

Subject: FEBEG's reaction to Elia's Call for evidence 2021 as part of the Task Force Scenario's

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FEBEG thanks ELIA for having the opportunity to react ELIA's Call for evidence 2021 as part of the Task Force Scenario's¹.

The inputs and suggestions of FEBEG are not confidential.

Overall remarks

FEBEG welcomes to be included in the construction of relevant scenarios for the horizon 2040–2050 and would like to comment on the proposed methodology to be applied, namely the use of TYNDP storylines and the call for evidence.

On the topic of Flexibility, FEBEG will provide additional elements at a later stage considering the difficulties to have detailed inputs over the holiday period.

While, overall, the TYNDP studies are considered as important reference studies for Europe, we would like to highlight some of our concerns:

- The TYNDP storylines as such can be criticized for not being sufficiently substantiated, why centralised vs decentralised? (See also detailed remarks below)
- TYNDP studies are often optimistic on the increase of capacities in Europe (based on policy targets, lack of economic viability)
- The storylines outlined in the TYNDP studies (see annex) seems only indirectly relevant for Belgium, when considering the current energy landscape and the political ambitions, specific Belgian sensitivities are to be considered:
 - Role of nuclear in Belgium
 - High share of industrialisation
 - State of housing/buildings...

To conclude, we consider that staying too close to existing high level EU studies would not be the best approach for a debate on long term scenarios for Belgium.

¹ <https://www.elia.be/en/public-consultation/20210531-public-consultation-call-for-evidence-2021-as-part-of-the-task-force-scenarios>

Regarding the second part, i.e. “Call for evidence on Flexibility Options in Electricity Consumption”, as Elia has already done some studies on the subject, FEBEG would prefer to take, as starting point, that Elia would firstly present its methodology and hypothesis related to Flexibility. This would serve as basis to be challenged by stakeholders rather than aggregating several figures based on, possibly, very different (and non-combinable) hypothesis.

“Flexibility Options” should be considered as an output a given sensitivity (e.g. Digitalization, Technology or Regulatory Framework) rather than an upstream given.

In depth comments on TYNDP

Regarding the usage of TYNDP in general

The basis version of TYNDP 2022 is still under consultation. It will be important, when using this study as a starting point, to stay up-to-date with the evolutions of the study.

Furthermore, the “Fit-for-55” package expected on July the 14th, could bring some useful insights over the proposed storylines (e.g. EU ETS reform, Amendment to the Renewable Energy Directive to implement the ambition of the new 2030 climate target (RED), targets for -55% towards 2030,...). From the EU impact assessment many relevant information can be extracted such as the extension of ETS, the increase in carbon prices, the (target increase of) share of renewables in the energy and electricity mix. Any debate on the storyline should duly consider any new information, if not it risks to be outdated as from the start.

Detailed remarks on TYNDP scenario storylines

Scenarios are defined according to a consistent combination of risk factors. TYNDP does not fully meet the criterion of consistency. **The assumption of a more centralized (GA) or decentralized (DE) scenario is not well backed.** More specifically, it is not well explained which assumptions are underlying this differentiation. The reasons for a more centralized (offshore) and decentralized (onshore/PV) development remain rather unclear. In particular, it is unclear whether GA and DE scenarios reflect well the main risk factors which, in our view, are related in the long term to technological (including energy efficiency) aspects and to policy choices in the shorter term.

In our opinion, **technology** (including energy efficiency) is probably the main differentiating factor in the long term. Scenario analysis should reflect this uncertainty. In the TYNDP, energy efficiency improvements by 2050 are significant and fairly similar across scenarios. Also, **investment cost assumptions** (centred around assumptions of the ASSET report) **differ between GA and DE to enable the storyline** of the scenario. Scenarios therefore do not fully reflect technology uncertainty (it is not clear why technology development would differ between centralized/large scale and decentralized/smaller scale technologies).

Detailed remarks on the TYNDP methodology

Economic viability issues

We would like to underline that capacities in the TYNDP scenarios are not “by definition” economically viable, indeed, some additional investments are added which are in our view not viable from an economic perspective (exogenous capacity comes out of nowhere). Even with an economic viability check, some assumptions could be overly optimistic (frequent occurrence of price peaks which are not a base for a rational investor to take long term investment risks, investments that arrive because they are “mentioned in political vision documents”, etc...). Studies should consider the different economic/regulatory environments of countries with or without a CRM (in the latter, one cannot assume that investments “will come”).

