



Web consultation – 2050 Scenarios: summary of the received feedbacks

Feedback was received from the following experts:

- Michel Noussan - FEEM
- Mark Norton - SmartWires
- Jan Segerstam - Empower
- Tim Schittekatte - Florence School of Regulation
- Evangelos Vrettos – Swissgrid

Question 1 - How to project FlexPlan 2050 scenarios based on 2030 and 2040 TYNDP2020 scenarios data?

Summary of received feedbacks: Experts indicated that a mixed approach should be followed to create 2050 scenarios. These should be based on a projection (e.g. pro-rata extrapolation from 2030 and 2040 data), but validated using additional data sources. From these additional data sources, Experts indicated two possible solutions: validation using national level data (e.g. carbon free plans that some countries already issued) or validation using pan-European or worldwide level data (e.g. reports/vision from the European Commission, IEA, IRENA or BNEF). These validations should always ensure carbon neutrality as this is also the goal of TYNDP2020 scenarios.

Critical analysis: After an analysis of the experts answers and advises, the team decided to implement a methodology to create 2050 scenarios based on two steps:

- 1 – Perform an extrapolation from TYNDP2020 data for 2030 and 2040, for each scenario.
- 2 – Adapt and validate obtained 2050 scenarios using a single pan-European data source. For this purpose, it was decided to use “A Clean Planet for All” long term strategy from the European Commission as it provides an official vision from the Commission and is already used as a base for the creation of the TYNDP2020 scenarios. The team decided not to use national level data as this would result in a heterogeneous set of information for the different regional cases, as different countries have different strategies and different levels of data availability.



Question 2 - How to ensure that the created scenarios for 2050 are on track with regard to climate targets already considered by ENTSOs in the creation of the TYNDP2020 scenarios?

Summary of received feedbacks: Experts indicated that the created scenarios should be validated using a comparison of main indicators (e.g energy mix) for different climate targets. National level data (e.g. NECP) can also be used to perform this validation. Experts indicated also that this validation can be performed using market simulations for 2050. It is important to mention that different experts indirectly provided the answer to this question in the answer to question one, as these two are related.

Critical analysis: The validation strategy used is as described in question 1: using a well-known and accepted pan-European data source to validate the extrapolation of 2030 and 2040 data, validating installed capacity of thermal / renewable energy.

Question 3 - For the created scenarios, what kind of other operational uncertainties (e.g. weather, hydrology) should be considered in the planning phase?

Summary of received feedbacks: Collected experts feedback indicated that weather years should be considered as these represent important variations. Due to the increase of intermittent generation, several weather years should be considered. Weather should be considered not only in generation but also on the potential demand, at least using a sensitivity analysis. Additionally, experts indicated that other uncertainties such as population movements (for EVs and DR) should be considered as these influence flexibility solutions.

Critical analysis: FlexPlan will consider weather years effects in Monte Carlo simulations for the different scenarios. Other uncertainties (e.g. EVs and DR) are also considered as part of flexibility solutions.