

Public consultation report on ENTSOG's guidance documents for TYNDP 2026

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1. Introduction

The present consultation report concerns the public consultation of ENTSOG's (European Network of Transmission System Operators for Gas) draft TYNDP 2026 (Ten-Year Network Development Plan 2026) Annex D. The draft Annex D contained following documents^[1]:

- **Annex D1: Implementation Guidelines** for the project-specific cost-benefit analysis (PS-CBA) of candidates for the status of Project of Common Interest (PCI) or Project of Mutual Interest (PMI).
- **Annex D2: Infrastructure Gaps Identification methodology** for the Infrastructure Gaps Identification report (IGI report).
- **Annex D3: System Assessment methodology** for deliveries that do not feed the PCI/PMI selection process.

As part of the consultation process, ENTSOG organised a dedicated, public stakeholder webinar on 9 March 2026¹, followed by a live questions and answers session on 23 March. Feedback was requested from stakeholders during a consultation period between 9 March and 10 April 2026 via an [online form](#). This consultation report details the received inputs from stakeholders as well as statements by ENTSOG on how inputs were considered.

This is the first consultation report prepared by ENTSOG for the TYNDP 2026. The remaining reports of the TYNDP, among which the Hydrogen Infrastructure Gaps Identification (IGI) report and the Hydrogen and Natural Gas System Assessment report, will be consulted in future, along with supporting materials.

2. Legal background

Article 29(1) of Regulation nr. 2024/1789, on the internal markets for renewable gas, natural gas and hydrogen (Gas and Hydrogen Regulation, GHR) states: *"While preparing [...] the draft [TYNDP] for natural gas [...], [ENTSOG] shall conduct an extensive public consultation process, at an early stage and in an open and transparent manner, involving all relevant market participants, and, in particular, the organisations representing all stakeholders, in accordance with the rules of procedure referred to in Article 25(1). That consultation shall also involve regulatory authorities*

¹ All materials, including a recording for webinar on 9 March 2026, are available on the [event page](#)

and other national authorities, supply and production undertakings, network users including customers, distribution system operators, including relevant industry associations, technical bodies and stakeholder platforms. [ENTSOG] shall publish drafts of [...] the [TYNDP] for natural gas [...] for comments by the stakeholders and provide sufficient time for them to participate in the consultation process effectively. The aim of that consultation is to identify the views and proposals of the relevant stakeholders during the decision-making process."

From Article 29(3) of the GHR it follows that in general a consultation report is not mandatory for the TYNDP-related consultations detailed in Article 29(1) of the GHR. However, Regulation nr. 2022/869 on Guidelines for trans-European energy infrastructure (TEN-E Regulation) stipulates mandatory consultation reports for the preparation of the Cost-Benefit Analysis (CBA) methodology (see Article 11)^[3], for the preparation of the TYNDP scenarios (see Article 12)^[4], and for the preparation of the infrastructure gaps identification report (see Article 13).

More specifically, Article 13 of the TEN-E Regulation states:

"1. [...] Prior to publishing their respective reports, [ENTSO-E] and [ENTSOG] shall conduct an extensive consultation process involving all relevant stakeholders, including the EU DSO entity, associations involved in electricity, gas and hydrogen markets, heating and cooling, carbon capture and storage and carbon capture and utilisation stakeholders, independent aggregators, demand-response operators, organisations involved in energy efficiency solutions and, energy consumer associations, civil society representatives, [ACER] and all the Member States' representatives that are part of the relevant energy infrastructure priority corridors that are set out in Annex I [...].

[...]

3. Within three months of receipt of the infrastructure gaps report together with the input received in the consultation process and a report on how it was taken into account, [ACER] shall submit its opinion to [...] [ENTSOG], the Commission and Member States and make it publicly available."

The public consultation of the draft TYNDP 2026 Annex D contained assumptions of relevance for the Hydrogen Infrastructure Gaps Identification report, covered in parts of Annex D1 and the full Annex D2.

For project-specific cost-benefit analyses (PS-CBA), relevant explanations are available in Annex D1 – Implementation Guidelines and in [ENTSOG's hydrogen CBA methodology](#), approved by the European Commission (EC) in February 2025.

Furthermore, on voluntary basis, this report covers the methodology of sole relevance for the remaining sections of the TYNDP, i.e., the full Annex D3 – Hydrogen and Natural Gas System Assessment methodology.

3. Next steps

ENTSOG shall publish the final versions of Annexes D1, D2 and D3 on its website, together with this consultation report. The methods and assumption outlined in this documentation are used to establish the Hydrogen Infrastructure Gaps Identification (H₂ IGI) report. The report is then subject to the opinions of the Agency for the Cooperation of Energy Regulators (ACER), Member States, and the European Commission (EC), as outlined in article 13 of the TEN-E regulation.

4. Additions, in complement to stakeholder input received

The consulted documents contain a series of additional elements on top of the stakeholder input incorporated. Such modifications – listed below – are based on the interpretation of results of simulations by the System Development team, Network Modelling (NeMo) Kernel Group and Investment (Inv) Working Group.

Changes to Annex D2:

- When reviewing the IGI preliminary results, it was found that Hydrogen Advanced infra level is close to PCI/PMI in terms of input data and results. After internal assessment with ENTSOG members, it was decided not to consider the Advanced infrastructure level in H2 IGI simulations. See section 3. – Model description.
- The analysis is only performed for the base weather scenario, while initially it was foreseen for both the base and the stressful weather scenarios. This methodological change reflects [ACER's feedback](#) to the TYNDP 2024 draft IGI report. See section 5 – Infrastructure Gaps Identification indicators.
- The addition of a sensitivity analysis on low electrolytic hydrogen production (P2X) and RES, considered necessary by the Investment Working Group after analysis of results the base case simulations and simulations under hypothetical infrastructure approach. See section 6.2 – Sensitivity analysis on low electrolytic hydrogen production (P2X) and RES Sensitivity.
- Change of indicator order IGI 1-2
- Figure 10, example of IGI indicators 1 and 2 was modified to better depict the interlinkage of these indicators when identifying infrastructure gaps.

5. Consolidated answers by question

The stakeholder consultation contained a series of identification-related questions (nr. 1-3), for administrative and contact purposes. The consultation-related content and stakeholder descriptions are available below, for questions nr. 4-33 of the consultation.