Sum of all studies results in optimistic view of available capacities

TYNDP is based on input from various TSOs, therefore, the study is a combination of possibly different views on adequacy, economic viability, system risks, and risk aversion. In addition, the input from local TSOs reports is likely to be (to a certain extent) influenced by local political ambitions (for example with regards to share of renewables to be reached at certain deadlines). In our opinion, because of this, the estimates are often optimistic, where everybody relies on (renewable/CHP/storage...) capacity being developed/available in other countries.

Gas and electricity interface

In the TYNDP study, the power system is rather well modelled while the gas network representation seems to be underdeveloped. There is, however, an essential link between gas and electricity via hydrogen. In our opinion, the study does not take sufficiently into account the increased inter-dependence of the gas and electricity networks (Power-to-X technologies). While we understand this is not an issue which can be solved by Elia, or the members of the scenario task force, we do wish to underline this issue, as it is important to take it into account when interpreting the results of the study, or when using this study as a reference for Belgian scenarios.

Energy market and grid modelling

An important question will be how the electricity market/system will develop in practice according to market mechanisms or in a more centralized and controlled manner. The TYNDP report **should** at least **point to gaps with respect to the current target model** in addressing future challenges. For instance, the electricity transmission grid is modelled with a network of about 100 zones by 2040. Today’s electricity markets usually rely on one zone per member state (with exception of the Nordics and Italy).

Conclusion on Storylines

While the TYNDP studies are very interesting, and have many merits, we wanted to raise some concerns, as mentioned above. Overall, the main concern is not to cling onto the TYNDP approach to much and to have a real debate on the possible storylines, relevant for

Belgium, Europe and the world. Indeed, complementary to (or instead of) the storylines proposed in TYNDP, we see other interesting and relevant long-term dimensions (that could be combined):

1. Less or more ambitious GHG target (in BE and/or EU)
 - a. 80 vs 90% reductions by 2040
 - b. 90 vs 100% by 2050
2. More or less import dependency
 - a. At BE level
 - b. At EU level vis-à-vis rest of world
3. More or less electrification for mobility, heating, industry
 - a. HIGH electrification scenario
 - b. Mix of electricity and "low carbon fuels"

Useful documents

Related to the call for evidence we wish to refer to the following interesting documents which could serve as a source of inspiration and debate.

- IEA _ NET ZERO scenario (Juin 2021) <https://www.iea.org/reports/net-zero-by-2050>
- IRENA scenario: <https://www.irena.org/publications/2021/Jun/World-Energy-Transitions-Outlook>
- EU Impact assessment related to Fit for 55: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020SC0176>
- ENGIE Impact Belgian Scenarios (see separate PPT in annexed file)
- ENERGYVILLE study for Belgium towards 2050: https://www.energyville.be/sites/energyville/files/downloads/2020/20200918_fullpresentation_0.pdf

ANNEX

TYNDP Storylines

	 Distributed Energy Higher European autonomy with renewable and decentralised focus	 Global Ambition Global economy with centralised low carbon and RES options
Green Transition	At least –55 % ^s reduction in 2030, climate neutral in 2050	
Driving force of the energy transition	Transition initiated on local/national level (prosumers)	Transition initiated on a European/international level
	Aims for EU energy autonomy through maximisation of RES and smart sector integration (P2G/L)	High EU RES development supplemented with low carbon energy and imports
Energy intensity	Reduced energy demand through circularity and better energy consumption behaviour	Energy demand also declines, but priority is given to decarbonisation of energy supply
	Digitalisation driven by prosumer and variable RES management	Digitalisation and automation reinforce competitiveness of EU business
Technologies	Focus of decentralised technologies (PV, batteries, etc) and smart charging	Focus on large scale technologies (offshore wind, large storage)
	Focus on electric heat pumps and district heating	Focus on hybrid heating technology
	Higher share of EV, with e-liquids and biofuels supplementing for heavy transport	Wide range of technologies across mobility sectors (electricity, hydrogen and biofuels)
	Minimal CCS and nuclear	Integration of nuclear and CCS

Source: https://2022.entsos-tyndp-scenarios.eu/wp-content/uploads/2021/04/entsog_entso-e_TYNDP2022_Joint_Scenarios_Final_Storyline_Report_210421.pdf