



FEEDBACK ON ENTSOS' PROPOSALS FOR TYNDP 2024 STORYLINES

Climate Action Network (CAN) Europe is Europe's leading NGO coalition fighting dangerous climate change. With over 170 member organisations from 38 European countries, representing over 1.500 NGOs and more than 47 million citizens, CAN Europe promotes sustainable climate, energy and development policies throughout Europe.

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With this feedback to the proposals of the European Network of Transmission System Operators for Electricity (ENTSO-E) and for Gas (ENTSOG) for the Ten Year Network Development Plan (TYNDP) 2024, CAN Europe would like to raise its concerns about the compatibility of the scenarios for European energy infrastructure with the Paris Agreement. While we acknowledge some progress in transparency and variation of the scenarios, we still see room for improvements to better prepare our networks for an accelerated energy transition.

According to our understanding, the suggested storylines ('Decentralised Energy' and 'Global Ambition') can only be considered as preliminary because the design of future scenarios under the TYNDP will have to be aligned to the overarching principles of the upcoming Scenario Guideline by the European Union's Agency for the Cooperation of Energy Regulators (ACER), expected in January 2023.

For CAN Europe, it is self-evident that all TYNDP scenarios need to show pathways towards the Paris Agreement's objective of **limiting average global temperature increase to 1.5°C**. While the storyline matrix presented by the ENTSOs on 20 July 2022 claims to be fully in line with the EU's 2030 targets and its 2050 climate neutrality objective, we fear that these scenarios again **imply overshooting the (very generous) carbon budget** allocated.

By allowing too high greenhouse gas emissions before 2050, the TYNDP scenarios would only theoretically respect the Paris Agreement's 1.5°C threshold if disproportionately strong emissions reductions and carbon removals come into play very quickly after 2050. The scenarios then would bet again on the **quick roll-out of carbon removal technologies** such as Direct Air Capture, Carbon Capture and Storage (CCS) and bioenergy with CCS whose readiness and availability remains questionable.

Is there any missing driver that may have an impact on electricity and gas infrastructure assessment?

Yes. Firstly, there is the **time dimension**. The urgency of the climate crisis requires an accelerated energy transition. Recent research confirms the urgency of very swift emission reductions to keep the 1.5°C objective in reach. Against this backdrop, a variation in time would increase the pertinence of the TYNDP scenarios. At least one scenario should assess the conditions for the EU reaching net zero emissions clearly before 2050.

Another important driver in relation with the time dimension is the pace of the uptake of different **societal trends** (e.g. behavioural changes) as well as technologies with **different technology readiness levels**. For instance, the learning curves and the competitiveness of renewable energy technologies and storage technologies are important drivers for the pace of their upscaling. The scenarios should better explain the key drivers of these trends and technologies, why and when these drivers actually inform the different scenarios.

Secondly, there is the **impact of fossil fuel price increase** on the energy transition. As highlighted recently in the [ACER Opinion No. 06/2022](#), price assumptions for the TYNDP 2022 scenarios can be considered implausible. TYNDP scenarios need to be enabled to reflect the fundamental changes in the EU's energy supply due to the fossil gas price crisis and the further implications of the Russian invasion in Ukraine.

Against this backdrop, both **strategic energy independence in parallel with a diversification** of energy supply have become strong drivers across all EU policies and markets during the past year. It thus appears to be rather inconsistent to suggest either energy independence or diversification as the unique driver. The two scenarios should rather vary with regards to the real world risks that determine the pace of the energy transition, namely the future increase of fossil fuel prices and the interlinkage with the competitiveness of renewable energy technologies.

What do you think about the new scenario approach; policy driven scenario in the short term and exploring uncertainty in the long term?

All scenarios should illustrate divergent pathways **compatible with the 1.5°C objective** and net zero emissions by 2040 to assess the variety of available solutions for emissions reductions. The level of ambition of the **RePowerEU package should be the starting point** of scenarios, reflecting the most up to date policies of Member States.

In order to be on the safe side with regards to its compatibility with the Paris Agreement's 1.5°C objective, CAN Europe recommends to not only assess the current range of targets under the 'Fit for 55' package but also the emissions reductions trajectories needed to make the EU **'Fit for 1.5°C'**. In view of the timeliness of data and policy objectives, the storylines should not fall back on completely outdated National Energy and Climate Plans (NECPs) or on divergent and inconsistent data feed-in from national TSOs.

How do you consider the additions to the previous storyline (elements in green)?

Regarding our criticism on the alignment with the climate and energy targets, please refer to our general remarks on the carbon budget page 1. We welcome the consideration of a larger set of indicators such as different heating solutions. The new storyline matrix however appears to keep most elements of the previous dichotomy between 'Global Ambition' and 'Distributed Energy'.

Do you see any other drivers that could be embedded into the storyline? If yes, how it could be implemented and be used to differentiate scenarios?

Role of hydrogen: The storylines should be clear about where the hydrogen and other gases and fuels derived from hydrogen come into play at what cost, what is their origin and their net climate benefit. For the future infrastructure assessment, it will probably be of great relevance to differentiate storylines on where the electrolyzers will be located and in which operation mode they will run.

Carbon removal technologies: As carbon removal technologies play an important role in both storylines, future scenarios should provide more contrasted pathways. We consider a cost comparison of different carbon removal technologies as a prerequisite. Instead of assuming all carbon removal technologies will have to be introduced anyway because of overshooting emissions, at least one pathway should illustrate how the EU can achieve the 1.5°C objective without relying massively on carbon removal technologies.

Demand side flexibility: The role of the energy efficiency first principle in the storylines could be substantiated, e.g. by integrating varying potentials for demand side flexibility, such as industry's load shifting potential vs. households' load shifting potential.

Which other technology do you consider as a key for the scenario development for the differentiation of the scenarios?

The most important technologies for accelerating the energy transition...

...are on the demand side: the electrification of industrial processes, of heating and transport.

...are on the supply side: solar PV installations combined with battery storage, wind energy, renewable heat supply through district heat networks, renewable hydrogen supply.

Energy savings and energy efficiency improvements contribute equally to the achievement of climate and energy targets as the abovementioned technologies. 'Non-technological' solutions such as the implementation of the **circular economy approach** and **the deep renovation** of buildings should not be omitted but become key elements of the TYNDP storylines.