4. How would you describe the type of organisation you represent?

Respondent	Answer
Italgas	Market actor – network user
Gas Infrastructure Europe (GIE)	Associations – gas sector
Edison	Market actor – project promoter
European Biogas Association (EBA)	Associations – gas sector
Proxigas	Associations – gas sector
Barcelona Supercomputing Center (BSC)	Research center
EWE HYDROGEN	Market actor – project promoter
EWE Gas Storage	Hydrogen and Gas Storage Operator
Hydrogen Europe	Associations – hydrogen sector

5. What TYNDP deliverables do you use in practice?

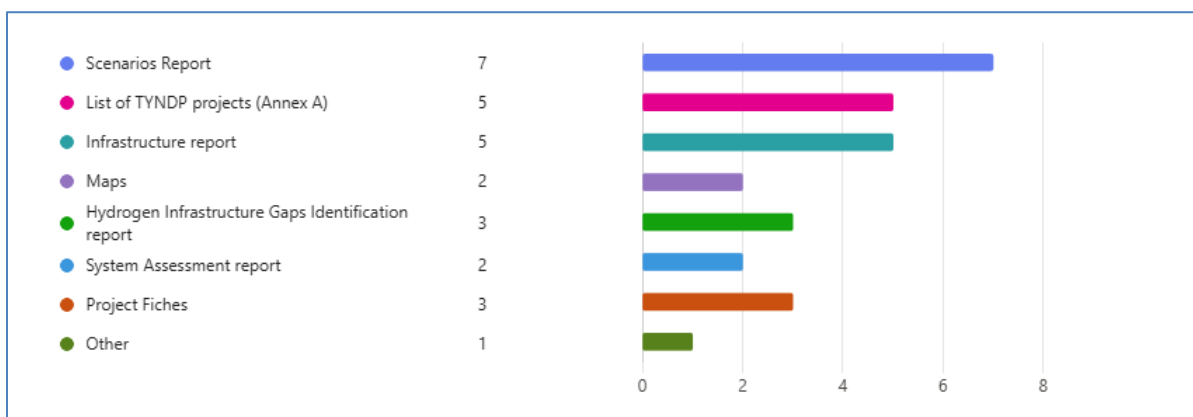


Figure 1 – Representation by report of answers to consultation question nr. 5

Respondent	Answer	ENTSOG feedback
Italgas	Infrastructure report;Hydrogen Infrastructure Gaps Identification report;	
GIE	-	
Edison	Scenarios Report;List of TYNDP projects (Annex A);Maps;Infrastructure report;Hydrogen Infrastructure Gaps Identification report;System Assessment report;Project Fiches;	
European Biogas Association	Scenarios Report;	
Proxigas	Scenarios Report;List of TYNDP projects (Annex A);Infrastructure report;	
BSC	Scenarios Report	
EWE HYDROGEN	List of TYNDP projects (Annex A);System Assessment report;Scenarios Report	
EWE Gas Storage	Maps;Project Fiches;Scenarios Report;List of TYNDP projects (Annex A);Infrastructure report	
Hydrogen Europe	Scenarios Report;List of TYNDP projects (Annex A);Infrastructure report;Hydrogen Infrastructure Gaps Identification report;Project Fiches	

6. Do you have any suggestion on how to improve the readability of the documents?

Respondent	Answer	ENTSOG feedback
Italgas	The documents are clear and readable	
GIE	-	
Edison	-	
EBA	-	
Proxigas	No	
BSC	Regarding future climate scenarios (Section 2.5), I have two comments: 1. You have selected SSP2-4.5, which represents an intermediate greenhouse gas emissions scenario in which carbon dioxide emissions remain at approximately current levels until around 2050, after which they decline but do not reach net zero by 2100. If the aim is to analyse a range of possible futures, it would be important to also consider additional scenarios (both more and less ambitious, such as SSP5-8.5) to develop stress scenarios that capture a broader spectrum of potential impacts on the energy system.	As a general principle, ENTSOG agrees that a broader spectrum of scenarios, including weather scenarios, supports long-term planning by enabling comparative analysis across a wider set of trajectories and thereby strengthening the information base for decision-making. In practice, developing an additional climate scenario dataset can take a significant amount of time and requires cooperation with an expert institution. Consequently, due to timeline constraints in the current cycle, the first suggestion can only be implemented from the TYNDP 2028 cycle onwards.

Respondent	Answer	ENTSOG feedback
	2. For relatively short lead times (i.e. less than 20–30 years), it is difficult to identify substantial differences between climate projection scenarios. This is because climate projections are primarily driven by boundary conditions (i.e. greenhouse gas emissions) and do not account for the initial state of the climate system. Addressing this limitation is precisely the focus of the work we are undertaking within the ASPECT project (https://www.aspect-project.eu/), coordinated by BSC, which aims to combine decadal climate predictions with long-term climate projections to provide more consistent and actionable climate information for the coming decades.	ENTSOG will need time to assess the practical steps and weigh them against the expected benefits. Regarding the second point, we note the justification that, over 20–30-year horizons, differences between standard climate projections may be limited. Thank you for drawing our attention to the ASPECT project; it will be considered within the investigation referred to above.
EWE HYDROGEN	No	
EWE Gas Storage	-	
Hydrogen Europe	No	

7. Are the explanations and illustrations in the draft TYNDP 2026 Implementation Guidelines clear and exhaustive?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG thanks stakeholders for their feedback.
GIE	-	
Edison	Yes	
EBA	-	
Proxigas	Yes	
BSC	Yes	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

8. Do you consider the ranges defined by the “base” and “stressful” weather scenarios as sufficient to capture the range of climatic uncertainty relevant to long-term infrastructure planning?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG thanks stakeholders for their feedback.
GIE	-	
Edison	Yes	
EBA	-	

Respondent	Answer	ENTSOG feedback
Proxigas	Yes	
BSC	Yes	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

9. The methodology covers the two planning horizons most relevant for PS-CBA: 2035 and 2040. Do you consider the choice of target years as appropriate and relevant?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG thanks stakeholders for their feedback. ENTSOG's TYNDP 2026 timeline can only accommodate for up to two target years for PS-CBA. Additional simulations are not excluded, but are conditional according to the integration possibilities with the PCI/PMI process timeline, as well as with ENTSOG's other activities.
GIE	-	
Edison	Yes	
EBA	-	
Proxigas	Yes	
BSC	Yes	
EWE HYDROGEN	Yes	
EWE Gas Storage	-	
Hydrogen Europe	2030, 2035 and 2040	

10. Do you support the consideration of GHG and non-GHG emissions savings stemming from the reduction of energy curtailment (i.e., the reduction of hydrogen and electricity curtailed demand) for PS-CBA indicators B1 and B2, respectively described in sections 3.2.3 and 3.2.4 of TYNDP 2026 Annex D1?

