

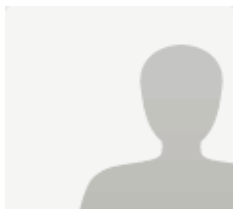
# TYNDP 2017

ANNEX H

FEEDBACK

H1: PUBLIC CONSULTATION: QUESTIONNAIRE

ENTSOG – A FAIR  
PARTNER TO ALL!



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## PAGE 2: Identification

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**Q1: What is your name?**

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**Q2: What is your organisation?**

Energy Community Secretariat

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**Q3: What is your email address?**

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**Q4: How would you describe your organisation?  
(Please choose only the category which best  
represents your organisation)**

Other (please specify),  
If indicated, please specify below:  
International Organization with Western Balkan 6  
countries and Ukraine, Moldova as Contracting  
Parties

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**Q5: ENTSOE intends to publish the results of this  
public consultation. If your response should remain  
confidential, please indicate it below.**

My response should only be disclosed anonymously

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## PAGE 3: Stakeholder questions - General Information

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**Q6: Do you have a former experience in reading  
ENTSOE and/or ENTSO-E TYNDPs?**

ENTSOE TYNDP 2015, ENTSO-E TYNDP 2016

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**Q7: Did you participate in the TYNDP 2017 Stakeholder  
engagement process?**

Yes

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**Q8: If yes, please select below the prior event(s) to  
which you participated:**

TYNDP 2017 kick-off workshop – 12 January 2016 ,  
SJWS#1 – 13 January 2016 ,  
SJWS#2 – 26 January 2016 ,  
SJWS#3 – 9 February 2016 ,  
SJWS#4 – 23 February 2016 ,  
SJWS#5 – 10 March 2016 ,  
TYNDP Workshop – 11 May 2016

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## PAGE 4: Stakeholder questions - General information

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**Q9: What are the TYNDP elements most valuable for your activity?**

Demand scenarios, Supply potentials,  
Information on projects, Barriers to investment,  
Identification of the infrastructure needs ,  
Assessment of TYNDP projects and TYNDP modelling results provided in Annex E  
,  
Information on the TYNDP modelling (Annex F)

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**PAGE 5: General feedback**

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**Q10: Would you like to provide input to the General Feedback section?**

Yes

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**PAGE 6: General feedback**

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**Q11: Is TYNDP 2017 easy to read and navigate through?**

easy

**Q12: Are the maps, graphs and tables easy to understand?**

easy

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

*Respondent skipped this question*

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

Indication how TYNDP scenarios comply with the EU energy and climate targets  
,  
Further consideration of ENTSO-E TYNDP scenario information  
,  
Advanced project status

**Q15: Do some TYNDP elements require better explanation? Which ones?**

*Respondent skipped this question*

**Q16: Is there additional information you would like to find in TYNDP?**

Yes, the inclusion of the Energy Community Contracting Parties in the assessment.

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

No

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

Demand chapter, Supply chapter,  
Infrastructure chapter, Assessment chapter,  
Energy Transition chapter

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**PAGE 7: Demand**

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**Q19: Would you like to provide input to the Demand section?**

Yes

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**PAGE 8: Demand**

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**Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

Yes,

Explanation :

Yes, but: (comments refer to future TYNDPs) If we look at the range of the demand data by the end of the 20 years time horizon and we accept that the demand scenarios are defined as "extremes" for modelling the infrastructure behaviour in Europe in the different scenarios, then the maximum range of 30,83 % between the max and the min scenarios in 20 years time is too low. (SUM Blue Transition in 2035=5.303 TWh/y divided by SUM EU Green Revolution in 2035 4.053 TWh/y) = 1,3083 After 10 years, the min-max range is only 14,46%, although reasonable scenarios can be imagined when the actual max or the min annual consumption would be higher or lower than this range. It is understood that the reason for that is the voluntary data collection from the TSOs and the 'net-out' impact between the countries. And it is also accepted that the values do show a much bigger range in the demand for power generation- which practically drives the differences. This nevertheless brings up the need for the development of top-down scenarios being "more extreme" in min. and max - especially in the final demand, as the power generation demands, based on the ENTSO-E data, show higher ranges. To sum up, 4 scenarios could be used: 2 top-down: extreme min. and max; 2 bottom-up TSO min. and max. with corresponding story lines. ENTSOG has been criticized in previous TYNDPs due to the difference between the gas demand scenarios and the actual consumption data. These differences in the recent years can be partially explained by the unusually warm winters (how much, would be interesting to see in the TYNDP). In this year we will see a proper "bounce-back" of annual demand, which will increase the credibility of previous TYNDP scenarios. Such opinions could partially be mitigated with the following demand presentation: Most of the TSOs do have the functional connection between daily demand and the temperature of the day (temperatur-consumption curve). Would this data be available to ENTSOG with the historical meteorological data, it could be used to present: 1) past annual demands with a hypothetical 1-in-5 or 1-in-20 winter. So as a practical example: what the 2013-2014-2015 annual demand would have been in a 1-in-5 winter (such as the present one) or in a 1-in-20 winter. Or 2) how the future demand scenarios can be affected by the weather pattern of the winter. This could practically result in a range around the min/max demand scenarios depending on the assumed winter. (This calculation can already be done manually based on the Annex C). Also possibly 1-in-5 and 1-in-20 peak conditions could be re-defined based on the meteorological evidence of warmer winters. The use of the current definitions in a 20 years time horizon can systematically result in demand overestimation. This could be the topic in the future in a chapter like the 2.2.2 - Seasonal and Peak Consumptions

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes

**Q22: Regarding the role of gas generation in the power sector, ENTSG aligned its scenarios with the Visions developed in ENTSG-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSG-E generation data, together with national expertise. Do you have additional views on this approach?**

No

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes,

If no, please specify why:

Yes, but not because it does not achieve the EU 2030 targets, but because it falls between the other scenarios. Another note: In the Demand Chapter 2.3.2.1, figure 2.17, page 34 is probably wrong. Italy and Hungary CNG values have probably been mixed up. There are in total 9-10 filling stations in Hungary only. And it is about 3,8m vehicles in total, so there cannot be 0,9 m natural gas cars.

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

Yes

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes,

Please specify:

Yes, at least mentioning them and updating about their current status is useful in the all-time TYNDP. They should only be considered in the supply potential (LNG or pipe), in case there is actual project existing (submitted to the TYNDP) with project schedule and planned commissioning date, which can enable marketing the gas in Europe.

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#### PAGE 11: Infrastructure

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**Q30: Would you like to provide input to the Infrastructure section?**

Yes

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#### PAGE 12: Infrastructure

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**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

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**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

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**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes,

If no, please specify why:

Very much so. Furthermore this information should be included on the ENTSOE Transparency Platform - in a new, TYNDP Projects layer.

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**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

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**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

All projects from the Energy Community Contracting Parties should be fully represented in the TYNDP (ESW-CBA). This means that the geographical scope of the next TYNDP should be enlarged to fully represent all Contracting Parties.

Explanation:

In line with the adopted Regulation, the Energy Community is not required to develop an EnC TYNDP or ESW-CBA. Noting the incomplete infrastructure links between the CPs themselves, their connections to MSs and the source of gas used in these countries, a stand-alone analysis of these countries is not reasonable.

However, the aim of the EU is the development of a common Energy Market, and the legal acquis of the Energy Community requires its Contracting Parties to implement EU regulations exactly with the aim to harmonize the market conditions in neighbouring countries (EnC) as well.

Noting the cross-border nature of numerous projects in the Contracting Parties, also reaching EU MSs, it would be sensible to see the full impact of these projects on the gas infrastructure of the EU, but also on the Contracting Parties.

The Secretariat recognizes that the legal obligation of ENTSOG is analysing and optimizing the supply-demand balance of the EU MSs and the possible shift in optimum in case additional Contracting Parties are included in the ESW and PS-CBA analysis.

A possible solution is to run the simulations first for EU only, and after that, for EU+EnC.

Recognizing the additional workload that it would mean to ENTSOG, the Secretariat would be ready to provide technical and data collection assistance if deemed necessary, if the enlargement of the geographical scope is agreed.

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**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

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**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

No,

If no, how can we further improve?  
It is actually a Yes, but: Project-Specific CBA results should also be presented on the project fiche. This means running PS-CBA before the publication of TYNDP, which is a tough logistical and timing task. Such a major change, would justify the delay of publication of the next TYNDP edition.

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**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

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**Q38: Would you like to provide input to the Assessment section?**

Yes

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**PAGE 14: Assessment, Energy Transition and Gas Quality Outlook**

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**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need	Yes, this proved useful to me
Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop	Yes, this proved useful to me
Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)	Yes, this proved useful to me
Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)	Yes, this proved useful to me
Inclusion of the supply adequacy outlook in Assessment chapter	Yes, this proved useful to me

<b>Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?</b>	Yes
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<b>Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?</b>	Yes
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<b>Q42: Which elements would you suggest to further improve?</b>	<i>Respondent skipped this question</i>
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<b>Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?</b>	Yes
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<b>Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?</b>	Yes
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<b>Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	No
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<b>Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	Yes
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**PAGE 15: Towards TYNDP 2018**

<b>Q47: Would you like to provide input to the TYNDP 2018 section?</b>	Yes
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**PAGE 16: Towards TYNDP 2018**

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	No
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**Q49: On which topics do you consider ENTSG would need specific stakeholder engagement?**

As so far:  
Input data in general  
Methodology  
Assumptions

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?**

No

**Q51: As part of this process, ENTSG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSGs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?**

Yes

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

National production – conventional,  
Pipeline imports from Russia,  
Pipeline imports from Norway,  
Pipeline imports from Azerbaijan, LNG imports

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSG could use? Which supply source(s) would that cover?**

*Respondent skipped this question*

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

As elaborated earlier, the inclusion of EnC Contracting Parties in the geographical scope and the full assessment of the these project would be beneficiary.

The Energy Community Secretariat is ready to provide data collection and technical assistance if deemed necessary and is available for bi-lateral in-depth discussion to achieve this goal.

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

The PS-CBA assessment results should be included.

This is challenging because of timing, but this would justify a later publication of the TYNDP; or a 2 stage publication of the TYNDP.

This would practically mean as it is now, that PS-CBA follows the ESW-CBA/TYNDP work, but it would be public and would be organic part of the TYNDP.

As a softer measure, PS-CBA results could be published for the Regional Group, not being part of the TYNDP.

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

*Respondent skipped this question*

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

*Respondent skipped this question*

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

*Respondent skipped this question*

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**Q60: Do you have other expectations regarding TYNDP 2018?**

The Secretariat chairs the PECI/PMI selection procedure in the EnC, along with COM. The EnC has been using a 3rd party consultant for the PS-CBA analysis, who disposes of a Europe-wide, dynamic, economic optimization model (REKK European Gas Market Model – EGMM), which enables trading between countries until optimum is reached and uses country specific demand and supply curve assumptions. In this way, this model enables country-specific economic welfare optimization and as a result, it produces country specific economic indicators. The resulting prices are the result of dynamic optimization and are not exogenous assumptions. The stakeholders of the PECI/PMI identification process, including COM, have welcomed these country-specific results. The results have helped the acceptance of other, project related impacts and have facilitated the understanding of project behaviour in the scenarios.

Although flow modelling is the original, underlying crucial element of TYNDP/ ESW-CBA, in our understanding the ENTSOG modelling tool has historically been designed for the linear problem of flow optimization, therefore the dynamic welfare optimization use of this tool is cumbersome and not straightforward.

The Secretariat sees the TYNDP 2018 development process and the ongoing CBA Methodology Update Process as an opportunity to consider the addition of a market simulation layer to the already existing flow simulation tool and use flow simulation tool exclusively for flow optimization in the TYNDP and the ESW/PS-CBA.

Such a market simulation layer could also provide valuable information about the reasonability and economic value of the different infrastructure levels to be used in the TYNDP.

Such a step could answer the concerns about the exogenous price assumptions in the assessment and could increase the legitimacy of flow and market assessment results in the system-wide and project assessment alike.

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**PAGE 17: Final remarks**

**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*

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## PAGE 2: Identification

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<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	PJSC "UKRTRANSGAZ"
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Other (please specify), If indicated, please specify below: Ukrainian`s TSO
<b>Q5: ENTSG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

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## PAGE 3: Stakeholder questions - General Information

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<b>Q6: Do you have a former experience in reading ENTSG and/or ENTSO-E TYNDPs?</b>	ENTSG TYNDP 2015
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	Yes
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	TYNDP 2017 kick-off workshop – 12 January 2016

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## PAGE 4: Stakeholder questions - General information

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<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Demand scenarios, Supply potentials, Information on projects, Barriers to investment, Identification of the infrastructure needs
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## PAGE 5: General feedback

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<b>Q10: Would you like to provide input to the General Feedback section?</b>	Yes
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## PAGE 6: General feedback

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**Q11: Is TYNDP 2017 easy to read and navigate through?**

easy,

\* If difficult, please specify below: easy

**Q12: Are the maps, graphs and tables easy to understand?**

difficult\*,

\* If difficult, please specify below:

For my opinion, it's very hard to work with files because most of them don't have explanatory notes. For example: in the file "entsog\_tyndp\_2017\_Annex\_E06\_Import Route Diversification" the description is absent, and searching for explanation in "Annex F – Methodology" creates additional problems.

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

Yes

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

Indication how TYNDP scenarios comply with the EU energy and climate targets

,

Indication of project costs, TYNDP 2017 map

**Q15: Do some TYNDP elements require better explanation? Which ones?**

*Respondent skipped this question*

**Q16: Is there additional information you would like to find in TYNDP?**

*Respondent skipped this question*

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

Yes

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

Demand chapter, Supply chapter,

Infrastructure chapter, Energy Transition chapter

## PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

Yes

## PAGE 8: Demand

**Q20: ENTSG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

Yes

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes

**Q22: Regarding the role of gas generation in the power sector, ENTSG aligned its scenarios with the Visions developed in ENTSG-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSG-E generation data, together with national expertise. Do you have additional views on this approach?**

*Respondent skipped this question*

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

No,

If no, please specify why:  
For my opinion, the demand should be based on the four main scenarios: EU Green Revolution, Green Evolution Blue Transition and Slow Progression. Slow Progression should be included, because this scenario is the only scenario which provides the forecast of the slowest economic growth and lowest level of gas consumption.

