ENTSO-E Stakeholder Workshop

"Second 2030 Vision Workshop on Visions for the Ten Year Network Development Plan 2014"

Date: 22 November 2012
Time: 10:30h – 15:00
Place: ENTSO-E premises, Brussels

WORKSHOP MINUTES

In the preparation of the Ten Year Network Development Plan 2014 and the System Outlook and Adequacy Forecast 2013, ENTSO-E has invited all the interested stakeholders to participate to the 2nd 2030 visions workshop which was held in Brussels, 22 November 2012, at ENTSO-E premises.

The workshop aim was to present and exchange ideas with the stakeholders on preliminary European results of the visions one and three for 2030, the parameters used in checking the data consistency at the European level and the methodology to derive the visions two and four for 2030.

0. Workshop's agenda

10:00	**Registration/Welcome coffee**	
10:30	**Welcome**	**Dimitrios Chaniotis** System Development Manager
10:40	**Overview of the Ten Year Network Development Plan 2014**	**Felix Maire** System Planning Adviser
11:10	**2030 Visions explained + first insights in vision 1 & 3** **Discussion**	**Viviane Illegems** Convenor of CT 2 - visions 2030 **All participants**
12:10	**Lunch**	
13:10	**High level methodology for establishing vision 2 & 4**	**Viviane Illegems** Convenor of CT 2 - visions 2030
14:00	**Interactive session:** **Brainstorming with stakeholders on 2030 - High level methodology for establishing vision 2 & 4**	**All participants**
14:40	**Conclusions from the discussions and the next steps**	**Dimitrios Chaniotis** System Development Manager
15:00	**End of Workshop**	

1. Overview of the Ten Year Network Development Plan 2014

Felix Maire (ENTSO-E) has presented the overview of the TYNDP 2014 process underlying the improvements compared to 2012 version. This changes are mainly in the relation to the involvement of relevant stakeholders in the process (more workshops and consultations in the early stage), improved the 3rd party procedure for inclusion of non-ENTSO-E member projects in the TYNDP, the implementation of an improved CBA methodology and the scenarios that tackle the 2030 visions.
The presentation can be accessed on the ENTSO-E website.[1]

Discussion: no questions were asked related to this presentation.

2. 2030 Visions explained + first insights in vision 1 & 3

Viviane Illegems (ENTSO-E) gave an overview on the 4 visions for 2030, presented the steps taken until now on constructing the visions 1 &3 along with the way stakeholders suggestions given in the 1st workshop on 2030 visions[2] were used and presented some of the preliminary results of the visions 1 and 3.
The presentation can be accessed on the ENTSO-E website.[3]

Discussion:

FOSG: Why does ENTSO-E looks at vision 1nd 3(bottom-up visions) since they do not have a generation optimization? For the FOSG is more interested in the 2&4. In the vision 1&3 is no generation optimization. ENTSO-E should concentrate on the visions 2 and 4.
ENTSO-E: Since the future is uncertain and there is no guarantee that optimization at European level will occur, TSOs have to assess all plausible situations that may appear, e.g. the currently discussed capacity markets is an example which currently is more likely to be implemented at national level. The grid that a TSO wants to develop for the future should not only be adequate when 2050 targets are realized but also when there is a delay in the realization of these targets.

Swissgrid: How do you consider the 2030 visions in the 2050 view (EC 2050 roadmap)?
ENTSO-E: 2050 may be reached through different paths. Relevant for the TSOs is to build a future grid that stands extreme conditions (therefore the 4 corner scenarios). ENTSO-E must be pragmatic and weight what can be achieved within the time horizon of the TYDNP (biennially report) and the available resources. Compared to the TYNDP 2012 ENTSO-E has doubled the number of scenarios and improved the methodology for constructing these scenarios.

[1] https://www.entsoe.eu/events/2nd-entso-e-2030-vision-workshop-on-visions-for-the-ten-year-network-development-plan-2014/
[2] The compilation of the received answers and the material of the 1st 2030 visions workshop, 17 April 2012 can be accessed at: https://www.entsoe.eu/events/2030-visions/
[3] Idem 1

CAN Europe: Presently the European market is not fully integrated and the optimization of RES generation is not reached.
ENTSO-E: In our visions there is always a certain degree of European integration. However in vision 1 it is business as today and the full European integrated market is not reached. In vision 4 ENTSO-E looks at the impact of fully integrates European market.
Today an optimization of RES location is not foreseen when going from the national to the European visions due to the lack of needed parameters and tools.

ECG: Is the impact of DSM and electrical vehicles considered in the scenarios?
ENTSO-E: DSM is not modelled in an endogenous way in the market models we are currently using. Therefore ENTSO-E is adapting the load profiles used in different visions in order to reflect the impact of DSM, heat pumps and electric vehicles on the load pattern. Energy efficiency is introduced in the assessment of the energy growth rate. The given guidelines to national correspondents are to use national studies that assess the national energy efficiency potential. However if this type of studies is not available or known then the national correspondent may use a proposed default value.