Context: unsatisfied hydrogen demand could often be interpreted as a certain amount of hydrogen users that will fail to switch to the hydrogen sector, and therefore, be forced to use an alternative fuel. (e.g., natural gas, oil, coal or others). For this reason, disregarding the impact of projects on the reduction of hydrogen curtailment might lead to the underestimation of GHG/non-GHG emissions savings.

Respondent	Answer	ENTSOG feedback
Italgas	Yes	
GIE	Yes	
Edison	As currently structured, indicators B1 and B2 may paradoxically suggest that projects supplying green or low-carbon hydrogen could lead to a net increase in GHG/non-GHG emissions. This conclusion is not robust. If a project makes green or low-carbon hydrogen accessible to a new geographic area, thereby stimulating additional demand, only the hydrogen demand actually served by the project should be considered in the assessment. The assumption that any incremental hydrogen demand induced by the project would be met by more polluting fuels is not plausible: demand stimulated by the project cannot, by definition, exceed the hydrogen volumes the project itself supplies.	The model used for TYNDP 2026 PS-CBA assessment is the dual hydrogen-electricity model (DHEM). To achieve a comprehensive assessment that reflects, to the extent possible, market behaviour, this hydrogen and electricity dispatch model is run on a yearly basis, with hourly granularity. The DHEM aims at minimising total system costs, or alternatively, maximising market rents. GHG emissions costs are, therefore, an element to be considered as part of the total system cost optimisation. The optimisation of the emissions, by their cost, is a sub-component of the total

Respondent	Answer	ENTSOG feedback
	A scenario in which a renewable or low-carbon hydrogen project causes an increase in emissions would be paradoxical and should be excluded from the methodological framework.	cost optimisation. While in most cases, the least-cost option is also the one with the least emissions, this cannot be guaranteed for 100% of situations. Considering the above, it is important to highlight that the indicators B1 (GHG-emissions) and B2 (non-GHG emissions) might not always reflect GHG/non-GHG emissions reductions, as the scale of emissions depends on additional elements, such as hydrogen supply import prices, electricity fuel costs, Emissions Trading Scheme prices, and others. During TYNDP 2024, PS-CBA indicators B1 and B2, as presented Annex D1 methodology (2024) underestimated emissions, as savings corresponding to hydrogen infrastructure, from energy curtailment reduction, were not taken into account. This is now the case in TYNDP 2026 and will contribute to increasing the emissions reductions reported under indicators B1, B2. Finally, we make a note regarding any demand that a project (group) can serve and

Respondent	Answer	ENTSOG feedback
		that would have been curtailed otherwise. We clarify that demand assessed in PS-CBA is limited to the levels in the TYNDP 2026 Scenarios (with country-level granularity, in zone 2) and that any project can only serve demand to the limit of its submitted technical capacity. Therefore, no additional demand can be “unlocked” and served, by existing (more polluting) or newly proposed infrastructure. Please refer to the description in the Hydrogen projects CBA methodology (2024) – section 2.2 in general (DHEM) and in particular 2.2.3 (hydrogen topology), where country-level demand is described.
EBA	-	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	Yes	
EWE Gas Storage	-	
Hydrogen Europe	Yes, but as a general remark: while we fully understand why only direct	ENTSOG agrees that a considering upstream

Respondent	Answer	ENTSOG feedback
	emissions are taken into account for calculating the financial impact on stakeholders (B4), for the monetisation of GHG emission savings the upstream emissions related to the supply of fuels should be considered as well.	emissions would render the monetisation of emissions more comprehensive and thus, more realistic. ENTSOG investigates possible developments regarding this aspect from one cycle to another. For TYNDP 2026 however, the reasons acknowledged by Hydrogen Europe prevent their consideration. Examples of such reasons are the complexity and lack of consensus regarding the quantification of upstream emissions, as well as keeping consistency with other energy infrastructure categories, in particular, ENTSO-E's methodology.

11. Which assumption should be applied to the GHG and non-GHG emission factors (EF) applicable to hydrogen demand curtailment (Annex III and IV of TYNDP 2026 Annex D1)?

Respondent	Answer	ENTSOG feedback
Italgas	Assume natural gas emission factors	Stakeholders tend to agree on the following: 1. The consideration of EF from NG would be a conservative assumption, most likely
GIE	A more accurate approach to calculate the GHG and non-GHG emission factors based on the corresponding fossil fuel mix that would be observed if expected hydrogen demand would not materialize	

Respondent	Answer	ENTSOG feedback
	due to missing access. It would largely correspond to a mixture of liquid (diesel, petrol, ...), gaseous (natural gas, ...) and solid (coal, ...) fossil fuels, but would also encompass some use of biomass and derivatives and an increased, but inefficient, direct electrification. It can be expected that on average the fossil fuels replacing the curtailed hydrogen demand would have an emission intensity that is higher than natural gas, but lower than coal. Hence, natural gas emission factors as a proxy are a conservative and therefore robust choice to account for potentially caused emissions that can be avoided by the implementation of the proposed hydrogen infrastructure.	underestimating GHG and non-GHG emissions reduction from hydrogen infrastructure, 2. The emission factor for hydrogen curtailment should be based on the fuels that will replace hydrogen when hydrogen demand is curtailed. ENTSOG will adapt EFs in the post-consultation version of Annex D1, using a weighted average of the EFs from the main fuel replaced for each subsector, in line with the TYNDP 2026 Scenarios.
Edison	The current framework appears to assign zero emissions to curtailed hydrogen demand, as per the final paragraph at page 32 of Annex D1 for indicator B1 and page 37 for indicator B2. We would suggest that this assumption warrants further consideration. As acknowledged in the question's context, users who fail to switch to hydrogen will instead rely on alternative fuels (e.g., natural gas, oil, or coal). It would therefore seem more appropriate to value curtailed hydrogen demand at the emission intensity of the relevant substitute fuel in the counterfactual	ENTSOG thanks Edison for pointing out this aspect. The description for indicators B1 and B2 will be corrected, mentioning the consideration of an emission factor for curtailed hydrogen and electricity. Such EF will be explicitly specified in the annexes III and IV of the post-consultation version of the draft TYNDP 2026 Annex D1.

