

Ljubljana, 11 January 2023

NOTE ON EVALUATION OF THE EUROPEAN SCIENTIFIC ADVISORY BOARD ON CLIMATE CHANGE’S INPUT TO THE TYNDP SCENARIOS GUIDELINES

On 14 November 2022, the European Scientific Advisory Board on Climate Change (hereafter ESABCC) provided ACER with their input to the document on Framework Guidelines on Scenarios for Network Development Planning. On 22 and 23 November, ACER had calls to ESABCC to discuss the provided input.

The following table summarises the main recommendations from the ESABCC and explains how ACER has reflected them in the final TYNDP Scenarios Guidelines document. The table also include the underlying reasons in case of rejection.

ESABCC recommendation	Accommodated?
1. Scenarios should be adjusted as necessary to remain compatible with EU’s climate and energy targets, and be modelled until at least 2050	1.1 Scenarios must be regularly updated to comply with new or revised EU climate and energy targets, achieving target levels within the specified time frame. Yes , included in paragraph (23) and related footnote 15, which envisage now that scenarios should comply also with any adopted updates of the Union’s concerned policies (given also the identified cut-off date).
	1.2 To credibly demonstrate climate target compliance, scenarios must be modelled until at least 2050. Yes , included in paragraphs (25) and (33). Scenarios to provide sufficient information about greenhouse gas emissions from the energy sector and carbon budgets and also to include a very long-term perspective until 2050 (as per the TEN-E Regulation’s Article 12(2)).
	1.3 Scenarios should reflect all relevant policy objectives adopted at EU level, including non-binding ones, up to a cut-off date agreed upon with the European Commission Yes , included in paragraphs (19), (23), and (47). Specific references to a cut-off date included in the SFGs.
	1.4 Where relevant, policy assumptions from National Energy and Climate Plans (NECPs) should be updated, and complemented in order to ensure compliance with climate and energy targets Yes , included in paragraph (31). Clear reference to NECPs as basis for scenarios and to NECPs adaptation in case they are outdated.
2. Scenarios should capture a range of climate neutrality pathways reflecting the varying impacts of key infrastructure development drivers	2.1 Scenarios should cover a sufficiently wide spectrum of climate neutrality pathways, aligned with the assessments that form the basis of EU decision processes, and strive to decrease Europe’s dependency on fossil fuel infrastructure and imports. Yes , after discussion with ESABCC, with this recommendations they are trying to ensure widely enough contrasted scenarios. Included in paragraphs (37) and, particularly, in (38). No , no need for a direct reference to EU dependency. If a policy includes EU aim to reduce dependency on fossil fuels, this would already be implicitly considered in the scenarios.
	2.2 Scenarios should be differentiated at the latest Yes , included in paragraphs (37) and (38). No reference to fixed years like in the ESABCC proposal but recommending that differentiation

	within seven years of the start of the scenario time frame.	starts already from the mid-term scenarios (i.e. after the best estimate) for both central scenarios variants and for any additional scenarios.
	2.3 Scenarios should capture contrasting pathways based on differences between the most impactful drivers affecting infrastructure development.	Yes , after discussion with ESABCC, the wording “drivers” in paragraphs (37) and (38) was removed. Also footnote 18 (which would have potentially limited the number of impactful “drivers” to only two) was removed.
	2.4 Benchmarking should include short-term and medium-term outcomes, cover climate relevant aspects, and include an analysis of discrepancies	Yes , included in a new paragraph (53), expecting the ENTSOs to benchmark their scenarios with the most relevant external ones.
3. Scenario development should incorporate future climate projections and their impact on energy infrastructure resilience	3.1 Scenarios should, to the extent possible, draw from up-to-date information on observed changes in regional climate, and on projected future climate impacts.	Partially , included as new paragraph (36) and related footnote 17. The proposed text amendments do not specifically refer to how to take into account the costs for energy infrastructures to be climate resilient. These should be part of TYNDP phase post-scenarios development.
	3.2 Scenarios should reflect the need for EU energy infrastructure to adapt to climate change and be climate resilient. This includes vulnerability to high temperatures, floods and other extreme weather events, as well as water scarcity.	
4. Scenarios should be constructed using an integrated building-block approach	4.1 Scenario development should draw from a continuous process on storyline development. The number of scenario variants should be determined by the key factors identified through this process	Partially , the ACER SFG already now do not strictly prescribe the number of scenarios to be developed by the ENTSOs. At the same time the number of scenarios variants should be limited to a number which is considered by the ENTSOs manageable to ensure development of robust scenarios and avoid EU cherry picking. Therefore no further changes were implemented to the text.
	4.2 The continuous storyline development should build upon analytical work examining major and partly interlinked building blocks, including but not limited to flexibility, electrification, hydrogen and e-fuels, offshore grids and carbon dioxide removal.	Yes , the five building blocks considered by ESABCC as critical assumptions have been explicitly mentioned either in paragraph (24) or in paragraph (52). Yes , storylines should not change cycle to cycle but text was amended to foresee a “confirmation step” in paragraph (38). The confirmation step concerns only the additional scenarios and not the central one and its two variants. No , ESABCC proposes that at least one of the scenarios should be free from CDR technologies. SFGs should not pre-empt the discussion on main assumptions and parameters by the SRG, especially if CCUS is part of the policies.
	4.3 Coherence of inputs and assumptions should be strived for within scenarios, consistency between scenarios checked, and	Yes , included in paragraph (39). ENTSOs to ensure consistency both within scenarios and between scenarios, and differentiation explained.