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

*Respondent skipped this question*

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

Yes

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes

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#### PAGE 11: Infrastructure

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**Q30: Would you like to provide input to the Infrastructure section?**

Yes

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#### PAGE 12: Infrastructure

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**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

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**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

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**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

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**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

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**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

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**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

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**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

Yes

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#### PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

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**Q38: Would you like to provide input to the Assessment section?**

Yes

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**PAGE 14: Assessment, Energy Transition and Gas Quality Outlook**

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**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need

Yes, this proved useful to me

Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop

Yes, this proved useful to me

Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)

Yes, this proved useful to me

Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)

Yes, this proved useful to me

Inclusion of the supply adequacy outlook in Assessment chapter

Yes, this proved useful to me

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**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

Yes

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**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

Yes

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**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

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**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

Yes

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**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

No

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**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

No

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**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes

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**PAGE 15: Towards TYNDP 2018**

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**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

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<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	Yes, If so, please specify below: No
<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	No
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	Yes
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	National production – conventional, Pipeline imports from Russia, Pipeline imports from Norway, Pipeline imports from Azerbaijan
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>  I think very important to include «Supply potentials» information about main gas routes that can be using for gas transmission from Russia, Norway and other country, because gas routes supply have significant impact security of supply in EU.	
<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	Keeping the same approach as in TYNDP 2017 would provide the necessary insights
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	Yes
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters,</b>	No

ENTSOG TYNDP 2017 Public consultation questionnaire  
defining other inputs for the reference values of gas  
quality parameters, sharing views on the evolution of  
these parameters, etc.)

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**Q60: Do you have other expectations regarding TYNDP 2018?**

We would be grateful if you could include in TYNDP 2018 in all your Annexes (forecasts and analysis) information about Observers of ENTSOG and Contracting Parties of Energy Community.

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**PAGE 17: Final remarks**

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<b>Q61: Do you have any other comment to TYNDP 2017?</b>	<i>Respondent skipped this question</i>
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PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	GASTRADE SA
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Project promoter,  If indicated, please specify below: GASTRADE S.A. is a 100% private equity and project promoter of the PCI 6.9.1 "LNG Terminal in northern Greece"
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	My response should only be disclosed anonymously

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOE TYNDP 2015
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	No
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	<i>Respondent skipped this question</i>

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Assessment of TYNDP projects and TYNDP modelling results provided in Annex E  ,  Identification of the infrastructure needs ,  Barriers to investment, Information on projects,  Supply potentials, Demand scenarios
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PAGE 5: General feedback

# ENTSOG TYNDP 2017 Public consultation questionnaire

**Q10: Would you like to provide input to the General Feedback section?**

Yes

## PAGE 6: General feedback

**Q11: Is TYNDP 2017 easy to read and navigate through?**

*Respondent skipped this question*

**Q12: Are the maps, graphs and tables easy to understand?**

*Respondent skipped this question*

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

*Respondent skipped this question*

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

*Respondent skipped this question*

**Q15: Do some TYNDP elements require better explanation? Which ones?**

*Respondent skipped this question*

**Q16: Is there additional information you would like to find in TYNDP?**

*Respondent skipped this question*

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

*Respondent skipped this question*

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

*Respondent skipped this question*

## PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

*Respondent skipped this question*

## PAGE 8: Demand

**Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

*Respondent skipped this question*



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

*Respondent skipped this question*

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

*Respondent skipped this question*

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

*Respondent skipped this question*

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

*Respondent skipped this question*

### PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

*Respondent skipped this question*

### PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

*Respondent skipped this question*

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

*Respondent skipped this question*

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

*Respondent skipped this question*

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

*Respondent skipped this question*

### PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

*Respondent skipped this question*

### PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

*Respondent skipped this question*

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

*Respondent skipped this question*

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

*Respondent skipped this question*

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

*Respondent skipped this question*

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

*Respondent skipped this question*

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

*Respondent skipped this question*

### PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

*Respondent skipped this question*

### PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

<b>Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:</b>	<i>Respondent skipped this question</i>
<b>Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?</b>	<i>Respondent skipped this question</i>
<b>Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?</b>	<i>Respondent skipped this question</i>
<b>Q42: Which elements would you suggest to further improve?</b>	<i>Respondent skipped this question</i>
<b>Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>
<b>Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>

**PAGE 15: Towards TYNDP 2018**

<b>Q47: Would you like to provide input to the TYNDP 2018 section?</b>	<i>Respondent skipped this question</i>
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**PAGE 16: Towards TYNDP 2018**

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	<i>Respondent skipped this question</i>

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q51:</b> As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?	<i>Respondent skipped this question</i>
<b>Q52:</b> For which supply source do you expect to need the most intense stakeholder involvement?	<i>Respondent skipped this question</i>
<b>Q53:</b> TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?	<i>Respondent skipped this question</i>
<b>Q54:</b> Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?	<i>Respondent skipped this question</i>
<b>Q55:</b> Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?	<i>Respondent skipped this question</i>
<b>Q56:</b> Would you see additional elements that could be included in the TYNDP 2018 assessment?	<i>Respondent skipped this question</i>
<b>Q57:</b> Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:	<i>Respondent skipped this question</i>
<b>Q58:</b> TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?	<i>Respondent skipped this question</i>
<b>Q59:</b> TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)	<i>Respondent skipped this question</i>
<b>Q60:</b> Do you have other expectations regarding TYNDP 2018?	<i>Respondent skipped this question</i>

### PAGE 17: Final remarks

<b>Q61:</b> Do you have any other comment to TYNDP 2017?	<i>Respondent skipped this question</i>
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PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	UPRIGAZ
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Association (please specify type), If indicated, please specify below: Association of french gas undertakings
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOE TYNDP 2015, ENTSO-E TYNDP 2016
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	Yes
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	SJWS#3 – 9 February 2016, TYNDP Workshop – 11 May 2016

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Demand scenarios, Supply potentials, Information on projects, Identification of the infrastructure needs, Assessment of TYNDP projects and TYNDP modelling results provided in Annex E , Information on the TYNDP modelling (Annex F)
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PAGE 5: General feedback

# ENTSOG TYNDP 2017 Public consultation questionnaire

**Q10: Would you like to provide input to the General Feedback section?**

Yes

## PAGE 6: General feedback

**Q11: Is TYNDP 2017 easy to read and navigate through?**

very easy

**Q12: Are the maps, graphs and tables easy to understand?**

very easy

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

Yes

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

Indication how TYNDP scenarios comply with the EU energy and climate targets

,

Qualitative approach to LNG embedded diversification

,

Advanced project status

**Q15: Do some TYNDP elements require better explanation? Which ones?**

*Respondent skipped this question*

**Q16: Is there additional information you would like to find in TYNDP?**

*Respondent skipped this question*

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

Yes

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

Demand chapter, Supply chapter,  
Infrastructure chapter, Assessment chapter,  
Energy Transition chapter

## PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

No

## PAGE 8: Demand

**Q20:** ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?

*Respondent skipped this question*

**Q21:** TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?

*Respondent skipped this question*

**Q22:** Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?

*Respondent skipped this question*

**Q23:** For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?

*Respondent skipped this question*

**Q24:** For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?

*Respondent skipped this question*

## PAGE 9: Supply

**Q25:** Would you like to provide input to the Supply section?

Yes

## PAGE 10: Supply

**Q26:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?

Yes

**Q27:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

No,

If no, please specify why:  
UPRIGAZ considers that LNG market is becoming global, which means that it is very difficult to identify the supply sources.

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes

## PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

## PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

No,

If no, please specify why:  
UPRIGAZ considers that new significant investment should be regarded on a regional basis rather than on a national standpoint.

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

Yes

PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

Yes

PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need

Yes, this proved useful to me

Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop

Yes, this proved useful to me

Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)

Yes, this proved useful to me

Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)

Yes, this proved useful to me

Inclusion of the supply adequacy outlook in Assessment chapter

No, not useful

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

No,

If no, please specify why:

The progressive of integration of the regional wholesale markets implies an analysis at regional level.

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

Would you have any suggestion of public information that could be used to support this analysis? If the assessment did not prove valuable, could you indicate why?  
UPRIGAZ is of the opinion that pipeline gas import prices will be driven by the LNG worldwide market prices.

**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

Yes

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

Yes

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

No

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes

### PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

### PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

Yes,

If so, please specify below:  
UPRIGAZ suggests that the ENTSOG meeting dedicated to the presentation of TYNDP be fixed at an another date than ACER/CEER yearly meeting.

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

*Respondent skipped this question*

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?**

Yes

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?**

Yes

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

National production – conventional,  
National production – Biomethane & Power-to-gas,  
Pipeline imports from Russia,  
Pipeline imports from Norway, LNG imports

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?**

*Respondent skipped this question*

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

*Respondent skipped this question*

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

*Respondent skipped this question*



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

Treating LNG as a multi-source supply would bring further added-value to the assessment.

,

If LNG is to be treated as a multi-source supply, this case, could you specify what added-value you would see in this approach? If the answer above is no, could you specify why?

UPRIGAZ considers that LNG is becoming a global market and that TYNDP 2017 and 2018 should take the element into account.

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

Yes

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

Yes

**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

### PAGE 17: Final remarks

**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*



PAGE 2: Identification

**Q1: What is your name?**

**Q2: What is your organisation?**

REF-E

**Q3: What is your email address?**

**Q4: How would you describe your organisation?  
(Please choose only the category which best represents your organisation)**

Other (please specify),  
If indicated, please specify below:  
Energy Research consultancy firm

**Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.**

*Respondent skipped this question*

PAGE 3: Stakeholder questions - General Information

**Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?**

ENTSO-E TYNDP 2016, ENTSOG TYNDP 2015

**Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?**

No

**Q8: If yes, please select below the prior event(s) to which you participated:**

*Respondent skipped this question*

PAGE 4: Stakeholder questions - General information

**Q9: What are the TYNDP elements most valuable for your activity?**

Demand scenarios, Information on projects,  
Information on the TYNDP modelling (Annex F)

PAGE 5: General feedback

**Q10: Would you like to provide input to the General Feedback section?**

Yes

PAGE 6: General feedback

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	<i>Respondent skipped this question</i>
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	<i>Respondent skipped this question</i>
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	<i>Respondent skipped this question</i>
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	<i>Respondent skipped this question</i>
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	<i>Respondent skipped this question</i>
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	<i>Respondent skipped this question</i>

### PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	<i>Respondent skipped this question</i>
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### PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	<i>Respondent skipped this question</i>
<b>Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?</b>	<i>Respondent skipped this question</i>

**Q22:** Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?

*Respondent skipped this question*

**Q23:** For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?

*Respondent skipped this question*

**Q24:** For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?

*Respondent skipped this question*

## PAGE 9: Supply

**Q25:** Would you like to provide input to the Supply section?

*Respondent skipped this question*

## PAGE 10: Supply

**Q26:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?

*Respondent skipped this question*

**Q27:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?

*Respondent skipped this question*

**Q28:** TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?

*Respondent skipped this question*

**Q29:** Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?

*Respondent skipped this question*

## PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

*Respondent skipped this question*

**PAGE 12: Infrastructure**

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

*Respondent skipped this question*

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

*Respondent skipped this question*

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

*Respondent skipped this question*

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

*Respondent skipped this question*

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

*Respondent skipped this question*

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

*Respondent skipped this question*

**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

**Q38: Would you like to provide input to the Assessment section?**

*Respondent skipped this question*

**PAGE 14: Assessment, Energy Transition and Gas Quality Outlook**

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?</b>	<i>Respondent skipped this question</i>
<b>Q42: Which elements would you suggest to further improve?</b>	<i>Respondent skipped this question</i>
<b>Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>
<b>Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>

### PAGE 15: Towards TYNDP 2018

<b>Q47: Would you like to provide input to the TYNDP 2018 section?</b>	<i>Respondent skipped this question</i>
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### PAGE 16: Towards TYNDP 2018

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	<i>Respondent skipped this question</i>
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	<i>Respondent skipped this question</i>
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	<i>Respondent skipped this question</i>
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

*Respondent skipped this question*

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

*Respondent skipped this question*

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

*Respondent skipped this question*

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

*Respondent skipped this question*

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

*Respondent skipped this question*

**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

### PAGE 17: Final remarks

**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*



PAGE 2: Identification

Q1: What is your name?

Q2: What is your organisation?

Q3: What is your email address?

Q4: How would you describe your organisation?  
(Please choose only the category which best represents your organisation)

Project promoter

Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.

My response should only be disclosed anonymously

PAGE 3: Stakeholder questions - General Information

Q6: Do you have a former experience in reading ENTSOG and/or ENTSOG-E TYNDPs?

ENTSO-E TYNDP 2016

Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?

Yes

Q8: If yes, please select below the prior event(s) to which you participated:

SJWS#4 – 23 February 2016,

SJWS#2 – 26 January 2016

PAGE 4: Stakeholder questions - General information

Q9: What are the TYNDP elements most valuable for your activity?

Identification of the infrastructure needs,  
Barriers to investment

PAGE 5: General feedback

Q10: Would you like to provide input to the General Feedback section?