Respondent	Answer	ENTSOG feedback
	scenario, rather than at zero. Failing to do so underestimates the counterfactual emissions baseline and leads to an artificial underestimation of the emissions savings delivered by hydrogen projects.	
EBA	-	
Proxigas	The emission factor (EF) should reflect the emissions of the relevant substitute fuels in counterfactual scenarios, in particular the fuels used in the sectors where the demand is curtailed or, if it is not feasible to have these details, it should reflect a weighted average of coal and natural gas EF. In the past, indicators B1 and B2 implied that for some projects delivering green or low-carbon H2 a net increase in GHG and non-GHG emission could be resulting from modelling outcomes. Should the project extend access to green or low-carbon H2 to previously unserved geographic areas, and generate additional demand, only the portion of demand actually met by the project should be factored into the assessment. Only already existing demand should be covered by more polluting alternatives when unserved by H2. A scenario in which a renewable or low-carbon H2 project drives an increase in emissions would be inherently contradictory and should be ruled out from the methodological framework.	EFs will be adapted – please refer to ENTOSG's answer to the GIE contribution, above. Regarding previously unserved demand (curtailed demand), please refer to the last paragraph of ENTOSG's answer to the Edison contribution, at question 10. In brief, only country-level demand which was previously curtailed (in zone 2) can be served. No additional demand can be generated.

Respondent	Answer	ENTSOG feedback
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Specifically with regards to the EF applicable to hydrogen demand curtailment we think that neither natural gas nor coal emission factor as an accurate proxy. These could be used in case the curtailed demand would be coming from e.g. heat & power generation. There is however little reason to believe those are going to be the dominant clean hydrogen applications in the 2035 time horizon in mind. In the short to medium term clean hydrogen is going to be used as a transport fuel, reduction agent in steel making (replacing coke) or replacing conventional hydrogen in fertiliser/chemical/refining sector. For that reason we suggest that the correct reference emission factor should be equal to the reference value used in RED and EU taxonomy - i.e. 94 gCO ₂ /MJ. At the very least if a decision is made to stick with direct emissions only- it should not be natural gas but rather natural gas based hydrogen - i.e. $56 \times 1.33 = 74.5$ [source: tech-econ assumptions for SMR in the EU reference scenarios]	

12. Which assumption should be applied to the GHG and non-GHG emission factors (EF) applicable to electricity demand curtailment (Annex III and IV of TYNDP 2026 Annex D1)?

Respondent	Answer	ENTSOG feedback
Italgas	A local energy mix which may include natural gas, biomethane, e-methane etc	ENTSOG thanks stakeholders for their feedback. For simplicity and considering that VOLL for electricity curtailment is set as 3.000 eur/MWh in the DHEM, ENTSOG will consider the EF from NG, in the TYNDP 2026 process.
GIE	ENTSOG-e uses the emissions of marginal technology active in each market node. This approach can also be adopted for the ENTSOG methodology. The coal emission factor would overestimate the emissions related to electricity demand curtailment.	
Edison	-	
EBA	-	
Proxigas	The emission factor should reflect the emissions of the fuels used in the sectors where the demand is curtailed (including biomethane and e-methane used at local level) or, if it is not feasible to have this level of details, it should reflect a weighted average of coal and natural gas emission factors	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	

Respondent	Answer	ENTSOG feedback
Hydrogen Europe	Assume natural gas emission factors	

13. Do you consider the European Investment Bank values for the societal cost of carbon appropriate for the calculation of the GHG emissions variations indicator (B1) in the TYNDP 2026 PS-CBA as proposed in the draft TYNDP 2026 Implementation Guidelines?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG will consider EIB-sourced values for the societal cost of carbon.
GIE	-	
Edison	No preference	
EBA	No preference	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	No preference	
EWE Gas Storage	-	
Hydrogen Europe	No preference	

14. Do you agree that the non-GHG emissions variations indicator (B2) should be monetised? If yes, do you support the usage of the European Environment Agency values for the VOLY cost or the VSL cost to be used for the monetisation? If not, which alternative value(s) do you propose and why? (please specify the source)

Note: VOLY - Value of Life Year; VSL - Value of Statistical Life

Respondent	Answer	ENTSOG feedback
Italgas	No preference	ENTSOG thanks stakeholders for their feedback. ENTSOG will used the VOLY as reference, with VSL as a sensitivity.
GIE	-	
Edison	No preference	
EBA	No preference	
Proxigas	VSL	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

15. Do you support that the increase of market rents indicator (B4) covers both the electricity sector and the hydrogen sector in the TYNDP 2026 PS-CBA and is thereby aligned with the approach taken by ENTSO-E for the PS-CBA of electricity projects?

Respondent	Answer	ENTSOG feedback
Italgas	No preference	The PS-CBA indicator B4 shall cover both the electricity and hydrogen sector rents, under an integrated system approach.
GIE	-	
Edison	No preference	
EBA	No preference	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

16. When calculating benefit indicator B4 (i.e., increase of market rents), do you support the consideration of cost of hydrogen disruption equal to WTP_{H_2} ?

Respondent	Answer	ENTSOG feedback
Italgas	No preference	ENTSOG shall use the cost of hydrogen disruption based on the WTH_{H_2} of
GIE	-	

Edison	Yes	hydrogen users for monetisation of hydrogen curtailment, for monetisation of indicator B4.
EBA	-	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	-	

17. Which willingness to pay (WTP) values do you propose to be assumed for hydrogen? Please provide a source of information or another form of justification for the proposed values.

Note: the WTP values should be higher than the most expensive supply source.

Respondent	Answer	ENTSOG feedback
Italgas	No preference	ENTSOG acknowledges stakeholders' clear specification WTP levels, used for the financial quantification of disruption under PS-CBA indicator B4, will be higher than the most expensive hydrogen import source available. An exceptional situation with a more expensive source does exist in the
GIE	-	
Edison	-	
EBA	-	
Proxigas	WTP should be significantly higher than the highest H2 price present in the model	
BSC	-	

Respondent	Answer	ENTSOG feedback
EWE HYDROGEN	-	model, in practice, i.e hydrogen produced by fossil-based power-to-X. This methodological consideration is used in a limited number of cases, to prevent the use of such a source. Regarding CODH, see answer to question nr. 18.
EWE Gas Storage	-	
Hydrogen Europe	The priority should be ensuring the CODH value is high enough to reflect the loss of production/damage of appliances/energy disruptions. It is however a challenge to adopt a single value accurately covering all applications. For some applications the interchangeability of H2 vs other carriers is limited - e.g. for all uses of hydrogen as a chemical feedstock. In case of steel, H2 used for steelmaking could be replaced with NG but not electricity (and even then, only if the steel plant has the required NG reforming equipment installed). In such cases (which we argue will constitute the majority of H2 applications) - It seems appropriate to estimate the WTP as the maximum value of daily average wholesale electricity price, as suggested in the methodology (approximately equal to 20 €/kg (LHV)).	

