011, that mentioned investigations of connections between Spain and UK in the long term electricity highways framework, did not make any reference to the BRITIB project.

Enel S.p.A.

Are the TYNDP 2016 project list elaboration principles clear to you?

Yes, the elaboration principles are clear.

Is there an investment need that you are aware of that is not described in this list? No, the description is accurate.

Do you deem the technical features of the projects, or one project in particular, are sound (technology, location, commissioning date, anticipated GTC, costs, etc...)?

Yes, we deem the technical features sound.

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

For the candidate project interconnection cable between Italy and Tunisia the Expected Commissioning Year should be 2020 (and not 2030).

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

No

Any other remark/s?

No

Promoter answer:

We assume the comment is referred to project 29. The status and the commissioning date of the project has been updated to be fully consistent with the joint statement on 30 April 2015 of the Italian and Tunisian Governments to give the highest priority to this project in order to realize it in the short/mid-term time horizon.

RTE

Are the TYNDP 2016 project list elaboration principles clear to you?

No answer.

Is there an investment need that you are aware of that is not described in this list? no
Do you deem the technical features of the projects, or one project in particular, are sound?
(technology, location, commissioning date, anticipated GTC, costs, etc...)

Not Answered

Is there a piece of information about the projects, or one project in particular, that needs to be corrected? In case of specific project/s please mention the name/ number from the TYNDP 2014 if the case.

Elia and RTE would like to split project "FR-BE phase 2" (project 173 of TYNDP2014) in two separate projects: on the one hand the power flows control on Moulaine-Aubange double-circuit 225-kV axis (e.g. by phase-shifters) and on the other hand the upgrade of Lonny-Achene-Gramme 380-kV line (via reconductoring with HTLS conductors and/or PST), hereby not excluding alternative/complementary solutions (new HVDC corridors, upgrade 225-kV to 380-kV corridor,...) as per the framework of the long term concepts of an off-shore grid & west-east corridor.

Compared to the project list submitted to consultation, we are not adding new investments but only clustering them in a different way. The reason is that congestion on both axes may have different drivers and appear at different time horizons, therefore corresponding investments may be commissioned more than 5-years apart (subject to feasibility studies and cost-benefit analyses).

Is the motivation to reject the projects that did not comply with the EC's guidelines criteria sufficient?

No answer.

Any other remark/s?

No answer.

ENTSO-E response:

Change reflected in the final TYNDP project list.