Yes

PAGE 6: General feedback

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	difficult*,  * If difficult, please specify below: Too many colored maps, too little graphs and other or more condensed ways of visual presentation
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	difficult*,  * If difficult, please specify below: too many geographical maps with limited additional informational content
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	Yes
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	Advanced project status,  Indication of project costs, TYNDP 2017 map
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	Yes
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	Infrastructure chapter,  Barriers to Investment chapter

### PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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### PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	No
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## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

No

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

No,

If no, please specify why:  
broader range for analytical purposes preferred

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

### PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

### PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

*Respondent skipped this question*

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

*Respondent skipped this question*

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

No,

If no, please specify why:  
quantitative approach preferred

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes

PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

*Respondent skipped this question*

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

Yes

PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

Yes

PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need	Yes, this proved useful to me
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Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop	Yes, this proved useful to me
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<b>Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?</b>	Yes
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<b>Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?</b>	Yes
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<b>Q42: Which elements would you suggest to further improve?</b>	<i>Respondent skipped this question</i>
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<b>Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?</b>	Yes
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<b>Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?</b>	Yes
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<b>Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	No
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<b>Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	Yes
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**PAGE 15: Towards TYNDP 2018**

<b>Q47: Would you like to provide input to the TYNDP 2018 section?</b>	Yes
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**PAGE 16: Towards TYNDP 2018**

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
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<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
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# ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	No
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	Further comments: very supportive
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	LNG imports, Pipeline imports from Azerbaijan, Pipeline imports from Libya, Pipeline imports from Algeria, Pipeline imports from Norway, Pipeline imports from Russia
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>
<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	Treating LNG as a multi-source supply would bring further added-value to the assessment. ,  If LNG is to be treated as a multi-source supply, this case, could you specify what added-value you would see in this approach? If the answer above is no, could you specify why? Because we are at the beginning of the process of establishing a world market for LNG, price differentials cob fob.
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	Yes
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)</b>	<i>Respondent skipped this question</i>
<b>Q60: Do you have other expectations regarding TYNDP 2018?</b>	<i>Respondent skipped this question</i>

PAGE 17: Final remarks

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**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*

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PAGE 2: Identification

**Q1: What is your name?**

**Q2: What is your organisation?**

**Q3: What is your email address?**

**Q4: How would you describe your organisation?  
(Please choose only the category which best represents your organisation)**

Project promoter,

If indicated, please specify below:  
Joint stock company for performing energy activities  
(pipeline transport).

**Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.**

My response should only be disclosed anonymously

PAGE 3: Stakeholder questions - General Information

**Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?**

*Respondent skipped this question*

**Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?**

*Respondent skipped this question*

**Q8: If yes, please select below the prior event(s) to which you participated:**

*Respondent skipped this question*

PAGE 4: Stakeholder questions - General information

**Q9: What are the TYNDP elements most valuable for your activity?**

*Respondent skipped this question*

PAGE 5: General feedback

**Q10: Would you like to provide input to the General Feedback section?**

*Respondent skipped this question*

PAGE 6: General feedback

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	<i>Respondent skipped this question</i>
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	<i>Respondent skipped this question</i>
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	<i>Respondent skipped this question</i>
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	<p>TYNDP 2017 map,</p> <p>Common data set used for TYNDP 2017 and GRIPs 2017</p> <p>,</p> <p>Qualitative approach to LNG embedded diversification</p>
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	<i>Respondent skipped this question</i>
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	<i>Respondent skipped this question</i>

### PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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### PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	<i>Respondent skipped this question</i>
<b>Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?</b>	<i>Respondent skipped this question</i>

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

Yes

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

*Respondent skipped this question*

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

*Respondent skipped this question*

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

*Respondent skipped this question*

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

*Respondent skipped this question*

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

*Respondent skipped this question*

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

*Respondent skipped this question*

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

*Respondent skipped this question*

## PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

*Respondent skipped this question*

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

*Respondent skipped this question*

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

*Respondent skipped this question*

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

*Respondent skipped this question*

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

*Respondent skipped this question*

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

*Respondent skipped this question*

PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

Yes

PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?</b>	<i>Respondent skipped this question</i>
<b>Q42: Which elements would you suggest to further improve?</b>	<i>Respondent skipped this question</i>
<b>Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>
<b>Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>

### PAGE 15: Towards TYNDP 2018

<b>Q47: Would you like to provide input to the TYNDP 2018 section?</b>	<i>Respondent skipped this question</i>
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### PAGE 16: Towards TYNDP 2018

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	<i>Respondent skipped this question</i>
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	<i>Respondent skipped this question</i>
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	<i>Respondent skipped this question</i>
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

*Respondent skipped this question*

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

*Respondent skipped this question*

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

*Respondent skipped this question*

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

*Respondent skipped this question*

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

*Respondent skipped this question*

**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

### PAGE 17: Final remarks

**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*



PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	EUROGAS
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Association (please specify type)
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	My response should only be disclosed anonymously

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOG TYNDP 2015, ENTSO-E TYNDP 2016
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	TYNDP 2017 kick-off workshop – 12 January 2016 , SJWS#1 – 13 January 2016

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Information on projects, Barriers to investment, Identification of the infrastructure needs , Assessment of TYNDP projects and TYNDP modelling results provided in Annex E , Information on the TYNDP modelling (Annex F)
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PAGE 5: General feedback

<b>Q10: Would you like to provide input to the General Feedback section?</b>	Yes
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PAGE 6: General feedback

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	easy
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	easy
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	Yes
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	Indication how TYNDP scenarios comply with the EU energy and climate targets , Advanced project status, TYNDP 2017 map
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	
<p>ENTSOG has done very good and transparent work in analysing physical network opportunities and constraints in multiple scenarios. The modelling work, however, is weaker. Especially, the pricing and costs/benefits computations arguably require more scrutiny and eventual refinement. As the computations asked for by the legislation may not turn out to be main determinants of network viability, the limitations of the resultant model should be better acknowledged. It is accepted that some sort of model is needed to assist a decision-making process, but ENTSOG themselves recognises, there are too many complexities to be factored in to allow them to arrive at a full-blown market model. Caveats should therefore be attached to the attempt to develop monetised indicators and project ranking. One refinement could be to introduce the impact of new investment on tariffs as part of the cost-benefit analysis of projects and consequences that follow. Certainly, more clarification is needed on the assumptions made in determining PCIs.</p>	
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	No
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	<p>Infrastructure chapter,</p> <p>Barriers to Investment chapter,</p> <p>Assessment chapter,</p> <p>Please specify your indications below, and indicate if there are elements of the selected chapter(s) that you consider could be left out of the Main Report: See answer to Question 61.</p>

PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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PAGE 8: Demand

**Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

No,

Explanation :  
Although alignment with the views on electricity market development is important, the traffic on assumptions seems to have been one way. Eurogas during the process expressed concern that the acceptance of assumptions driven by ENTSO-E were disadvantageous to the outlook on the future role of gas, even if the inputs were modified by national perceptions. Eurogas supports the need to take an integrated view of the energy system, but this should be more demonstrably an holistic approach.

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes,

Explanation :  
Policy to reach climate change targets will be an important determinant in the demand for gas, and therefore assessing the scenarios against demand makes sense.

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

Explanation:  
It makes sense to have a practicable alignment with ENTSO-E in this area, but on a precautionary basis. Ultimately the generation mix should be market driven, not developed by network interests. Moreover it was disappointing to note that ENTSO-E's proposed TYNDP template for 2030 and 2040 storylines had no direct section on gas-fired power generation.

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

I find this information interesting, but I do not directly use it

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

*Respondent skipped this question*

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

No,

Please specify:

There is a risk that in trying to be so comprehensive, the focus of the TYNDP is lost. While supply diversification is important, in so far as it entails consideration of routes to EU borders and possible consequences for within-EU capacity, it is premature to include the potential of uncertain sources.

#### PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

#### PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

No

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

As the TYNDP provides input to the PCI section, we would like to see more transparency in this part of the process too. Markets should determine where new investment happens, and there should be demonstrable benefits to the market.

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

No,

If no, which additional barriers would you suggest to consider?  
ENTSOG could be more investigative with regard to TSOs own activities/inactivities that may result in blocking progress.

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

No,

If no, how can we further improve?  
The list represents a starting point, but is not necessarily objective in the provision of reasons.

#### PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

Yes

#### PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need

Yes, this proved useful to me

Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop

Yes, this proved useful to me

Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)

Yes, this proved useful to me

Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)

Yes, this proved useful to me

Inclusion of the supply adequacy outlook in Assessment chapter

Yes, this proved useful to me

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

No,

If no, please specify why:  
No. it goes beyond the main objectives of the TYNDP and its objective, and seems to have the aim of showing that infrastructure costs-only represent a "very limited share" of supply costs in end-user bills. The experience of consumers is that this share is increasing and the methodology therefore, if the exercise is repeated, requires further scrutiny.

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?** No

**Q42: Which elements would you suggest to further improve?**

This whole section touches on commercial and market considerations, and arguably goes beyond the objective of a TYNDP.

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?** No,  
If yes, Could you indicate in which context? Do you have any suggestion on the format of these results? Not personally, but they show the comprehensive underpinning of ENTSOG's work.

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?** Yes

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)** Yes,  
Please provide your comments below:  
While natural gas will continue flowing through the system for many years to come, it could be useful to consider and explain the readiness of networks to be adapted to carry a range of renewable gases in the future.

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)** No

### PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?** Yes

### PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?** No

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?** *Respondent skipped this question*

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?** Yes

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?** Yes



**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

*Respondent skipped this question*

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?**

*Respondent skipped this question*

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

Although ENTSOG has calculated certain supply scenarios, finally actual supply and the routes chosen will be for market parties to determine. The resilience of the system is important, and in that context the infrastructure standard is relevant, but considerations of the infrastructure standard should not be confused with supply standard aspects.

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

*Respondent skipped this question*

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

A priority should be to optimise use of existing infrastructure. If it happens that infrastructure becomes stranded, then it should be revalued at a rate to incentivise some use, e.g. RES gas.

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

Treating LNG as a multi-source supply would bring further added-value to the assessment.

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If LNG is to be treated as a multi-source supply, this case, could you specify what added-value you would see in this approach? If the answer above is no, could you specify why?

Yes. The GLE section on LNG as multi-source recalls how important LNG is in boosting supply competition and supporting supply security, and this complementary role may be better recognised if a multi-source supply approach is taken. Arguably, the single source approach implies a bias towards pipeline investments.

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

Yes,

Are there additional elements you would suggest to include? If the answer above is no, could you specify why?

The chapter is descriptive, offering little added-value. It would be interesting to hear from the TSOs how they are preparing for implied new uses of their assets, and what technical obstacles they face. The relevance of the topic to the TYNDP exercise should be clear.

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

No

**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

**Q61: Do you have any other comment to TYNDP 2017?**

It is a very comprehensive work, and in some respects now goes beyond what is necessary to be considered in the TYNDP context. Future infrastructure development should consist of largely market-driven investment, with a check on the security of supply considerations, and therefore the TYNDP should identify more clearly the basic conclusions and/or project related recommendations. The short paragraph on p. 237 could be elaborated. Future TYNDPs should focus on projects. Commercial material, such as internal market assessments, could be referenced without the associated detail which, although interesting to see, requires much greater scrutiny. Gas Quality considerations are important but could be handled separately, notably related to implementation of the Code on Gas Quality and Interoperability.

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PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	Klaipėdos Nafta
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Project promoter
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	None
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	No
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	<i>Respondent skipped this question</i>

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	<i>Respondent skipped this question</i>
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PAGE 5: General feedback

<b>Q10: Would you like to provide input to the General Feedback section?</b>	Yes
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PAGE 6: General feedback

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	easy
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## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q12: Are the maps, graphs and tables easy to understand?</b>	easy
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	Yes,  Please specify: Appreciate the transparency and ability to see detailed data behind the calculations.
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	TYNDP 2017 map,  Qualitative approach to LNG embedded diversification ,  Indication how TYNDP scenarios comply with the EU energy and climate targets
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	Yes
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	Barriers to Investment chapter, Supply chapter,  Please specify your indications below, and indicate if there are elements of the selected chapter(s) that you consider could be left out of the Main Report: Supply chapter is important and we are happy to see it described in detail in the report. There could be more discussion on specific national interests and potential overall risks associated with each supply source. Barriers to investment could touch more on the challenges projects face to achieve cross boarder agreement on what the benefits projects bring to member states.

### PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	No
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### PAGE 8: Demand

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q20:** ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?

*Respondent skipped this question*

**Q21:** TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?

*Respondent skipped this question*

**Q22:** Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?

*Respondent skipped this question*

**Q23:** For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?

*Respondent skipped this question*

**Q24:** For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?

*Respondent skipped this question*

### PAGE 9: Supply

**Q25:** Would you like to provide input to the Supply section?

No

### PAGE 10: Supply

**Q26:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?

*Respondent skipped this question*

**Q27:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?

*Respondent skipped this question*

# ENTSOG TYNDP 2017 Public consultation questionnaire

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

*Respondent skipped this question*

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

*Respondent skipped this question*

## PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

## PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

No,  
If no, please specify why:  
It is misleading to use the number of years to commissioning as a metric in deciding whether a project is advanced or less-advanced. The maturity of the project and the extent of project de-risking does not necessarily correlate to time to maturity.

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

Listing of technical execution risks for projects.

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

No,  
If no, which additional barriers would you suggest to consider?  
Barriers to investment could touch more on the challenges projects face to achieve cross boarder agreement on what the benefits projects bring to member states.