	drivers of differentiation explained.	
5. Assumptions should be based on up-to-date, scientifically sound and forward-looking information	5.1 Scenario assumptions should be based on up-to-date, comprehensive and scientifically sound information, both for current assumptions and forecasts, and be prepared in an unbiased manner. Regional differences and expected changes in technology costs, innovations, and commodity prices should be adequately integrated into the scenarios, in sufficient granularity.	Yes , included in paragraph (24), scenarios to consider regional difference. Included in paragraphs (26) and (28), scenarios to take into account up-to-date information. Included in paragraph (54), scenarios to be robust, non-discriminatory and to be prepared impartially.
	5.2 The long-term climate effects of infrastructure under consideration should be considered, and assumptions on the expected useful life of energy infrastructure should be aligned with the transition and net-zero objective.	No , the expected useful life of energy infrastructure is not a topic for scenarios but pertaining the PS-CBA and the project costs information submitted by the project promoters. It is true that the scenarios modelling considers a grid which includes also projects. But a reduction in the useful life of projects would presumably not impact their cost but only the remuneration period (e.g. shorter period, higher RAB).
	5.3 Scenarios should be, whenever possible and reasonable, based on data sources and modelling tools that are comparable to those adopted by EU institutions to inform EU policies. In case of deviations, these should be explained and justified	No , not feasible. Regulation requires that scenarios are target-compliant but do not expect the use of the same tools, for example, as EC. Being able to compare and justify deviations it assumes that the externals' tools/models used as benchmark are fully available, which is usually not the case. In any case, the request to the ENTSOs for transparency on the tools, models and their limitations is already covered in paragraph (52).
	5.4 Scenario assessments should include an account of uncertainties around input assumptions.	Yes , included in paragraph (27). ENTSOs to provide a qualitative assessment of how the scenarios would be impacted by the uncertainty around the main selected assumptions and drivers.
6. The process should be more transparent and built on timely consultations of stakeholders and external experts	6.1 Detailed descriptions of methodologies and models should be published to the greatest extent possible.	Yes , included in paragraphs (4) and (52).
	6.2 Detailed assumptions should be published for each scenario, including data sources, how data is used, necessary information to assess and reproduce calculations, and adjustments and corrections of inputs made during the modelling process – according to FAIR principles (Findable, Accessible, Interoperable and Reusable).	Yes , included in paragraphs (4) and (52). Explicitly mention to FAIR principle made in paragraph (50).
	6.3 The scenario report should contain an analysis and a detailed description of all results, including	Yes , included in paragraphs (25) and (50)-(52). ENTSOs to explain how scenarios are target-compliant and to share all relevant information,

	<p>compliance of scenarios with EU climate and energy targets. Scenarios must be informative and made understandable to decision makers and relevant stakeholders</p>	<p>adjusted to different stakeholder needs and capabilities.</p>
	<p>6.4 The scenario development process should be based on effective consultations and meaningful engagement with stakeholders.</p>	<p>Yes, included in paragraph (4) and whole section 4 where SRG creation is foreseen as well as at least one non-SRG stakeholder consultation.</p>
	<p>6.5 An expert engagement process should involve independent experts to scrutinise modelling methodology, input assumptions and robustness of results. Independent experts should be consulted early in the process.</p>	<p>Yes, included in paragraph (32) (43), independent experts to be included in the SRG, as well as in whole section 5. on stakeholder scrutiny.</p>