18. Do you support to use the market assumptions listed in the draft TYNDP 2026 Implementation Guidelines (section 2.7 of Annex D1, for the DHEM)?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	
GIE	-	
Edison	Whereas the idea to use for CODH a price tied to a stressful moment for European markets might have some merit, it seems excessive to pick the maximum daily average price of 2022, which is the highest peak for wholesale electricity prices in recent history. A more balanced approach, while still retaining the idea of picking a stressful situation for markets, could be the average of the daily maximum prices of 2022 and 2023, which were as a whole a critical moment for the energy market. Choosing the highest peak ever reached by electricity prices instead might lead to a misleadingly high value for COHD.	
EBA	-	ENTSOG updated the CODH value, having also taken into considered the indication from Hydrogen Europe. In practice, the updated value is relatively close to the previous assumption of daily maximum prices of 2022 and 2023. It represents the maximum value of daily average wholesale electricity prices of 2024 where replacement fuels are not available and by a lower, estimated value where replacement fuels exist ² .
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	No comment	

² See section 3.2.8 – B5: Reduction in Exposure to Curtailed Hydrogen Demand.

Respondent	Answer	ENTSOG feedback
EWE Gas Storage	-	
Hydrogen Europe	Yes	

19. Do you support that the reduction in exposure to curtailed hydrogen demand indicator (B5) is calculated based on the stressful weather scenario? If you disagree, please specify an alternative approach.

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG will proceed and use the stressful weather scenario as the base for calculating the reduction in exposure to curtailed hydrogen demand indicator (B5).
GIE	-	
Edison	Yes	
EBA	-	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

20. Do you consider the list of benefit indicators in the draft TYNDP 2026 Implementation Guidelines as complete and satisfactory?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG will proceed to perform PS-CBA with the
GIE	-	

Respondent	Answer	ENTSOG feedback
Edison	Yes	proposed list of benefit indicators.
EBA	-	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	No comment	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

21. Do you have any other remarks on the draft TYNDP 2026 Implementation Guidelines?

Respondent	Answer	ENTSOG feedback
Italgas	No	According to Art. 11 (8) of the TEN-E regulation, the electrolyser PS-CBA is mandatory, and the establishment of its methodology is an attribution of the European Commission. In practice, this responsibility of performing the assessment has been delegated by the EC to ENTSOG from the first cycle when it applied, namely TYNDP 2022, including for TYNDP 2026.
GIE	-	
Edison	No	
EBA	-	
Proxigas	No	
BSC	-	
EWE HYDROGEN	Integrate electrolyzers as an explicit, mandatory element of the PS-CBA: model electrolyzers as controllable load with realistic constraints. Monetise the electricity-system value created by flexible electrolysis (avoided redispatch/congestion management, avoided RES	While Annex D1 does not explicitly cover electrolyser PS-CBA,

Respondent	Answer	ENTSOG feedback
	curtailment, reduced system costs in stress hours, resilience contribution during peak/dark doldrums) so projects enabling such operation are properly valued.	ENTSOG has been following its general principles for such projects, together with the indications of the EC (JRC guidelines). In the DHEM, the electrolyser load is determined by the electricity generation mix, hydrogen demand and storage, being optimised by the model's solver. Redispatch studies, or other studies that imply knowledge of internal Member-State-level electricity bottlenecks, however, are not part of the (Union-wide, cross-border) PS-CBA, according to the JRC guidelines, which ENTSOG follows for electrolyser PS-CBA.
EWE Gas Storage	-	
Hydrogen Europe	No	

22. The methodology covers three planning horizons: 2030, 2035 and 2040. Do you consider this choice of target years appropriate and relevant? Or do you see as more relevant the alternative horizon expanding the long term until 2050 (i.e., 2035, 2040, 2050)?

Respondent	Answer	ENTSOG feedback
Italgas	2035, 2040 and 2050	
GIE	-	

Respondent	Answer	ENTSOG feedback
Edison	2030, 2035 and 2040	ENTSOG thanks stakeholders for their feedback. Since contributions are balanced regarding the choice of year, ENTSOG will proceed with the proposed option (2030, 2035 and 2040).
EBA	-	
Proxigas	2035, 2040 and 2050	
BSC	-	
EWE HYDROGEN	No comment	
EWE Gas Storage	-	
Hydrogen Europe	2030, 2035 and 2040	

23. Do you support the definition of the hydrogen market clearing price spread indicator (IGI indicator 1) as well as the concept and values of its thresholds in the draft TYNDP 2026 IGI methodology?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG thanks stakeholders for their feedback.
GIE	-	
Edison	No opinion	
EBA	No opinion	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	No opinion	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

24. Do you support the definition of the curtailed hydrogen demand indicator (IGI indicator 2) as well as the concept and values of its threshold draft TYNDP 2026 IGI methodology?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG thanks stakeholders for their feedback.
GIE	-	
Edison	No opinion	
EBA	No opinion	
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	No opinion	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

25. Do you support the inclusion of the proposed sensitivity regarding unlimited infrastructure and/or supply as described in section 6.2 of Annex D2? If not, please provide reasons.

Respondent	Answer	ENTSOG feedback
Italgas	No preference	
GIE	-	
Edison	No opinion	

Respondent	Answer	ENTSOG feedback
EBA	-	ENTSOG thanks stakeholders for their feedback. Please also see ENTSOG's feedback to question nr. 28.
Proxigas	Yes	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

26. Do you support the consideration of different weather scenarios as valuable to the IGI exercise? (If not, please provide reasons.)