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

Yes

PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

No

PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

*Respondent skipped this question*

**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

*Respondent skipped this question*

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

*Respondent skipped this question*

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

No

PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

*Respondent skipped this question*



## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	<i>Respondent skipped this question</i>
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	<i>Respondent skipped this question</i>
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	<i>Respondent skipped this question</i>
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>
<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	<i>Respondent skipped this question</i>
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)</b>	<i>Respondent skipped this question</i>
<b>Q60: Do you have other expectations regarding TYNDP 2018?</b>	<i>Respondent skipped this question</i>

PAGE 17: Final remarks

<b>Q61: Do you have any other comment to TYNDP 2017?</b>	<i>Respondent skipped this question</i>
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PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	Magyar Gáz Tranzit Zrt.
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Project promoter,  If indicated, please specify below: Mayar Gáz Tranzit (MGT) is one of the Hungarian TSO. MGT is operated the Hungarian part of the Slovak-Hungarian interconnector.
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOG TYNDP 2015, ENTSO-E TYNDP 2016
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	Yes
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	SJWS#3 – 9 February 2016,  TYNDP Workshop – 11 May 2016

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Demand scenarios, Supply potentials,  Information on projects,  Assessment of TYNDP projects and TYNDP modelling results provided in Annex E
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PAGE 5: General feedback

<b>Q10: Would you like to provide input to the General Feedback section?</b>	Yes
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PAGE 6: General feedback

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	very easy
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	easy
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	Yes
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	Indication how TYNDP scenarios comply with the EU energy and climate targets , Advanced project status, Indication of project costs
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	Yes
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	Supply chapter, Infrastructure chapter

PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	Yes
<b>Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?</b>	Yes

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

No

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

I find this information interesting, but I do not directly use it

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

Yes

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes

## PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

If no, please specify why:  
It is not clear for me how determine the TYNDP the differences between advanced and less advanced FID projects.

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

No

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

No,  
If no, how can we further improve?  
I think that the 3rd PCI list is necessary in the project level information .

PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

Yes

PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need	Yes, this proved useful to me
Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop	No, not useful
Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)	Yes, this proved useful to me
Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)	Yes, this proved useful to me
Inclusion of the supply adequacy outlook in Assessment chapter	No, not useful

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

Yes

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

Would you have any suggestion of public information that could be used to support this analysis? If the assessment did not prove valuable, could you indicate why?  
Import prices are very different at the EU cross-borders.

**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

Yes

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

Yes

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

No

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes

PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

PAGE 16: Towards TYNDP 2018

# ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	No
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	Yes
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	Pipeline imports from Russia , LNG imports
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>
<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	Treating LNG as a multi-source supply would bring further added-value to the assessment.
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	Yes
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)</b>	No
<b>Q60: Do you have other expectations regarding TYNDP 2018?</b>	<i>Respondent skipped this question</i>



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q61: Do you have any other comment to TYNDP 2017?** *Respondent skipped this question*

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PAGE 2: Identification

Q1: What is your name?

Q2: What is your organisation?

Elengy

Q3: What is your email address?

Q4: How would you describe your organisation?  
(Please choose only the category which best represents your organisation)

Other (please specify)

Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.

*Respondent skipped this question*

PAGE 3: Stakeholder questions - General Information

Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?

ENTSO-E TYNDP 2016, ENTSOG TYNDP 2015

Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?

Yes

Q8: If yes, please select below the prior event(s) to which you participated:

SJWS#5 – 10 March 2016,  
SJWS#4 – 23 February 2016,  
SJWS#3 – 9 February 2016,  
SJWS#1 – 13 January 2016,  
TYNDP 2017 kick-off workshop – 12 January 2016

PAGE 4: Stakeholder questions - General information

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q9: What are the TYNDP elements most valuable for your activity?**

Information on the TYNDP modelling (Annex F) ,  
Assessment of TYNDP projects and TYNDP modelling results provided in Annex E  
,  
Identification of the infrastructure needs ,  
Barriers to investment, Information on projects,  
Supply potentials, Demand scenarios,  
Other (please specify below)  
Specificities of LNG compared to pipeline gas

### PAGE 5: General feedback

**Q10: Would you like to provide input to the General Feedback section?**

*Respondent skipped this question*

### PAGE 6: General feedback

**Q11: Is TYNDP 2017 easy to read and navigate through?**

*Respondent skipped this question*

**Q12: Are the maps, graphs and tables easy to understand?**

*Respondent skipped this question*

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

*Respondent skipped this question*

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

*Respondent skipped this question*

**Q15: Do some TYNDP elements require better explanation? Which ones?**

*Respondent skipped this question*

**Q16: Is there additional information you would like to find in TYNDP?**

*Respondent skipped this question*

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

*Respondent skipped this question*

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

*Respondent skipped this question*

### PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

*Respondent skipped this question*

**PAGE 8: Demand**

**Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

*Respondent skipped this question*

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

*Respondent skipped this question*

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

*Respondent skipped this question*

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

*Respondent skipped this question*

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

*Respondent skipped this question*

**PAGE 9: Supply**

**Q25: Would you like to provide input to the Supply section?**

*Respondent skipped this question*

**PAGE 10: Supply**

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

*Respondent skipped this question*

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

*Respondent skipped this question*

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

*Respondent skipped this question*

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

*Respondent skipped this question*

### PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

*Respondent skipped this question*

### PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

*Respondent skipped this question*

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

*Respondent skipped this question*

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

*Respondent skipped this question*

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

*Respondent skipped this question*

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

*Respondent skipped this question*

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

*Respondent skipped this question*

### PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

*Respondent skipped this question*

### PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

*Respondent skipped this question*

**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

*Respondent skipped this question*

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

*Respondent skipped this question*

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

### PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

*Respondent skipped this question*

### PAGE 16: Towards TYNDP 2018

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	<i>Respondent skipped this question</i>
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	<i>Respondent skipped this question</i>
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	<i>Respondent skipped this question</i>
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>
<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	<i>Respondent skipped this question</i>
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)</b>	<i>Respondent skipped this question</i>
<b>Q60: Do you have other expectations regarding TYNDP 2018?</b>	<i>Respondent skipped this question</i>

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q61: Do you have any other comment to TYNDP 2017?** *Respondent skipped this question*

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PAGE 2: Identification

**Q1: What is your name?**

**Q2: What is your organisation?**

Edison SpA

**Q3: What is your email address?**

**Q4: How would you describe your organisation?**  
(Please choose only the category which best represents your organisation)

*Respondent skipped this question*

**Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.**

*Respondent skipped this question*

PAGE 3: Stakeholder questions - General Information

**Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?**

ENTSOG TYNDP 2015

**Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?**

Yes

**Q8: If yes, please select below the prior event(s) to which you participated:**

TYNDP 2017 kick-off workshop – 12 January 2016 ,  
SJWS#1 – 13 January 2016 ,  
SJWS#2 – 26 January 2016 ,  
SJWS#3 – 9 February 2016 ,  
SJWS#4 – 23 February 2016 ,  
TYNDP Workshop – 11 May 2016

PAGE 4: Stakeholder questions - General information

**Q9: What are the TYNDP elements most valuable for your activity?**

Demand scenarios, Supply potentials,  
Information on projects,  
Identification of the infrastructure needs ,  
Information on the TYNDP modelling (Annex F)

PAGE 5: General feedback

**Q10: Would you like to provide input to the General Feedback section?**

Yes

PAGE 6: General feedback

**Q11: Is TYNDP 2017 easy to read and navigate through?**

easy

**Q12: Are the maps, graphs and tables easy to understand?**

easy

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

*Respondent skipped this question*

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

Indication how TYNDP scenarios comply with the EU energy and climate targets  
,  
Further consideration of ENTSO-E TYNDP scenario information  
,  
Advanced project status

**Q15: Do some TYNDP elements require better explanation? Which ones?**

*Respondent skipped this question*

**Q16: Is there additional information you would like to find in TYNDP?**

*Respondent skipped this question*

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

Yes

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

Demand chapter, Supply chapter,  
Infrastructure chapter, Assessment chapter

PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

Yes

PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	Yes
<b>Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?</b>	Yes
<b>Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?</b>	Yes,  Explanation: Edison welcomes the collaboration between gas and electricity TSOs to improve consistency between the TYNDPs, building a scenario consistent with the long term evolution of gas demand and suitable for the assessment of gas infrastructure projects. To reach this goal, it could be useful an alignment with ENTSO-E in this area. In particular we suggest the opportunity to introduce in ENTSO-E's TYNDP a template for 2030 and 2040 storylines and a dedicated section on gas-fired power generation. It is highly recommended to have the same figures, relative to the gas generation in the power sector, in both TYNDPs elaborated by the ENTSO-E and ENTSO-G.
<b>Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?</b>	Yes
<b>Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?</b>	This information is useful to me

## PAGE 9: Supply

<b>Q25: Would you like to provide input to the Supply section?</b>	Yes
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## PAGE 10: Supply

<b>Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a "tomorrow as today" approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?</b>	Yes
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**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

Yes

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes,

Please specify:

The main challenge for the European gas infrastructure is the maintaining of its supply diversification. In this context, it will be very important that additional gas supply sources will be investigated and, if the case, it will be necessary to provide them the necessary support. The Eastern Mediterranean Region is emerging as a significant export province that - thanks to its very significant reserves size and proximity to Europe – could contribute to cover expected European additional import requirements. The EastMed project, included in the PCI list, is an intra-EU pipeline, technically feasible, that could directly connect the European markets to the Eastern Mediterranean region securing part of the recently discovered reserves in the area. The project benefits of strong politically support from the Governments of the interested countries (Cyprus, Greece, Israel and Italy) and European Commission, that has co-financed the Pre-FEED studies through CEF program. Considered the above, the reserves from Eastern Mediterranean region, especially Cyprus and Israel, shouldn't be included in the potential supply sources with high level of uncertainty. On the contrary, we highly recommended to take concretely in consideration these reserves, evaluating its inclusion as supply sources in the TYNDP assessment.

PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

PAGE 12: Infrastructure

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q31:</b> In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?	Yes
<b>Q32:</b> TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?	No, If no, please specify why: We believe that this information is not relevant to the TYNDP purposes.
<b>Q33:</b> TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?	Yes
<b>Q34:</b> In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?	Yes
<b>Q35:</b> Is there further information on projects that you would like to see reflected in TYNDP?	<i>Respondent skipped this question</i>
<b>Q36:</b> The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?	Yes
<b>Q37:</b> Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?	Yes

### PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

<b>Q38:</b> Would you like to provide input to the Assessment section?	Yes
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### PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need	Yes, this proved useful to me
Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop	Yes, this proved useful to me
Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)	Yes, this proved useful to me
Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)	Yes, this proved useful to me
Inclusion of the supply adequacy outlook in Assessment chapter	Yes, this proved useful to me

<b>Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?</b>	Yes
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<b>Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?</b>	Yes
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<b>Q42: Which elements would you suggest to further improve?</b>	<i>Respondent skipped this question</i>
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<b>Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?</b>	Yes
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<b>Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?</b>	Yes
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<b>Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	No
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<b>Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	No
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PAGE 15: Towards TYNDP 2018

<b>Q47: Would you like to provide input to the TYNDP 2018 section?</b>	Yes
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PAGE 16: Towards TYNDP 2018

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	Yes
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## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	Yes
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	Yes
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	If Others : please specify below: Pipeline imports from Eastern Mediterranean Area (Cyprus and Israel)
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>
<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	Keeping the same approach as in TYNDP 2017 would provide the necessary insights

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

Yes,

Are there additional elements you would suggest to include? If the answer above is no, could you specify why?

The TYNDP underlines the role of gas in contributing to an energy system that can continue beyond 2050 as a sustainable low-carbon system. In this sense, the new uses of gas and the LNG terminals additional services could be a big opportunity also for the European energy market in general. The provision of new services in the LNG and gas sector will enable the EU to move towards a cleaner energy mix, improving also in terms of security of supply and affordability. In this sense the upgrading of EU regasification facilities, including the provision of services such as reloading of small scale vessels, loading/bunkering services at LNG storage facilities as well as truck loading to unlock new potential demand basins, should be more investigated. Edison believes also that the opportunity offered by projects related to coastal storage not necessarily functional to regasification terminals should be fully explored and where possible exploited. This kind of projects typically are bunkering/coastal facilities with a storage and transfer capacity of liquefied natural gas products for industrial and commercial usage, such as for both land, buses and trucks, and sea transport. These services could be a good solution to implement useful addition services and, most of all, they could help to connect areas typically off-grid, increasing the security of supply. For the reasons stated above, Edison firmly believes that this kind of projects shall be included in future TYNDPs. Moreover, LNG contributes to increase supply competition and security of supply, especially in case of supply emergencies. LNG can also provide peak shaving service especially for those countries where an extremely variable gas demand is recorded.

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

No

**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

**PAGE 17: Final remarks**

**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*





PAGE 2: Identification

Q1: What is your name?

Q2: What is your organisation?

EFET

Q3: What is your email address?

Q4: How would you describe your organisation?  
(Please choose only the category which best represents your organisation)

Association (please specify type),  
If indicated, please specify below:  
European Federation of Energy Traders

Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.

*Respondent skipped this question*

PAGE 3: Stakeholder questions - General Information

Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?

*Respondent skipped this question*

Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?

*Respondent skipped this question*

Q8: If yes, please select below the prior event(s) to which you participated:

*Respondent skipped this question*

PAGE 4: Stakeholder questions - General information

Q9: What are the TYNDP elements most valuable for your activity?

*Respondent skipped this question*

PAGE 5: General feedback

Q10: Would you like to provide input to the General Feedback section?