Bird life: The changes in climate have an impact on the generation and load. Do you consider these correlations in your model?
ENTSO-E: The correlation between load and temperature is not relevant for all European countries therefore ENTSO-E is considering these sensitivities within the affected regional groups' studies. Additionally the pan European studies do not replace the regional ones. The purpose of the pan –European market studies is to give the boundary conditions of the 3rd level countries.

Smart Energy for Europe Platform: How does ENTSO-E treat the demand response and what type of back – up capacity is considered in the model? Is it at the regional or the EU level?
ENTSO-E: The data on demand response (potential impact (MW), duration (hours), etc.) and the market model able to incorporate these data in an endogenous way are not currently available. For modelling the demand response ENTSO-E is using, as mentioned before, a pre-processing of the load pattern through the introduction of a peak shaving that is established based on default values or national specific studies.
For the back-up capacity in vision 4 ENTSO-E considers additional centralised pump storage (potential extra available storage which is not nationally needed), decentralised storage (if this type of back-up capacity introduced in vision 3 cannot be fully compensated by centralized additional storage). Decentralized storage is according to the consulted sources the most expensive sort of back-up. Additional interconnection capacity and gas generation is also considered.

3. High level methodology for establishing vision 2 & 4

Viviane Illegems (ENTSO-E) has presented the proposed methodology regarding how ENTSO-E will derive the two European top down visions (2 "Money rules" & 4 "Green Revolution") from the national bottom-up visions (1 "Slow Progress" & 3 "Green transition"). This methodology has not yet been implemented and therefore there are still some open issues. In this sense ENTSO-E has prepared a set of questions based on which the present stakeholders gave their input. The context for each question was given. Additionally ENTSO-E explained how and for what it will use the received inputs.
Note: this part of the workshop was based on the questionnaire that all the stakeholders received one week before the workshop.

Since the questionnaire was hard to be fully answered during the workshop, ENTSO- E will organize an open call for input on its website.

Discussion:

CAN Europe: What is the definition of congestion?
ENTSO-E: Congestion represents a situation in which the available transmission capacity is not enough to obtain the same short term marginal costs between two neighbouring areas and an increasing of the GTC at the border could alleviate the situation. .

Q3G: Do you have an image of the fulfilment of Barcelona indicator[4] fulfilment in Europe.
ENTSO-E: An overview of the Barcelona indicators can be found in the TYNDP 2012 at the end[5].
For some European countries this indicator is fulfilled, for others like Spain it is an issue. In the construction of the 2030 visions this indicator could be considered by adding the maximum additional BTC capacity allowed for a country.

EPPIA: How is ENTSO-E using the data received through the present questionnaire and the one from the previous consultation?
ENTSO-E: The data from the previous consultation was used to set the ranges of all the parameters considered in all four 2030 visions. The information is available on the ENTSO-E website.[6]
The present questionnaire is much more open and will be used to adapt the methodology for constructing the European top-down visions (if feasible within this TYDNP time frame, if not considered for the future implementations) and improve the consistencies checks for the top down scenarios.
Additionally this information and the acquired experience during the process of this TYNDP (including identifying the best way to interact with the stakeholders) will be used to increase the quality of the future studies.

Bundesnetzagentur: Going from vision 3 to vision 4 ENTSO-E changes from decentralized to centralised storage. Why? Do you have any projects in mind?
ENTSO-E: The stakeholders think[7] that in the visions reflecting a delay in the realisation of the roadmap 2050 the centralised generation would not change. Is hard to guess today how the decentralised storage will be in 2030, including the costs of such type of devises (which it is assumed to be higher than for the centralised storage).
In the vision 3, ENTSO-E is assessing the impact of RES capacity (on track with the 2050 targets) from the national perspective. Therefore 4 %(default value) of decentralized storage is considered.
In vision 4 it is assumed that RES generation could be integrated at a lower cost due to fully integrated European energy market in which the development of additional centralized storage, needed from a national perspective, is likely to be developed.

CAN Europe: How much RES is considered for the vision 4 not overlooking the still existing nuclear and CCS implementation?
ENTSO-E: The level of RES in vision 3 and 4 is identical. The nuclear instead will defer: less nuclear in vision 4 as in vision 3 (if nuclear is part of the 2030 national visions).

[4] The BTC of a country to be equal or higher than 10% of its installed capacity
[5] https://www.entsoe.eu/fileadmin/user_upload/_library/SDC/TYNDP/2012/TYNDP_2012_report.pdf , page 2014
[6] https://www.entsoe.eu/fileadmin/user_upload/_library/events/Workshops/2030_Visions/120417-Workshop_2030_Visions-PRESENTATIONS.zip
[7] See the answers give in the first 2030 workshop

CAN Europe: Why ENTSO-E had initial assumptions on some technologies (e.g. CCS) and not for all?
ENTSO-E: CCS is assumed to be very expensive and not likely to be implemented in the horizon 2030 without high financial EU support; therefore CCS is more likely to be implemented in European vision that reflects good economic conditions.