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG thanks stakeholders for their feedback.
GIE	-	
Edison	No opinion	
EBA	-	
Proxigas	Yes	
BSC	Yes	
EWE HYDROGEN	-	
EWE Gas Storage	-	

Respondent	Answer	ENTSOG feedback
Hydrogen Europe	Yes	

27. Are the explanations in the draft TYNDP 2026 IGI methodology clear and exhaustive?

Respondent	Answer	ENTSOG feedback
Italgas	Yes	ENTSOG thanks stakeholders for their feedback.
GIE	-	
Edison	No opinion	
EBA	-	
Proxigas	Yes	
BSC	Yes	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

28. Do you have any other remarks on the TYNDP 2026 IGI methodology?

Respondent	Answer	ENTSOG feedback
Italgas	No	
GIE	-	
Edison	No opinion	

Respondent	Answer	ENTSOG feedback
EBA	-	
Proxigas	No	
BSC	No	
EWE HYDROGEN	Add a compulsory IGI variant that allows demand response by electrolyzers (load shifting and temporary reduction) in every IGI run, and publish the delta on the IGI indicators (H2 price spreads and H2 curtailment). Require the IGI report to explicitly distinguish whether an identified "gap" is driven by hydrogen transport bottlenecks or by limited/assumed electrolyser flexibility and sector-coupling behaviour. This prevents systematic bias towards infrastructure build-out when efficient flexibility (EE integration, congestion relief, stress-hour support) could materially mitigate the issue.	In the TYNDP 2028 cycle. Specifically, ENTSOG will investigate the benefits of higher-granularity modelling of DR, compared to system-level modelling as part of the Scenarios exercise, including explicitly for electrolyzers. See further feedback to the EWE Hydrogen contribution under question nr. 33.
EWE Gas Storage	1. Secondary Role of Storage in Gap Identification: The IGI methodology prioritises pipelines as the primary solution for infrastructure gaps, with storage only considered as a secondary balancing tool. This risks underestimating the strategic value of storage for system flexibility, resilience, and seasonal balancing. 2. Treatment of Storage in Unlimited Infrastructure Sensitivity: Storage is mainly	ENTSOG acknowledges the strategic role of storages for system flexibility and adequacy (see, for instance, section 6.3 of the TYNDP 2024 Executive Summary). The Dual Hydrogen-Electricity Model (DHEM) is designed to minimise total system costs (including supply, transport, storage and

Respondent	Answer	ENTSOG feedback
	assessed in the “unlimited infrastructure” sensitivity, where its contribution is abstracted at EU level and not at specific nodes or countries. This overlooks locational bottlenecks and the importance of regional storage assets. Furthermore, the methodology calculates hypothetical additional storage needs only after pipeline constraints are removed, and treats storage as generic flexibility rather than strategic infrastructure.	curtailment) under a defined set of constraints. In any given simulation, in cases when storage units are used less than pipelines, this results from the optimisation under model constraints. The type of infrastructure employed is therefore, the most cost-efficient option, according to methodology, and not a predefined preference. Regarding the treatment of storage in the “unlimited infrastructure” sensitivity, ENTSOG welcomes the observation and intends to modify the TYNDP 2026 methodology by considering a storage and transport infrastructure separately and not subsequently. This will allow ENTSOG to identify in its IGI exercise the contribution of both infrastructure types to address identified gaps in a fair way.
Hydrogen Europe	No	

29. Are there any assumptions in the draft TYNDP 2026 System Assessment methodology that you would propose to change?

Respondent	Answer	ENTSOG feedback
Italgas	No	
GIE	-	
Edison	No opinion	
EBA	Regarding the TYNDP 2026 natural gas system assessment: EBA asks for clarity on the assumption for biomethane supply for all time horizons (2030, 2035, 2040). Some NECPs do not provide figures on the projected role of biomethane in the national energy mix. Other may not provide biomethane supply assumptions beyond 2030. It should be clear how the biomethane supply for 2035 and 2040 is calculated. The System Assessment must include sensitivity analysis, using variations from the National Trends Scenario, especially: • Lower-than-expected renewable electricity supply • Lower-than-expected energy-	In the ENTSOG's TYNDP System Assessment, biomethane supply potential values are derived from the National Trends+ (NT+) scenario under target-compliant ramp-up assumptions. The values for all target years (2030, 2035, and 2040) are collected from TSOs. All TYNDP 2026 scenario datasets are available in the Downloads³ section of the joint Scenarios 2026 website. For the TYNDP 2026 System Assessment, ENTSOG plans to investigate biomethane supply potentials in greater detail, including collaboration with the EBA

³ [Scenario Consultation Package](#) / TSO data reflecting NECPs and national and EU policies / Additional data collection (DC2) / DC2_dashboard_public consultation / sheet "Biofuels" for TSO-level data; [Draft TYNDP 2026 Scenarios Package](#) / TYNDP_2026_Scenario_Report_Data_Figures / sheet 82 ("Biofuels") for aggregated, EU-level data

Respondent	Answer	ENTSOG feedback
	efficiency gains/overall energy demand reduction.	on data and methodological aspects. Regarding the proposed sensitivity analyses for scenarios, ENTSOG is open to further discussion and investigation within the TYNDP 2028 Scenarios exercise. However, the scope of simulations for the TYNDP 2026 Scenarios can no longer be expanded at this stage to investigate the proposed sensitivity simulations.
Proxigas	No	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	No opinion	

30. Which natural gas infrastructure level do you support to be used in the Dual Gas Model (DGM) for the TYNDP 2026 natural gas system assessment?

- *"Low" natural gas infrastructure level*
- *"Advanced" natural gas infrastructure level*
- *Both*

Respondent	Answer	ENTSOG feedback
Italgas	Both	

Respondent	Answer	ENTSOG feedback
GIE	"Advanced" natural gas infrastructure level	Since most of the answers are "both", ENTSOG will use the two proposed methane infrastructure levels in its natural gas system assessment, as proposed.
Edison	Both	
EBA	Both	
Proxigas	Both	
BSC	"Low" natural gas infrastructure level	
EWE HYDROGEN	Both	
EWE Gas Storage	Both	
Hydrogen Europe	"Advanced" natural gas infrastructure level	

31. Do you find the selected time horizons (2030, 2035, 2040) and the infrastructure commissioning assumptions appropriate for assessing the impact of repurposing on the European gas system? If not, please explain what changes or additional assumptions you would recommend.

Context: the introduction of repurposing-related indicators is one of the major updates to the TYNDP 2026, based on a recently published report on repurposing criteria. These indicators assess potential changes in the natural gas infrastructure dependencies and natural gas infrastructure diversification.