Yes

PAGE 6: General feedback

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	<i>Respondent skipped this question</i>
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	<i>Respondent skipped this question</i>
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	<i>Respondent skipped this question</i>
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	Advanced project status, Indication of project costs, TYNDP 2017 map
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	<i>Respondent skipped this question</i>
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	<i>Respondent skipped this question</i>

### PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	No
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### PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	<i>Respondent skipped this question</i>
<b>Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?</b>	<i>Respondent skipped this question</i>

## ENTSOE TYNDP 2017 Public consultation questionnaire

**Q22:** Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?

*Respondent skipped this question*

**Q23:** For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?

*Respondent skipped this question*

**Q24:** For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?

*Respondent skipped this question*

### PAGE 9: Supply

**Q25:** Would you like to provide input to the Supply section?

No

### PAGE 10: Supply

**Q26:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?

*Respondent skipped this question*

**Q27:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?

*Respondent skipped this question*

**Q28:** TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?

*Respondent skipped this question*

**Q29:** Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?

*Respondent skipped this question*

### PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

No

PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

*Respondent skipped this question*

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

*Respondent skipped this question*

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

*Respondent skipped this question*

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

*Respondent skipped this question*

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

*Respondent skipped this question*

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

*Respondent skipped this question*

PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?**

No

PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?</b>	<i>Respondent skipped this question</i>
<b>Q42: Which elements would you suggest to further improve?</b>	<i>Respondent skipped this question</i>
<b>Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?</b>	<i>Respondent skipped this question</i>
<b>Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>
<b>Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)</b>	<i>Respondent skipped this question</i>

### PAGE 15: Towards TYNDP 2018

<b>Q47: Would you like to provide input to the TYNDP 2018 section?</b>	No
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### PAGE 16: Towards TYNDP 2018

<b>Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?</b>	<i>Respondent skipped this question</i>
<b>Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?</b>	<i>Respondent skipped this question</i>
<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	<i>Respondent skipped this question</i>
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	<i>Respondent skipped this question</i>
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	<i>Respondent skipped this question</i>
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	<i>Respondent skipped this question</i>
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)</b>	<i>Respondent skipped this question</i>
<b>Q60: Do you have other expectations regarding TYNDP 2018?</b>	<i>Respondent skipped this question</i>

### PAGE 17: Final remarks

#### **Q61: Do you have any other comment to TYNDP 2017?**

EFET recognises and appreciates the work and detail contributed by ENTSOG and European TSOs in the production of this report, which is an important reference document showing current and potential gas infrastructure.

Nevertheless, EFET has strong reservations about scenarios that show a need for significant incremental investment in gas transportation capacity, and about the economic assumptions used to support them. It is important that proposed investments have more robust economic justification than is implied here, and the inclusion of projects in the TYNDP cannot alone be taken as evidence of any market justification or cost benefit analysis.

As the value and usefulness of this work emerges over time as it is used to inform the analysis of opportunities and commercial decisions, we trust that EFET and its member companies may continue to provide feedback to ENTSOG outside the consultation period.



PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	ENEL
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Project promoter, If indicated, please specify below: We are Network user, Project promoter, Trader, End User.
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	My response should only be disclosed anonymously

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOE TYNDP 2015, ENTSO-E TYNDP 2016
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	Yes
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	SJWS#5 – 10 March 2016, TYNDP Workshop – 11 May 2016, Early transparency workshop (SJWS#6) – 13 July 2016

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Supply potentials, Information on projects, Identification of the infrastructure needs
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PAGE 5: General feedback

<b>Q10: Would you like to provide input to the General Feedback section?</b>	Yes
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<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	easy
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	easy
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	Yes
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	<p>Indication how TYNDP scenarios comply with the EU energy and climate targets</p> <p>,</p> <p>Qualitative approach to LNG embedded diversification</p> <p>,</p> <p>Advanced project status</p>
<p><b>Q15: Do some TYNDP elements require better explanation? Which ones?</b></p> <p>Some of the parameters used for the Demand Scenarios should be described in more detail. It is important to specify the absolute value and/or the percentage value of factors characterizing the different scenarios, such as the level of renewables deployment (overall e per sector), the electrification of the heating sector and the transport sector, instead of just grading them as low, moderate or high.</p> <p>In addition, we highlight that the Spanish gas demand for the period 2017-2022, in all TYNDP 2017 scenarios, is too optimistic. It is between 10%-22% higher than the demand forecasted by the Spanish Regulatory Authority (NRA) and the Spanish Ministry. The reason of such difference should be explained.</p> <p>Spanish NRA and Ministry gas demand forecasts for 2017-2022 can be found at the following link:  <a href="https://www.cnmec.es/sites/default/files/1375186_7.pdf">https://www.cnmec.es/sites/default/files/1375186_7.pdf</a>.</p> <p>Spanish TSO forecast for 2017 can be found here:  <a href="http://www.enagas.es/stfls/ENAGAS/Gesti%C3%B3n%20T%C3%A9cnica%20del%20Sistema/Documentos/DEMANDA/PA%20-17_subida%20web%20oficial.pdf">http://www.enagas.es/stfls/ENAGAS/Gesti%C3%B3n%20T%C3%A9cnica%20del%20Sistema/Documentos/DEMANDA/PA%20-17_subida%20web%20oficial.pdf</a></p> <p>Finally, regarding the infrastructure section, we call for the publication of the investment costs of projects promoted by TSOs. In fact, the concern expressed on page 129 - "Investment costs are for project promoters in many cases commercially sensitive information and might have the potential to negatively affect the competitive position of project promoters vis-à-vis contractors" – do not apply to TSOs. We deem also important to have in the TYNDP at least the investment costs aggregated by National Network Development Plan or by region (maintaining the split by projects with FID, advanced projects non-FID and less advanced projects non-FID).</p>	
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	
<p>We would like to see - in Annex C, per country - data allowing the understanding of the contribution of each of the final sectors to the increase/decrease of gas demand and electricity demand.</p> <p>Moreover, each of the three on-target scenarios should be detailed in terms of GHG emissions reduction, RES shares and Energy Efficiency improvement achieved.</p>	
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	Yes



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

Demand chapter, Supply chapter,  
Infrastructure chapter, Assessment chapter,  
Energy Transition chapter

### PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

Yes

### PAGE 8: Demand

**Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

No,

Explanation :

We do not see any benefit from including in the TYNDP a scenario that falls short in achieving the EU 2030 energy and climate targets. Thus, only Blue Transition, Green Evolution and EU Green Revolution should be part of the TYNDP.

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

Yes,

Explanation:

We welcome the alignment of ENTSOG scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report. To assess investments needs, it is extremely important to understand the future role of gas in the power sector and the impact of the increasing RES electricity production on the operation of CCGTs and OCGTs in the energy and balancing markets.

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

### PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

PAGE 10: Supply

**Q26:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?

Yes

**Q27:** Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?

Yes

**Q28:** TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?

Yes,

If no, please specify why:  
However, we believe that each LNG regasification terminal should be treated as an entry point.

**Q29:** Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?

Yes

PAGE 11: Infrastructure

**Q30:** Would you like to provide input to the Infrastructure section?

Yes

PAGE 12: Infrastructure

**Q31:** In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?

Yes,

If no, please specify why:  
We strongly support the distinction between advanced and less-advanced non-FID projects.

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

No,

If no, please specify why:  
It is important to provide at least the investment costs aggregated by National Network Development Plan or by region (maintaining the split of costs by status of projects). Moreover, for projects promoted by TSOs, the investment costs should be published by project.

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

As indicated in the answer to question 32, it would be important to provide at least the investment costs aggregated by National Network Development Plan or by region (maintaining the split of costs by status of projects). Moreover, for projects promoted by TSOs, the investment costs should be published by project.  
In addition, we would like to see the share of total CAPEX already spent. In addition, the indication of the average investment cost per each type of project (LNG terminal, storage, etc) would be of interest.

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

Yes

**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

**Q38: Would you like to provide input to the Assessment section?**

Yes

**PAGE 14: Assessment, Energy Transition and Gas Quality Outlook**

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need	Yes, this proved useful to me
Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop	Yes, this proved useful to me
Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)	Yes, this proved useful to me
Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)	Yes, this proved useful to me
Inclusion of the supply adequacy outlook in Assessment chapter	Yes, this proved useful to me

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?** Yes

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?** Yes

**Q42: Which elements would you suggest to further improve?**

The contribution of LNG to the Import Route Diversification indicator as well as to the Supply Source Price Diversification indicator should be better valued. Each LNG regasification terminal represents an entry point to the gas system, which provides access to several gas supply sources.

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?** Respondent skipped this question

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?** Yes

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)** Respondent skipped this question

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)** Yes

**PAGE 15: Towards TYNDP 2018**

**Q47: Would you like to provide input to the TYNDP 2018 section?** Yes

**PAGE 16: Towards TYNDP 2018**

# ENTSOG TYNDP 2017 Public consultation questionnaire

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?** Yes

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

We believe that the benefits of LNG to competition and security of supply should be better taken into account in the CBA. We believe that stakeholder engagement is really important to address this issue.

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?** Yes

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?** Yes

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?** National production – conventional,  
Pipeline imports from Russia,  
Pipeline imports from Norway,  
Pipeline imports from Algeria,  
Pipeline imports from Libya,  
Pipeline imports from Azerbaijan, LNG imports

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?** Respondent skipped this question

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?** Respondent skipped this question

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?** Respondent skipped this question

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?** Respondent skipped this question

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:** Treating LNG as a multi-source supply would bring further added-value to the assessment.  
,  
If LNG is to be treated as a multi-source supply, this case, could you specify what added-value you would see in this approach? If the answer above is no, could you specify why?  
This would allow a better assessment of the situation of each country in terms security of supply and competition as well as the impact of projects for the construction of new LNG terminals.

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?** Yes

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

*Respondent skipped this question*

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**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

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### PAGE 17: Final remarks

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**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*

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PAGE 2: Identification

Q1: What is your name?

Q2: What is your organisation?

Chemergie UG, Berlin, Germany

Q3: What is your email address?

Q4: How would you describe your organisation?  
(Please choose only the category which best represents your organisation)

Project promoter

Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.

*Respondent skipped this question*

PAGE 3: Stakeholder questions - General Information

Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?

ENTSOG TYNDP 2015, ENTSO-E TYNDP 2016

Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?

No

Q8: If yes, please select below the prior event(s) to which you participated:

*Respondent skipped this question*

PAGE 4: Stakeholder questions - General information

Q9: What are the TYNDP elements most valuable for your activity?

Demand scenarios, Supply potentials

PAGE 5: General feedback

Q10: Would you like to provide input to the General Feedback section?

Yes

PAGE 6: General feedback

Q11: Is TYNDP 2017 easy to read and navigate through?

easy

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q12: Are the maps, graphs and tables easy to understand?</b>	easy
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	Yes
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	Indication how TYNDP scenarios comply with the EU energy and climate targets , Further consideration of ENTSO-E TYNDP scenario information , Energy transition chapter
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	No
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	Demand chapter, Supply chapter, Infrastructure chapter, Assessment chapter, Energy Transition chapter

### PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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### PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	Yes,  Explanation : To be more specific: the future role of NATURAL gas or methane. There is some (pure) hydrogen infrastructure existing in EU, which should be taken into account for future energy supply purposes. The addition of a fourth scenario "Green Evolution" since October is greatly appreciated.
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## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes,

Explanation :

This is very important, but the EU 2030 energy and climate targets are just part of the picture. 2030 will be the starting point for further reduction until 2050 which should also be taken into account for an outlook on future TYNDPs. 2030 Climate targets might be easy to reach just by fuel switching from coal to natural gas. Any further reduction after that might be costly, e.g. operation of an inefficient, massively oversized "sunk cost" natural gas infrastructure after 2030 onwards

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

No

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

### PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

### PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a "tomorrow as today" approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

Yes

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes

**PAGE 11: Infrastructure**

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

**PAGE 12: Infrastructure**

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

Yes

**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

**Q38: Would you like to provide input to the Assessment section?**

Yes

PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

*Respondent skipped this question*

**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

*Respondent skipped this question*

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

*Respondent skipped this question*

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes,

Please provide your comments below:  
TYNDP does not take into account the existence, and further expansion of a pure hydrogen pipeline infrastructure in the EU. That is considered to be highly relevant for gas network development planning for several reasons: - indigenous gas production may increase as pure hydrogen in 2025+, but be transported in a separate gas infrastructure for pure hydrogen to power plants, as well as final gas customers - a separate hydrogen network development plan, including regional demand&supply scenarios, will provide fruitful insight on whether a planned natural gas infrastructure project may at some point in the future be switched to hydrogen, making it reasonable to plan, and construct it as "100% hydrogen ready" as an optional use in 2030+ when natural gas demand goes down for energy transition purposes - Some areas currently supplied by low calorific natural gas may not be switched to high calorific natural gas, but to hydrogen in the relevant timeframe for TYNDP 2017. That may have a highly relevant impact on the demand/supply/infrastructure investment need for natural gas as shown in this TYNDP.

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes

PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

Yes,

If so, please specify below:  
A TYNDP newsletter via email

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

Development of a pure hydrogen infrastructure for energy supply purposes. Some ENTSOG member companies may oppose that for individual reason:

- Chareholder supplying natural gas, e.g. Gascade (Wintershall, Gazprom)
- Companies whose assets may be "natural gas specific" for routing or technical reasons, and may be threatened by the setup of a parallel hydrogen infrastructure.

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?**

No

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?**

Further comments:

Please integrate (regional) hydrogen supply/demand scenarios as part of future TYNDPs, as previously done seperately with L-gas and H-gas.

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

National production – unconventional,

Pipeline imports from Russia, LNG imports,

If Others : please specify below: Hydrogen supply

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?**

*Respondent skipped this question*

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

Hydrogen infrastructure issues:

- already existing infrastructure
- potential interconnector corridors linking that infrastructure, or future supply sourceswhose locations may result from electricity TYNDPs
- existing natural gas pipeline infrastructure or at least its routes that may be re-used for pure hydrogen, specifically L-gas corridors which may not be needed any more in the foreseeable future.

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

Hydrogen issues, see above

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

*Respondent skipped this question*

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

Yes,

Are there additional elements you would suggest to include? If the answer above is no, could you specify why?  
Hydrogen aspects, see above

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

*Respondent skipped this question*

**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

### PAGE 17: Final remarks

**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*



PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	ENGIE / Gobal Energy Management
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Network user
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOG TYNDP 2015
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	Yes
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	TYNDP 2017 kick-off workshop – 12 January 2016 , SJWS#1 – 13 January 2016 , SJWS#4 – 23 February 2016 , SJWS#5 – 10 March 2016 , TYNDP Workshop – 11 May 2016

PAGE 4: Stakeholder questions - General information

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q9: What are the TYNDP elements most valuable for your activity?**

Demand scenarios, Supply potentials,  
Information on projects, Barriers to investment,  
Identification of the infrastructure needs ,  
Assessment of TYNDP projects and TYNDP modelling results provided in Annex E  
,  
Information on the TYNDP modelling (Annex F) ,  
Other (please specify below)  
TYNDP is a very important exercise for three reasons : - it allows to identify security of supply or excessive dependency on a single supplier at EU level, and therefore allows to trigger useful investment required to produce an integrated gas energy market; - on the other hand, it can give justification to investment not strictly needed. If these investments are socialized, they will increase the cost of gas, and will negatively impact market integration by rising cross-border tariffs; - all its hypothesis are a widely used public reference, that impacts gas advocacy.