E3G: Since the data is given by national correspondents they may have consider only the national targets.
ENTSO-E: This is true; some of our members have understood the questionnaire like that. At the present stage ENTSO-E cannot correct fully the error but we are aware of that. The original objective was to get the technical potential. Presently in the data we have a mixture of the two approaches. Next time we will be more attentive when explaining the objective of the data collection to national correspondents.

FOSG: CCS for vision 4 is fine. ENTSO-E should consider at least for the visions 4 a different approach – namely the introduction of optimization of the RES at EU level at least a certain percentage of RES for the base load.
ENTSO-E: Some of our members requested also to introduce this. But the idea arrived too late in the process to be implemented in a correct and accurate way in the remaining time frame. ENTSO-E needs to assess the information needed in order to do the optimization and then collect this information. At the moment wind mills, solar and biomass plants are modelled with a zero short term marginal cost in the current market models. Additionally ENTSO-E does not have the construction costs for the different type of RES in different geographical locations. ENTSO-E needs to assess the minimum level of information and tool needed to guarantee a minimum level of quality regarding a RES optimization.

Orgalim: Which criteria you propose in order to incorporate the smart grid, efficiency reduction and the demand side management?
ENTSO-E: The demand side management is modelled through the pre-processing of the load curve and introducing a peak load shave in various degrees in the different visions. Energy efficiency potential is considered in all visions. Smart grid characteristics are only marginal considered in the way we construct the load curve. Possible interaction between load and generation output are not considered due to a lack of information but also due the inability of current available market models to introduce this feature.

Greenpeace: In order to assess the way different policies are affecting the generation optimization we suggest performing different sensitive analysis: for the green revolution scenarios: 10% DSM or storage, ±10 efficiency, more or less flexibility. Additionally, how does ENTSO-E is doing the optimization? What parameters are optimized, what parameters are optional? How is the process inside ENTSO-E?
ENTSO-E: The mentioned sensitivity analysis is not considered for the moment in the TYNDP process. This is mainly due to the lack of time. This analysis could be done at regional level if judged relevant and time constraints allow it. Although it is most likely that even at regional level these sensitivity studies will be limited to the market studies. ENTSO-E will take this idea at the regional group level and check its feasibility.
For the next TYNDP 2014 the optimization will focus especially on the optimization of the thermal capacity. The appropriated reduction of back-up thermal capacity will be assessed based on a number of market and generation adequacy indicators (running hour, congestions, different prices, impact of additional interconnection cap).
Related to process, the experts team will create the top down visions but the results will be consulted with the national correspondent. They need to judge the obtained national generation and load forecast as feasible for their country.

FOSG: The generation optimization (especially RES) at the European level is very important therefore ENTSO-E should consider this approach at least for the vision 4.
ENTSO-E: Since ENTSO-E did not collected specific parameters to do such an optimization or disposes of an adequate tool, it was judged as a necessary development for the future but risky for the moment since the

obtained result could be easily questioned. Therefore today it is foreseen that the main optimization will be on the thermal capacity.

Statkraft: Considering the example form solar deployment, couldn't Europe have the same trend for the decentralised storage units?
ENTSO-E: Today the decentralised storage is more expressive than centralised one. ENTSO-E may reconsider it next time but for the moment ENTSO-E assumption are backed up by the public documents.

EPPIA: For the visions 2 and 4 will ENTSO-E check the results against the EC'S 2050 roadmap visions?
ENTSO-E: It was not in the plan, but ENTSO-E may perform the check although it is only relevant for vision 4 since in vision 2 there is a delay in the realization of roadmap 2050.

E3G: Are the national figure used in the scenarios available to the public?
ENTSO-E: At the end of the process they will be made available.

Alcatel Licental: How is the regulatory regime reflected in the model, e.g. capacity markets?
ENTSO-E: These regulatory regimes distort the market if different types are introduced in the different countries. The present market models do not include information on the type of regulatory regime that is applicable in a particular country such as capacity markets in an explicit way. The impact of the local regulatory regime could be introduced in an implicit way through the introduction of a must run constraint for certain units by the national correspondent. However in the setting of the visions current differences in regulatory regimes are introduced through the assumption that in national vision a suboptimal thermal generation park is built while in European visions a least cost optimal thermal generation park is put into place.

4. Conclusions from the discussions and the next steps

Dimitrios Chaniotis thanked all the participants for their presence and the useful suggestions.
ENTSO-E will consider all given comments and either will incorporate it in the present studies or will try to improve them for the next TYDNP.

ENTSO-E kindly asks all the participants to answer the sent questionnaire.
An email will be sent to all the participants will the presented material and the deadline until they can send their comments to ENTSO-E Secretariat (irina.minciuna@entsoe.eu).
In order to reach a wider range of stakeholders ENTSOE- will also launch an open call for input on the ENTSOE- website in the following days.

In order to present the outcomes of the 2030 visions ENTSO-E intends to organize on spring 2013 an open information session. All the information on this event will be published on time on the ENTSO-E website.

All the presentations of the workshop along with the relevant material can be accessed on the ENTSO-E website at: https://www.entsoe.eu/events/2nd-entso-e-2030-vision-workshop-on-visions-for-the-ten-year-network-development-plan-2014/.