Respondent	Answer	ENTSOG feedback
Italgas	While we broadly agree with the selected time horizons (2030, 2035, 2040), we highlight that the timing of TSO repurposing must remain coherent with that of DSO networks,	ENTSOG acknowledges that repurposing gas networks to hydrogen should not hinder the development of DSO-level

Respondent	Answer	ENTSOG feedback
	since any misalignment would prevent the effective emergence of hydrogen demand at local level and would not be captured by the modelling. Supporting the use of both infrastructure levels is essential, as it reflects the realistic evolution of existing networks and acknowledges their potential to be progressively repurposed for hydrogen transport. Early repurposing in the 2030 and 2035 horizons can serve as a strategic enabler for pure hydrogen uptake by 2040, also through transitional solutions such as blending. Given the widespread and capillary nature of distribution networks, anticipating their adaptation is key to ensuring that the medium and long term hydrogen demand potential is correctly represented in the assessments.	hydrogen markets and confirms that this is considered in the system assessment process. In particular, the infrastructure capacity figures provided by TSOs and used for TYNDP assessments should be validated with the relevant connected DSOs as part of regular network planning activities. At Member State level, TSOs verify internal repurposing projects against future needs, including potential hydrogen injection from the DSO level and transitional solutions such as hydrogen-methane blending. The same approach applies to TSO-DSO reverse-flow facilities: increasing volumes from existing and expected biomethane production are reflected in the capacity data TSOs provide for the Union-wide TYNDP for each
GIE	With relation to H2 storages, a higher level of granularity could be useful to assess the impact of repurposing demonstrating the impact on potential internal bottlenecks.	
Edison	No opinion	

Respondent	Answer	ENTSOG feedback
EBA	Infrastructure commissioning assumptions should explicitly include planned reverse-flow facilities between distribution and transmission grids, as these assets are increasingly necessary to absorb decentralised biomethane injections and maximise grid integration. The Dual Gas Model should model the reverse flow facilities (in operation and planned) between Distribution Systems and Transmission Systems.	target year (2030, 2035, 2040). To evaluate the impact of methane storage repurposing to hydrogen, an adequate methane storage topology must be used. ENTSOG has been adapting granularity at the node-level according to indications received from TSOs over TYNDP cycles, since their inception. We remain open to any additional suggestion. Please see ENTSOG's answer to EWE Gas Storage, at question nr. 33.
Proxigas	While we broadly agree with the selected time horizons (2030, 2035, 2040), we highlight that the timing of TSO repurposing must remain coherent with that of DSO networks and other connected grids or customers, since any misalignment would prevent to reflect in the modelling the effective emergence of hydrogen supply and demand. Supporting the use of both infrastructure levels is essential, as it reflects the realistic evolution of existing networks and acknowledges their potential to be progressively repurposed for hydrogen transport. Early repurposing in the 2030 and 2035 horizons can serve as a strategic enabler for an increased hydrogen uptake by 2040, also through transitional solutions such as blending.	

Respondent	Answer	ENTSOG feedback
	Given the widespread and capillary nature of distribution networks, anticipating their adaptation is key to ensuring that the medium and long term hydrogen demand potential is correctly represented in the assessments	
BSC	-	
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	Yes	

32. In your view, do the LICD and MASD indicators sufficiently capture the main risks and opportunities related to natural gas supply diversification and dependence in the context of infrastructure repurposing? If not, what improvements or complementary indicators would you propose?

Context: the introduction of repurposing-related indicators is one of the major updates to the TYNDP 2026, based on a recently published report on repurposing criteria. These indicators assess potential changes in the natural gas infrastructure dependencies and natural gas infrastructure diversification.

Note: LICD - LNG and Interconnection Capacity Diversification; MASD - Minimum Annual Supply Dependence

Respondent	Answer	ENTSOG feedback
Italgas	No preference	In feedback to question nr. 31, ENTSOG referred to the complementing roles of Union-wide TYNDP and
GIE	Yes	
Edison	No opinion	

Respondent	Answer	ENTSOG feedback
EBA	LICD and MASD are useful indicators for assessing diversification and supply dependence in the methane system, but they do not fully capture the strategic value of the specific gas pipeline being assessed for repurposing for the delivery of grid-injected biomethane. A market can look well diversified under LICD because it has LNG capacity several cross-border entry points, while still being poorly prepared to transport growing biomethane volumes from distribution grids up to the transmission network, and moving biomethane across regions of a same country. The LICD indicator does not capture the impact of repurposing transmission pipelines on cross-border flows. Biomethane production and reverse flow stations should be considered not only as a supply component within one country but also as a means of increasing the supply at EU-level. Repurposing decisions should also test whether the methane network remains fit for internal renewable methane flows, not only for traditional imports.	national TYNDP assessments. In practice, the Union-wide assessments build on and reflect the results of national assessments. Therefore, the proposed indicators, LICD and MASD, have limited internal measurement potential, including for biomethane. However, they implicitly consider current and planned biomethane injections at Member State-level, through the TSO-provided supply and demand figures for each target year (2030, 2035, 2040). Internal, Member State-level biomethane needs remain a national exercise, which the Union-wide TYNDP supports by aggregating supply and demand across borders and assessing the contribution of biomethane to their balance. For the LICD indicator, mentioned by the EBA in their contribution, it is
Proxigas	Yes	

Respondent	Answer	ENTSOG feedback
BSC	-	correct that it does not reflect networks' readiness to transport biomethane, neither internally, nor across Member States. The indicator is meant as a complementing measure of overall access to diversified supply sources, including for situations in which biomethane is not available in sufficient volumes, drawing attention to the potential need to support its development further. Regarding the indicator MASD, it is meant to measure the changes in dependence on import routes for gas, in consequence of repurposing. Hence, it does indeed not specifically contribute to biomethane-related assessments.
EWE HYDROGEN	-	
EWE Gas Storage	-	
Hydrogen Europe	No opinion	