### PAGE 5: General feedback

**Q10: Would you like to provide input to the General Feedback section?**

Yes

### PAGE 6: General feedback

**Q11: Is TYNDP 2017 easy to read and navigate through?**

difficult\*,

\* If difficult, please specify below:  
ENTSOG has been extremely didactic and produced a very high quality document whenever gas balance or pure security of supply issues are concerned. This is a real achievement given the very wide scope of the exercise. On the other hand, ENTSOG has included more market related indicators. Hypothesis used to derive prices are not clear enough, and understanding the signification of some indicators is also difficult because they mix a physical and commercial dimension.

**Q12: Are the maps, graphs and tables easy to understand?**

difficult\*,

\* If difficult, please specify below:  
Same issue as previous question

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

Yes

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

Indication how TYNDP scenarios comply with the EU energy and climate targets

,

Further consideration of ENTSO-E TYNDP scenario information

,

Advanced project status

**Q15: Do some TYNDP elements require better explanation? Which ones?**

At least CSSD and SSPDi indicators are completely biased by considering LNG as a single source. Just adding a separate explanation in the report is not sufficient.

Prices chronicles used to compute indicators are not presented. They should be disclosed and the related limitations (absence of differentiated upstream suppliers pricing strategies, lack of transportation costs...) should be much more clearly explained.

**Q16: Is there additional information you would like to find in TYNDP?**

Cf. previous question

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

*Respondent skipped this question*

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

Assessment chapter,

Please specify your indications below, and indicate if there are elements of the selected chapter(s) that you consider could be left out of the Main Report:  
All parts related to markets and prices should be left out of the report.

### PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

Yes

### PAGE 8: Demand



**Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

No,

Explanation :

More closely integrated gas and power demand outlook is needed. Gas and power infrastructures are both in competition and in synergy. For instance, the huge difference of efficiency of power and gas transmission infrastructure (fuel gas / grid losses) should have an impact on demand that is not explicit in the report. The compared impact of power heat pumps and of hybrid heat pumps / gas heat pumps / gas boilers on peak demand should also be more explicit. Figures in the same unities as power infrastructure is key to compare infrastructures. Power to gas should also be included in the demand assumption

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

Yes,

Explanation:

To use ENTSO-E data, there should be a more gas and power integrated approach. Finding a common view not favoring gas or power infrastructure is a challenge.

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

I find this information interesting, but I do not directly use it

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

No,

If no, please specify why:

The embedded diversification of the LNG supply should be taken into account explicitly. Keeping a unique LNG supply to Europe is probably the right option (if not, it would cause double counting of supply potential, as there is obvious competition between LNG sources). This issue is dealt with in the assessment chapter of this survey.

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

No

### PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

### PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

No,

If no, please specify why:

Europe gas market is facing a major issue of transmission costs recovery from the 2020s onwards. At the end of current long term bookings, tariffs will create a huge market splitting within Europe. Intra-EU tariffs are already a major barrier in Southern Europe, already create a significant spread between Italy and the rest of Europe, and put at risk interconnectors survivability. In this context, the level of investment corresponding to the advanced projects may not be sustainable. A much more selective approach is required. Otherwise, gas and power infrastructure scenarios should be compared, with the cost of investment for gas and power given for each scenario.

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?** Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?** Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

Transparency on costs per project is required, including CAPEX and OPEX costs (network losses / fuel gas). Pro & cons by project promoters should be much more carefully completed, and should be object to a consultation of all relevant stakeholders.  
More information on the grouping of projects, on competing projects, should also be included.

Gas and power projects should be easily comparable, with the same unities, and an order of magnitude of the impact on the OPEX costs should also be provided. Indeed, losses incurred when transferring massive quantities of North Sea wind power to Italian demand will be very different, seen from a cross-commodity perspective, if it's realised by power infrastructure than with gas infrastructure (e.g. by reducing gas fired plants output in Germany and using them more in Italy). Of course, lots of assumptions are required to make such a computation, and current power network losses are rather limited, but scenarios implying huge transfers of renewable power across Europe could considerably increase power network losses.

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?** *Respondent skipped this question*

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?** No,  
If no, how can we further improve?  
Project level information should not be simply an annex, but should be subject to stakeholders consultation process. Stakeholders can challenge some characteristics of the projects, in order to improve the quality of the data included in the TYNDP. It should be completed with cost information.

## PAGE 13: Assessment, Energy Transition and Gas Quality Outlook

**Q38: Would you like to provide input to the Assessment section?** Yes

## PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need	Yes, this proved useful to me
Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop	Yes, this proved useful to me
Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution)	Yes, this proved useful to me
Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations)	Yes, this proved useful to me
Inclusion of the supply adequacy outlook in Assessment chapter	Yes, this proved useful to me

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

No,  
If no, please specify why:  
TYNDP model is not relevant to compute country-level supply prices. First, it lacks transmission tariffs input, which is a basic element to assess price per countries. Even worse, producing even slightly realistic country-level supply prices long term scenarios is a very challenging task. It would require assumptions on differentiated upstream suppliers pricing strategies, on long term contracts indexation... Without these assumptions, keeping stable current country-level prices would not be a less relevant estimation and would save a lot of useless efforts... It should not be ENTSOG role to define such assumptions. This kind of indicators should not be part of the TYNDP.

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

No

**Q42: Which elements would you suggest to further improve?**

TYNDP model should be more focused on physical gas balance indicators, on Security of Supply indicators, and on physical dependency on a single supplier.

ENTSOG should not be asked to produce scenarios on market price, on average supply costs, or on economic welfare. As explained in Question 40, this requires to produce assumptions for instance on differentiated upstream suppliers pricing strategies, on long term contracts indexation, for which ENTSOG is obviously not relevant. On the absolutely central transmission tariff hypothesis, ENTSOG may risk to be conflicted with its own members.

All indicators which represents an impact of prices should be discarded from TYNDP. They give European decision makers the false impression that they have all the information required in directive 347/2013 to select PCI. Putting irrelevant figures is not a proper way to meet regulation requirements, and is not acceptable given the size of the considered investment. ENTSOG should state very clearly it cannot be in its remit to produce market or import prices scenarios.

On at least the CSSD and SSPDi indicators, the embedded diversification should be included in the computation. Modeling each LNG producer separately would require a worldwide model, which is out of reach. Instead, the computation of the indicators itself should be tweaked with a normative parameter that for instance double or triple the diversification effect of the LNG.

Difficulty is that these indicators give a single measure of diversification, whereas diversification can have several benefits : in terms of geopolitical dependency, in terms of security of supply (in case a systemic issue disrupt local production, e.g. war in Libya or higher than expected local demand in Egypt), or in terms of price diversification. The latter dimension is very different, and again, should be left out of TYNDP, as ENTSOG cannot define for instance the Qatari pricing strategy.

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

Yes,

If yes, Could you indicate in which context? Do you have any suggestion on the format of these results? These assessment results will help to constructively challenge project-specific cost benefit analysis. There lacks some intermediate results such as price chronicles used to compute indicators. These could be useful to challenge some indicators.

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

Yes,

Would you have any suggestion on this Annex? This section should be more explicit on the limitations of the TYNDP, especially on prices.

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes,

Please provide your comments below:  
This chapter should be more quantitative. For instance, there are no power-to-gas hypothesis in gas demand. And these long term perspective should be set in a coherent way with power hypothesis. Though, in the current organisational setup, with a fully independent ENTSOE and ENTSOG, and competing gas an power demand and projects, finding a consensus even on several scenarios will be a challenge.

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

### PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

### PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

Yes,

If so, please specify below:

ENTSOE made lots of efforts in the current stakeholder engagement process, and in particular provided a high level of transparency. The first possible improvement would be to better take into account remarks : for instance, the LNG embedded diversification has been an issue raised all along the process by many different actors, and that was insufficiently taken into account (only through caveats, and not through a modification of indicators). The second issue is to have a more process-wide approach. Lots of questions were raised on the subsequent use of the TYNDP, which are not strictly in the remit of ENTSOG, and these questions were not clearly answered. One of the main impact interesting stakeholders is project specific CBA, and the resulting level of socialisation of investments. For instance, no answer has yet been given on how taking into account the impact of socialized projects on cross-border or end-user tariffs. Till stakeholders are not able to make the direct link between TYNDP hypothesis, modeling, and presentation with the final impacts on projects in their countries, involvement of system users (shippers and end-users) will not be sufficient. From the beginning of the process, it should be perfectly clear how project specific CBA will be conducted, and how each hypothesis presented will impact this process. And there should be a single point of contact for the whole process, avoiding this permanent redirection between ENTSOG saying it's not in my remit and European authorities saying they have no resources and have to rely on ENTSOG work. Thirdly, fundamental questioning, such as discarding market price related indicators, should be taken into account even if they may have deep impact on the whole process.

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

- adaptation of indicators to reflect LNG embedded diversification;
- relevance of market price related indicators;
- taking into account existing transmission tariff (if the previous point is not solved...);
- taking into account the impact on future transmission tariff of socialized projects;
- future use of the indicators produced in the PS CBA

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?**

No

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?**

Further comments:

Yes, with one caveat : there will be conflicting views between ENTSOE and ENTSOG, and an open and transparent process to find a consensus is required. A possible solution is to let ENTSOG define fully one scenario, with ENTSOE engaging itself to compute assumptions according to ENTSOG inputs to produce a coherent scenario, and conversely, let ENTSOE define one scenario of its choice, with ENTSOG producing the corresponding inputs.



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

Pipeline imports from Algeria, LNG imports,  
If Others : please specify below:  
L-gas production (and conversion facilities) should be distinguished

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?**

Consultants disclose regularly some supply potentials. This could be an interesting source.

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

L-Gas infrastructure (including Norg storage and conversion facilities) should be distinguished.

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

The assessment should be conducted separately for the L-Gas area (taking into account coherent hypothesis for the conversion flows to and from H-Gas), independently of the fact gas quality is not distinguished in some markets.

If TYNDP is still producing indicators linked to market or import prices, then TYNDP must absolutely takes into account transmission tariff, taking into account that existing long term capacity contracts are not going to be renewed, and that transmission tariffs will be transferred to market prices and will distort flows.  
To take into account the impact of new projects on existing cross-border tariffs, a socialization hypothesis will be required.

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

Treating LNG as a multi-source supply would bring further added-value to the assessment.

,  
If LNG is to be treated as a multi-source supply, this case, could you specify what added-value you would see in this approach? If the answer above is no, could you specify why?  
Current diversification indicators give a biased view of the situation. ENTSOG introduced a valid explanation from GLE of the added value of LNG in terms of diversification. What will be retained from the TYNDP are the countries which lack diversification according to diversification indicators, and not a technical caveat. To correctly assess the level of diversification, a modification of the way indicators are computed is required. Cf. question 42 to define how indicators should be modified.

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

Yes,

Are there additional elements you would suggest to include? If the answer above is no, could you specify why?  
cf. question 45

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

*Respondent skipped this question*

**Q60: Do you have other expectations regarding TYNDP 2018?**

TYNDP 2018 should not include indicators requiring market prices scenarios or import prices scenarios.  
cf. question 42

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**PAGE 17: Final remarks**

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**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*

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PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	Polskie Górnictwo Naftowe i Gazownictwo S.A. (PGNiG SA)
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Trader
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOE TYNDP 2015, ENTSO-E TYNDP 2016
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	No
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	<i>Respondent skipped this question</i>

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Demand scenarios, Supply potentials, Information on projects, Identification of the infrastructure needs , Assessment of TYNDP projects and TYNDP modelling results provided in Annex E
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PAGE 5: General feedback

<b>Q10: Would you like to provide input to the General Feedback section?</b>	No
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PAGE 6: General feedback

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	<i>Respondent skipped this question</i>
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	<i>Respondent skipped this question</i>
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	<i>Respondent skipped this question</i>
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	<i>Respondent skipped this question</i>
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	<i>Respondent skipped this question</i>
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	<i>Respondent skipped this question</i>

PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	Yes
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## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Explanation :  
EU 2030 policies have the most prominent influence on energy sector and gas consumption.  
Nevertheless as the Energy Union focuses on 5 equal dimensions, it should be a part of the assessment along with in particular compliance with security of supply policies and internal energy market development.

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

No

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

No,

If no, please specify why:  
Regardless of the overall influence of the Slow Progression scenario, the particular influence for different MS and different markets may differ. As such it also may have a different impact on infrastructure development. Still, it should be well noted that 2030 policy remains only one of the prerequisites for infrastructure development.

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

### PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

### PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a "tomorrow as today" approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

Yes

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes,

Please specify:

Since diversification of supply sources should be considered as one of main drivers for infrastructure development all possible sources should be thoroughly analysed for their potential. In particular given that Iran was considered one of the sources that remains uncertain.

PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

No,

If no, please specify why:

Current data lead to distorted view – they don't take into account how project will influence competition on both EU and regional gas markets as well as the security of gas supply. Some projects need to be considered as providing more added value for integration of the Internal Gas Market than the others. In particular, diversification infrastructure such as connection between Norwegian Continental Shelf and Poland or PL-UA connection should be considered as crucial as these projects enhance diversification of supply sources. According to the European Energy Security Strategy, CEE region is still over 60% dependent on supplies from single source. Further integration requires new infrastructure projects which will bring diversification for CEE markets. Otherwise, instead of boosting competition, further integration will jeopardize competition in the European market and other achievement of the Energy Union.

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

No,

If no, please specify why:

In spite of fact that we find TYNDP map as a helpful tool, current form can be misleading – in particular since it indicates all projects regardless of their real impact on competition and security of supply. No indication of any assessment of project's influence on competition or security of gas supply is provided. Moreover, some of planned projects are indicated on the map (as well as in Annex A) despite of lack of the European Commission position regarding their compliance with the *acquis communautaire* and EU policy objectives, i.e. Nord Stream 2. None of these issues are addressed in maps nor in Annex A.

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

TYNDP does not provide any analysis of the projects' impact on competition and security of supply. Annex A is based on declarations of the project promoters, whereas their assessment can be in some cases dubious. In particular for the following projects:

- Nord Stream 2 (TRA-F-937) and the associated projects

Aims basically at increasing the dominant position of Gazprom in gas supplies to Europe, in particular Central Eastern Europe (CEE). TPA rule is already not applied to NS1. Investors seem to treat this as a benchmark for planned NS2 project. Construction of NS2 will lead to further dependence on the dominant supplier (Gazprom) and to lack of any market flexibility in framework of gas supply in CEE.

NS2 will be accompanied by:

- o EUGAL including upgrade of Groß Kőrös station (where currently, the TPA principle is also not applied) and corresponding Capacity4Gas DE/CZ, CZ/AT, CZ/SK interconnections;
- o NOWAL – Nord West Anbindungsleitung
- o NEL Expansion
- o Extension Receiving Terminal Greifswald.

These projects are focused on enabling the utilization of NS2, and as such on increasing of Gazprom's dominant position in Europe and in particular CEE markets. EUGAL pipeline constitutes a threat both to supplies and transit through Poland and Ukraine and is not justified by market demand.

- Bidirectional Austrian-Czech Interconnector (BACI) (TRA-N-021)

Will lead to decreasing of volumes of gas transported through Ukraine and limit the options for reverse supplies of gas from EU to Ukraine. The BACI projects is closely connected to Gazprom strategy of limiting supply and gas transport options of both Poland and Ukraine and limiting the shifting gas transport from Yamal and Brotherhood pipelines to alternative routes, i.e. NS/NS2 and all associated projects.

- TESLA (TRA-N-631, TRA-N-585, TRA-N-582)

Should be considered as in line with the described efforts of shifting supply routes of Gazprom gas from Yamal and Brotherhood to alternative routes. It strengthens the position of dominant supplier (Gazprom) in CEE and in SEE markets.

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

No,

If no, which additional barriers would you suggest to consider?

The outcome of analysis is misleading, since the barriers are identified by the project promoters which can differ from real state of affairs.

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

No,

If no, how can we further improve?  
Current formula of Annex A (as well as Annex B) can mislead stakeholders that all projects are accepted (as included in the Plan) in spite of their negative impact on competition or security of supply. Current report includes only data provided by project promoters. Thus, provided information about project in some cases cannot be considered as fully reliable. Therefore, we suggest to make an assessment of the given data. In particular, it is crucial to assess whether project enhances or disrupts competition on the Internal Gas Market and its impact on diversification of sources of supply.

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**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

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**Q38: Would you like to provide input to the Assessment section?**

Yes

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**PAGE 14: Assessment, Energy Transition and Gas Quality Outlook**

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**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need

Yes, this proved useful to me

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

Yes

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

Yes

**Q42: Which elements would you suggest to further improve?**

Country level assessment should be as wide and comprehensive as possible. It should allow to understand the impact of market integration and infrastructure development not only to the European market but also to specific markets. An comprehensive analysis of the projects' impact on competition and diversification of supply sources (not only routes should be taken into account).

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

Yes,

If yes, Could you indicate in which context? Do you have any suggestion on the format of these results? The data on the consequences of gas disruptions are key to the analysis as they provide input to the assessing the impact of projects on diversification of gas supplies in MSs.

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

No

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

No

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes

### PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

### PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

No

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

*Respondent skipped this question*

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?**

No

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?**

Yes

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

National production – Biomethane & Power-to-gas ,  
Pipeline imports from Russia , LNG imports

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?**

No.

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

A series of dedicated, public workshops.

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

TYNDP 2018 should make an approach at assessing the projects contribution to increasing competition, diversification of sources of supplies and security of supply.

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

For the demand side an analysis of the diversification level of sources of supply. This analysis would support the process of assessment of different infrastructure projects.

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

Keeping the same approach as in TYNDP 2017 would provide the necessary insights

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

Yes

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

Yes

**Q60: Do you have other expectations regarding TYNDP 2018?**

*Respondent skipped this question*

**PAGE 17: Final remarks**

**Q61: Do you have any other comment to TYNDP 2017?**

*Respondent skipped this question*





PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	E3G
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Other (please specify), If indicated, please specify below: Think Tank
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOE TYNDP 2015, ENTSO-E TYNDP 2016
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	Yes
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	<i>Respondent skipped this question</i>

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Demand scenarios, Supply potentials, Identification of the infrastructure needs , Assessment of TYNDP projects and TYNDP modelling results provided in Annex E , Information on the TYNDP modelling (Annex F) , Other (please specify below) Demand Assumptions and modelling methodology.
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PAGE 5: General feedback

**Q10: Would you like to provide input to the General Feedback section?**

Yes

PAGE 6: General feedback

**Q11: Is TYNDP 2017 easy to read and navigate through?**

easy

**Q12: Are the maps, graphs and tables easy to understand?**

easy

**Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?**

Yes,

Please specify:  
We could not attend the workshop but we used the data published on the website.

**Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?**

Indication how TYNDP scenarios comply with the EU energy and climate targets

,

Further consideration of ENTSO-E TYNDP scenario information

,

Energy transition chapter

**Q15: Do some TYNDP elements require better explanation? Which ones?**

The explanation on how the different TYNDP scenarios are compliant with the EU 2030 objectives could be more detailed. In particular, it would be useful to have explicit explanations on how much biomethane is used, assumptions around coal to gas switching, use of gas in transport, etc.

This information is available but sometimes hard to compile, in particular when it comes to assumptions around the increase in gas demand in the power sector.

**Q16: Is there additional information you would like to find in TYNDP?**

The impact of a low gas demand scenario - for instance in line with a 40% energy efficiency target or in line with a well below 2 degree pathway.

**Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?**

*Respondent skipped this question*

**Q18: Which are the TYNDP elements you consider the Main Report should focus on?**

*Respondent skipped this question*

PAGE 7: Demand

**Q19: Would you like to provide input to the Demand section?**

Yes

PAGE 8: Demand

**Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?**

No,

Explanation :

The scenarios fail to capture the downside risks associated with a low gas demand scenario. In particular, none of the scenarios fully meet the newly proposed 30% EU binding energy efficiency target for 2030, and are thus not in line with the current European policy context. No scenario helps assessing the impact of going beyond the 2030 objectives agreed in 2014, and thus fails to assess the implications of complying with the EU commitment to the Paris agreement.

**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes,

Explanation :

ENTSO-G – thanks to its membership and access to information - is in a unique position to highlight the potential impact of climate and clean energy policies on the business models of its members and to key investors in the gas sector. Yet, the choice of the scenarios fails to capture the full range of upside and downside risks for investors in terms of future gas demand, and does not send the right signals to ensure a competitive EU energy sector. For example, there is not one single scenario adequately reflecting the EU's long term climate targets equivalent to reaching a zero carbon energy sector by 2050. None of the ENTSO-G scenarios for 2030 is in line with a 2 degree compatible pathway (ranging from being 4%-28% above IEA projections under the 450ppm scenario). For some of them, meeting the target over a longer time frame is implausible. In order to be in line with a pathway to maintain the "well below 2 degree" goal as per the EU's international commitment, the Blue Transition pathway would require the EU to reduce its gas use by 39% in just 10 years (Comparing Blue Transition 2030 to the IEA450ppm scenario for 2040). This risks leading to stranded assets and to EU funds or governments wasting taxpayers' money through regulated tariffs, tax breaks or public grants. In its recent update on the State of the Energy Union, the Commission has highlighted this as an area of concern, by saying: "In view of scarce resources in the Member States [...] Support should only be given if in line with the long-term energy policy of the European Union, avoiding stranded assets and carbon lock-in."

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**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

Yes,

Explanation:

Similar to the above, it is ENTSO-G's responsibility to provide sound challenge to the underlying data it uses. ENTSO-E only assumes a 27% renewable target for 2030 and its overall scenarios are not compatible with a well below 2 degree pathway either. We have given the following feedback to ENTSO-E: "Delivering a secure, affordable and sustainable energy system requires an infrastructure planning process consistent with the future Europe is aiming for. It is therefore important that future scenarios help transmission system operators plan for the success of the European clean energy and climate objectives while stress-testing the system against a range of possible futures, including one in line with the the commitment of keeping global warming "well below 2°C", in line with the Paris Agreement."

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

No

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a "tomorrow as today" approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

*Respondent skipped this question*

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

*Respondent skipped this question*

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

*Respondent skipped this question*

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

*Respondent skipped this question*

**PAGE 11: Infrastructure**

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

**PAGE 12: Infrastructure**

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes,

If no, please specify why:  
It is useful that the plan looks at different infrastructure scenarios to establish the most efficient level of investment.

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes,

If no, please specify why:  
More transparency on cost is always useful!

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

*Respondent skipped this question*

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

*Respondent skipped this question*

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

*Respondent skipped this question*

**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

**Q38: Would you like to provide input to the Assessment section?**

No

**PAGE 14: Assessment, Energy Transition and Gas Quality Outlook**

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

*Respondent skipped this question*

**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

*Respondent skipped this question*

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

*Respondent skipped this question*

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

**PAGE 15: Towards TYNDP 2018**

**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

**PAGE 16: Towards TYNDP 2018**

# ENTSOG TYNDP 2017 Public consultation questionnaire

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

Yes,

If so, please specify below:

The stakeholder engagement process has already improved for TYNDP 2017. We look forward to engaging on TYNDP 2018. In light of the recent priority given by the Commission to ensuring infrastructure spend is in line with the EU's climate and energy targets, it would to see a strengthened representation of stakeholders advising on climate change perspectives.

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

Compliance with long-term European climate and energy objectives  
Gas demand scenarios  
GHG emissions from gas  
Biogas supply scenarios

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?**

Yes

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?**

Further comments:

The current scenario development process is designed as a bottom up process based on Member State submissions. We welcome the intent to make sure that gas and electricity scenarios are aligned. We recommend: - To ensure that there is at least one scenario that also reflects the EU's international commitments under the Paris agreement. - Energy security is an important question for the European Union's energy sector as a whole as net imports are still on the rise and overall 53.5% of gross inland consumption of energy is imported. As domestic gas production has been falling, the TYNDP gas has focussed much on diversification of import sources to increase energy security. For over a decade, renewables have been the only sector to increase domestic production, making up for nearly 90% of the lost domestic generation from other sources between 2005 and 2015 (Eurostat). A joint scenario development thus provides the opportunity to look at energy security not only from the perspective of diversifying import sources, but also including increasing domestic production and reduction domestic demand as additional variables.

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

*Respondent skipped this question*

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?**

*Respondent skipped this question*

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*

**Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?**

*Respondent skipped this question*

# ENTSOG TYNDP 2017 Public consultation questionnaire

**Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?**

*Respondent skipped this question*

**Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:**

Treating LNG as a multi-source supply would bring further added-value to the assessment.

,

If LNG is to be treated as a multi-source supply, this case, could you specify what added-value you would see in this approach? If the answer above is no, could you specify why?

It is useful exploring this question from the perspective of how well it allows ENTSO-G to assess investment needs. The question of source allows you to look at one of the key objective - energy security - in a more accurate way. An LNG terminal is different to a pipeline in nature as it can be supplied by a multitude of suppliers, thus contributing significantly more to the diversification of inward supply than reflected in the current methodology.

**Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?**

*Respondent skipped this question*

**Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)**

*Respondent skipped this question*



**Q60: Do you have other expectations regarding TYNDP 2018?**

**1. Planning for success with the 2040 scenarios**

Delivering a secure, affordable and sustainable energy system requires an infrastructure planning process consistent with the future Europe is aiming for. It is therefore important that future scenarios help transmission system operators plan for the success of the European clean energy and climate objectives while stress-testing the system against a range of possible futures. We suggest looking at four scenarios:

- One worst case scenario where the EU falls behind its 2030 and 2050 climate and energy objectives.
- Two scenarios in line with the EU 2030 and 2050 climate and energy objectives, but representing two extremes in terms of infrastructure requirements. One assumes a future of low gas infrastructure needs, which will help identify least-regret options. Given falling gas demand in every economic sectors and the uncertainty regarding its future outlook, it is imperative for Europe to be prepared to all futures, including one of low gas demand in which the current trend continues and where uptake of alternative uses for gas, and biogas, remains low.
- One best case in line with the commitment of keeping global warming “well below 2°C”, in line with the Paris Agreement. Since existing global climate commitments collectively put the world on a path to keep the average global temperature rise to 2.7-3.7°C, an “ambition mechanism” was laid out in Paris to continue strengthening climate action in a regular and timely way every five years, starting before 2020. Planning for success requires looking beyond the agreed EU targets of “at least” 40% emission reductions by 2030 and including the upper end of the 2050 target. Understanding the cost-effective infrastructure requirements for 95% emission reductions by 2050 is necessary to reflect the expected increase of climate ambition foreseen by the Paris ambition mechanism. We strongly welcome the introduction of the “Distributed Generation” scenario. This is the only scenario that incorporates leaps in innovation of small-scale generation and storage technology as a key driver of climate action and gas demand reduction. Given the significant impact on future generation and system requirements, similar innovation leaps should be included in all scenarios.

**2. Understanding climate impacts**

The costs of climate impacts on energy infrastructure need to be factored in the CBA-methodology and taken into account for the scenarios analysis. Annual damages to energy infrastructure from extreme climate events could quadruple by 2030, increase 9-fold by 2050 and 16-fold by the end of the century.