33. Do you have any other remarks on the TYNDP 2026 Hydrogen and Natural Gas System Assessment methodology?

Respondent	Answer	ENTSOG feedback
Italgas	No	
GIE	No	
Edison	No opinion	
EBA	EBA identifies shortcomings in how security of gas supply is reflected, as the growing role of biomethane is not adequately accounted for. The methodology focuses on traditional supply sources and infrastructure resilience but does not fully reflect biomethane as a domestic, decentralised and scalable source contributing to flexibility and diversification. For repurposing, biomethane should be systematically integrated into the assessment, notably in the gas market test, including impacts on grid access, flows and cross-border integration. EBA recommends: (1) a new indicator to detect bottlenecks, fragmentation or loss of capacity for biomethane; (2) using project lists, connection maps, reverse-flow plans and long-term potential;	ENTSOG acknowledges the role of biomethane in contributing to system flexibility and supply diversification at both local and EU levels. ENTSOG also notes that analysing potential fragmentation, loss of capacity, and internal bottlenecks requires the availability of information at the national level. Namely, information on capacities and projects for biomethane injection not only into the transmission system but also into distribution systems at the local level, would be required. ENTSOG is open to discussing and interested in working with the EBA to further investigate EBA recommendations, assess

Respondent	Answer	ENTSOG feedback
	(3) assessing repurposing against alternatives preserving the methane network, such as e-methane, to reflect complementarities and avoid premature constraints. EBA remains available for cooperation over the Biomethane Progress Report.	the data available for conducting such analyses, and support the improved integration of biomethane into future analyses.
Proxigas	No	
BSC	-	
EWE HYDROGEN	For all key stress cases (peak demand, cold dunkelflaute and any annual stress), introduce a required "Electrolysis Demand Response enabled" variant where electrolyzers can reduce/shift load in constrained hours. Report the impact on H2 and NG curtailment (levels and rates), net H2 demand peaks, and identified bottlenecks, and clearly flag where flexibility changes the ranking or severity of constraints. Ensure these stress-case results are structured so they can be carried into the subsequent PS-CBA as quantified resilience and system-security benefits of system-friendly electrolysis.	ENTSOG agrees that demand response (DR) measures that apply to electrolyzers are a potential modelling improvement. ENTSOG currently uses upstream (aggregated) system-level DR assumptions for electricity modelling in scenarios. However, unit-level data is not available and would have to be collected from TSOs, as part of the scenarios exercise. ENTSOG thanks EWE Hydrogen for the suggestion and will investigate the possibility for the TYNDP 2028 cycle. Specifically, ENTSOG will investigate the benefits of

Respondent	Answer	ENTSOG feedback
		higher-granularity modelling of DR, including explicitly for electrolyzers.
EWE Gas Storage	1. Filling levels: The assumption of a 35% filling level is highly impactful. Filling levels directly affect withdrawal rates, which are a critical parameter in PD and CDF scenarios. While we recognise that defining representative average filling levels is challenging in this context, it should be acknowledged that this assumption does not necessarily reflect real-world conditions and has a material impact on model outcomes. Any average filling level therefore represents a methodological compromise, particularly given that technical characteristics and performance profiles vary significantly across individual storage sites, which should be considered when interpreting the results. 2. Visibility of Storage in Annual Adequacy Assessments: Storage utilisation is only visible in non-yearly (stress case) simulations; storage is not displayed as filling levels start and end at the same value. This underrepresents the role of storage in balancing seasonal and	Regarding the first point, for the System Assessment, an initial storage level of 35% in the PD and CDF scenarios is considered at the node-level. While using a EU-wide, average level, is indeed a simplification, this is done for practical modelling purposes. To consider local specificities and variety, ENTSOG uses detailed specific technical characteristics at node-level. Examples of such characteristics are: WGV, injection and withdrawal capacities, as well as injection/withdrawal curves applied to the respective node groups. ENTSOG therefore considers this approach as a reasonable compromise between rigor and practicality. The simulation results can be found in Annex E – Analysis Tables at the node level⁴.

⁴ The most recent Annex E edition is accessible in the [Downloads](#) section of ENTSOG's TYNDP 2024 website (see the dedicated sheet, "Storage").

Respondent	Answer	ENTSOG feedback
	intra-annual supply/demand fluctuations.	Regarding the second point, ENTSOG acknowledges the role of the storage facilities in the balance of seasonal fluctuations. However, according to the assumptions used in the yearly supply simulations – where injections start and withdrawals end at a 30% storage level – storage facilities are not visible in the yearly supply mix graphs. Nevertheless, all underlying values are available in the Annex E – Analysis tables⁴.
Hydrogen Europe	No	

6. Abbreviations

- **ACER** – Agency for the Cooperation of Energy Regulators
- **BSC** – Barcelona Supercomputing Center
- **CBA** – Cost-Benefit Analysis
- **CDF** – Cold Dunkelflaute
- **CODH** – Cost of Disrupted Hydrogen
- **DR** – Demand Response
- **DGM** – Dual Gas Model
- **DHEM** – Dual Hydrogen-Electricity Model
- **DSO** – Distribution System Operator
- **EBA** – European Biomethane Association
- **EC** – European Commission
- **EF** – Emission factor
- **EE** – Energy Efficiency
- **EIB** – European Investment Bank
- **ENTSO-E** – European Network of Transmission System Operators for Electricity
- **ENTSOG** – European Network of Transmission System Operators for Gas
- **EU** – European Union
- **GHG** – Greenhouse gas
- **GHR** – Gas and Hydrogen Regulation (Regulation (EU) 2024/1789)
- **GIE** – Gas Infrastructure Europe
- **H2** – Hydrogen
- **H2 IGI** – Hydrogen Infrastructure Gaps Identification
- **IGI** – Infrastructure Gaps Identification
- **LICD** – LNG and Interconnection Capacity Diversification
- **LHV** – Lower Heating Value
- **LNG** – Liquefied Natural Gas
- **MASD** – Minimum Annual Supply Dependence
- **NECP** – National Energy and Action Plans
- **NG** – Natural Gas
- **NT+** – National Trends+ (scenario)
- **PCI** – Project of Common Interest

- **PD** – Peak Demand
- **PMI** – Project of Mutual Interest
- **PS-CBA** – Project-specific Cost-Benefit Analysis
- **RED** – Renewable Energy Directive
- **RES** – Renewable energy sources
- **SMR** – Steam Methane Reactor
- **SSP2-4.5/5-8.5** – Shared Socioeconomic Pathway from the Pan-European Climate Database (PECD)
- **TEN-E** – Trans-European Energy Infrastructure
- **TSO** – Transmission System Operator
- **TYNDP** – Ten-Year Network Development Plan
- **VOLL** – Value of Lost Load of Electricity
- **VOLY** – Value of a Life Year
- **VSL** – Value of Statistical Life
- **WGV** – Working Gas Volume
- **WTP** – Willingness to pay