The JRC, the EU Commission’s in-house science service, estimates that the energy production and transport systems are the sectors which will be the most affected by multi-hazard climate damages, with cumulative costs projected to increase by over €20 billion by 2030 and over €80 billion by 2050. These costs can no longer be ignored and should be weighed against the adaptation costs and benefits of making infrastructure climate-resilient.

**3. External references**

We are acutely aware of the difficulties of building long-term scenarios given the complexity and large uncertainty of future energy systems. We have compiled a list of references which could support the design of the scenarios through quantifying the key assumptions.

On scenario building and system integration between electricity, gas, transport

- European Court of Auditors – Improving the security of energy supply by developing the internal energy market: more efforts needed

- Carbon Tracker – Lost in Transition

- Energy Union Choices – A perspective on infrastructure and energy security in the transition

- Transport & Environment – Natural gas in vehicles, on the road to nowhere

On scenarios compatible with existing 2030 and 2050 scenarios

- Roadmap 2050 – A practical guide to a prosperous, low-carbon future

- Power Perspectives 2030 – On the road to a decarbonised power sector

On scenarios compatible with the Paris “well below 2°C” commitment

- The Institute for New Economic Thinking at the Oxford Martin School – The “2°C capital stock” for electricity generation: Cumulative committed carbon emissions and climate change

On climate impacts

- Joint Research Centre – Resilience of large investments and critical infrastructures in Europe to climate change
- Van Vliet, M. T. H. et al. (2016) – Power-generation system vulnerability and adaptation to changes in climate and water resources

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q61: Do you have any other comment to TYNDP 2017?** *Respondent skipped this question*

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PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	independent scientist
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Other (please specify)
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	<i>Respondent skipped this question</i>

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	ENTSOG TYNDP 2015, ENTSO-E TYNDP 2016
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	No
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	<i>Respondent skipped this question</i>

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Demand scenarios, Supply potentials, Information on projects, Identification of the infrastructure needs , Assessment of TYNDP projects and TYNDP modelling results provided in Annex E , Information on the TYNDP modelling (Annex F)
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PAGE 5: General feedback

<b>Q10: Would you like to provide input to the General Feedback section?</b>	No
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PAGE 6: General feedback

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	<i>Respondent skipped this question</i>
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	<i>Respondent skipped this question</i>
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	<i>Respondent skipped this question</i>
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	<i>Respondent skipped this question</i>
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	<i>Respondent skipped this question</i>
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	<i>Respondent skipped this question</i>

PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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PAGE 8: Demand

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	<p>No,</p> <p>Explanation :</p> <p>Upcoming demand scenarios may take a deeper look into demand side measures like local pipe Storages, back-up fuel. Non-technical measures may be more economic than grid investment: Even protected household customers may be willing to reduce gas consumption when asked for by relevant authorities. Quite a few protected household customers have an alternative heating option, most likely a fireplace which reduces the need for 100% protection.</p>
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**Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?**

Yes

**Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?**

No

**Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?**

Yes

**Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?**

This information is useful to me

## PAGE 9: Supply

**Q25: Would you like to provide input to the Supply section?**

Yes

## PAGE 10: Supply

**Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?**

Yes

**Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?**

Yes

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

Yes

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

Yes,

Please specify:

These supply sources may represent valuable alternative sources, and should be covered in more detail even if no project proposals exist yet. Uncertainties like engineering costs, or political reasons may seem prohibitive from today's point of view. But 20 years of time is a long period when a lot of things may change. Planning the EU (natural) gas infrastructure without taking these more or less viable options into account may result in a "infrastructure lock-in situation". That means, the opportunity cost of changing the infrastructure for new, formerly just "potential supply sources" results in prohibitive cost for those supply sources. That may result in a self-fulfilling prophecy where potential sources cannot supply additional gas in 2030+ for the reason of infrastructure decisions made 20 years ago.

PAGE 11: Infrastructure

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

PAGE 12: Infrastructure

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?** Yes

**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

**Q38: Would you like to provide input to the Assessment section?** Yes

**PAGE 14: Assessment, Energy Transition and Gas Quality Outlook**

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

Specific section of the Assessment chapter dedicated to the identification of infrastructure need Yes, this proved useful to me

Assessment of projects focused on the FID and Advanced projects, as well as projects of the previous PCI list as a feedback loop Yes, this proved useful to me

Presentation of results for the more contrasted demand scenarios (Blue Transition and EU Green Revolution) Yes, this proved useful to me

Focus on a limited number of simulations cases (e.g. limited number of contrasted supply configurations) No, not useful

Inclusion of the supply adequacy outlook in Assessment chapter Yes, this proved useful to me

If the item did not prove useful, please specify why:

The Ukraine, and Belorussian supply interruption cases must be simulated differently in the context of the Nord Stream 2 Project, and related onshore Pipelines like EUGAL: These Projects will most likely eliminate the need for Ukrainian transit, meaning that there will be no fees for maintenance, repair, and overhaul. An n-1 Security of Supply Scenario is more realistic if one considers the Ukrainian System as out-of-Operation. Most relevant infrastructure element will then be the Kienbaum interconnector Point just some Kilometers east of Berlin, where JAGAL, FGL 306, OPAL, and future EUGAL will meet. Any unintended, or deliberate (terrorist attack or asymmetric warfare during future conflicts) interruption of supply at that point will most likely pose a huge threat to SoS. Any consequences of Russian strategic investment, resulting in too much overall Import capacity by the Nord Stream 2/EUGAL Investment project should be carefully considered. Environmental legislation will not allow for any investment that cannot be justified from that point of view.

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?** Yes

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?** Yes

**Q42: Which elements would you suggest to further improve?**

Investment cost should be compared to demand side measures which may reduce capacity demand, and therefore need for Investment.

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?** Yes

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

Yes

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes,

Please provide your comments below:  
Take any power to X-Technologies and their impact on annual amount, as well as local capacity demand into account. Especially Power to Compression, which will not only reduce the pipeline's own capacity demand. But this will also be an important topic during the upcoming discussions on a Network Code on the energy Efficiency of the natural gas supply system

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

Yes

### PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

No

### PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

*Respondent skipped this question*

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

*Respondent skipped this question*

**Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?**

*Respondent skipped this question*

**Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?**

*Respondent skipped this question*

**Q52: For which supply source do you expect to need the most intense stakeholder involvement?**

*Respondent skipped this question*

**Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?**

*Respondent skipped this question*

**Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?**

*Respondent skipped this question*



## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	<i>Respondent skipped this question</i>
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)</b>	<i>Respondent skipped this question</i>
<b>Q60: Do you have other expectations regarding TYNDP 2018?</b>	<i>Respondent skipped this question</i>

### PAGE 17: Final remarks

#### **Q61: Do you have any other comment to TYNDP 2017?**

Modelling should not assume that all Pipeline infrastructure existing today will still be available in 2020+. If Nord Stream 2 goes onstream, the consequences of no transit through Ukraine must be carefully considered. Current modelling in the TYNDP does not reflect that.



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**PAGE 2: Identification**

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**Q1: What is your name?**

**Q2: What is your organisation?**

Ministry of Energy

**Q3: What is your email address?**

**Q4: How would you describe your organisation?**  
**(Please choose only the category which best represents your organisation)**

Other (please specify),  
If indicated, please specify below:  
Public Administration, governmental entity

**Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.**

My response should not be disclosed



PAGE 2: Identification

<b>Q1: What is your name?</b>	
<b>Q2: What is your organisation?</b>	IFIEC
<b>Q3: What is your email address?</b>	
<b>Q4: How would you describe your organisation? (Please choose only the category which best represents your organisation)</b>	Association (please specify type), If indicated, please specify below: IFIEC: Representing Energy Intensive Industry
<b>Q5: ENTSOG intends to publish the results of this public consultation. If your response should remain confidential, please indicate it below.</b>	My response should only be disclosed anonymously ,  Please indicate why: Can only be disclosed under 'IFIEC' response

PAGE 3: Stakeholder questions - General Information

<b>Q6: Do you have a former experience in reading ENTSOG and/or ENTSO-E TYNDPs?</b>	None
<b>Q7: Did you participate in the TYNDP 2017 Stakeholder engagement process?</b>	No
<b>Q8: If yes, please select below the prior event(s) to which you participated:</b>	<i>Respondent skipped this question</i>

PAGE 4: Stakeholder questions - General information

<b>Q9: What are the TYNDP elements most valuable for your activity?</b>	Demand scenarios, Supply potentials, Barriers to investment, Long-term Gas Quality Monitoring Outlook
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PAGE 5: General feedback

<b>Q10: Would you like to provide input to the General Feedback section?</b>	Yes
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PAGE 6: General feedback

<b>Q11: Is TYNDP 2017 easy to read and navigate through?</b>	very easy
<b>Q12: Are the maps, graphs and tables easy to understand?</b>	easy
<b>Q13: ENTSOG organised a workshop in July 2016 to inform stakeholders on the input data to TYNDP and subsequently published this data on its website: demand, supply, gas quality, information on projects. Has this been useful to you?</b>	<i>Respondent skipped this question</i>
<b>Q14: ENTSOG introduced a number of new elements in TYNDP 2017. Please indicate which 3 you find the most valuable?</b>	<p>Indication how TYNDP scenarios comply with the EU energy and climate targets</p> <p>,</p> <p>Further consideration of ENTSO-E TYNDP scenario information</p> <p>,</p> <p>TYNDP 2017 map</p>
<b>Q15: Do some TYNDP elements require better explanation? Which ones?</b>	<i>Respondent skipped this question</i>
<b>Q16: Is there additional information you would like to find in TYNDP?</b>	<i>Respondent skipped this question</i>
<b>Q17: TYNDP is made up of the Main Report and Annexes. The Main Report is an in-depth document. Once final, it may or not be published as a printed version. Annexes are made available only in electronic format. Would you appreciate to have the TYNDP Main Report available only in electronic version?</b>	No
<b>Q18: Which are the TYNDP elements you consider the Main Report should focus on?</b>	<p>Demand chapter, Supply chapter,</p> <p>Infrastructure chapter,</p> <p>Barriers to Investment chapter,</p> <p>Energy Transition chapter</p>

PAGE 7: Demand

<b>Q19: Would you like to provide input to the Demand section?</b>	Yes
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PAGE 8: Demand

## ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q20: ENTSOG developed four demand scenarios: three were designed as differentiated paths towards achieving the EU 2030 energy and climate targets (Blue Transition, Green Evolution, EU Green Revolution), and one as failing to achieve these targets (Slow Progression). These differentiated paths are intended to provide the future frame under which to assess the gas infrastructure. Would you consider this provides a comprehensive view on the future role of gas?</b>	No,  Explanation : Consequences of slow progress scenario is important as a worst case indication
<b>Q21: TYNDP indicates how scenarios comply with the EU 2030 energy and climate targets. Do you see that as an important element of TYNDP?</b>	Yes
<b>Q22: Regarding the role of gas generation in the power sector, ENTSOG aligned its scenarios with the Visions developed in ENTSO-E TYNDP 2016 Scenario Report, and elaborated the scenario data using ENTSO-E generation data, together with national expertise. Do you have additional views on this approach?</b>	No
<b>Q23: For all four demand scenarios, the TYNDP provides a detailed analysis in the Demand Chapter. The Slow Progression scenario does not achieve the EU 2030 targets and has a total gas demand evolution that falls between the other scenarios. As a result, the TYNDP assessment focuses on the three scenarios achieving the EU 2030 targets. Do you support this approach?</b>	No,  If no, please specify why: see answer question 20
<b>Q24: For all four demand scenarios, the demand data is available in Annex C2. Is this information useful to you?</b>	I find this information interesting, but I do not directly use it

### PAGE 9: Supply

<b>Q25: Would you like to provide input to the Supply section?</b>	No
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### PAGE 10: Supply

<b>Q26: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 takes a “tomorrow as today” approach for the supply potentials for 2017, in line with the approach retained for Seasonal Outlooks. Do you support this?</b>	<i>Respondent skipped this question</i>
<b>Q27: Based on stakeholder feedback, some elements of the supply potential approach have been changed in TYNDP 2017 from the last edition. TYNDP 2017 focuses on the range between minimum and maximum potentials per source, as further used in the assessment. It discontinues the intermediate potential showed in TYNDP 2015, which is not used in the assessment. Do you support this?</b>	<i>Respondent skipped this question</i>

**Q28: TYNDP 2017 takes a qualitative approach to the embedded diversification of the LNG supply, based on expert views provided by GLE (Gas LNG Europe). Do you welcome this qualitative approach supported by expert views?**

*Respondent skipped this question*

**Q29: Some potential supply sources are not included in the TYNDP assessment as they are considered as having a high level of uncertainty. They are nevertheless investigated in the supply chapter (such as gas from Turkmenistan, Iran, Egypt and Israel). Do you see benefits in covering those uncertain sources in the supply chapter?**

*Respondent skipped this question*

**PAGE 11: Infrastructure**

**Q30: Would you like to provide input to the Infrastructure section?**

Yes

**PAGE 12: Infrastructure**

**Q31: In addition to the FID status (for projects having taken their final investment decision) TYNDP 2017 defines an advanced project status, to distinguish between advanced and less-advanced non-FID projects. TYNDP 2017 assessment subsequently focuses on what the FID and advanced projects achieve. Do you consider this provides a realistic view on infrastructure development?**

Yes

**Q32: TYNDP 2017 provides the overall investment costs for projects of a given status. Do you find this information valuable?**

Yes

**Q33: TYNDP 2017 is accompanied with a new TYNDP projects map (Annex B). Do you find this information valuable?**

Yes

**Q34: In this edition, project promoters reported if their project were part of the national plan. Do you find this information valuable?**

Yes

**Q35: Is there further information on projects that you would like to see reflected in TYNDP?**

*Respondent skipped this question*

**Q36: The Barriers to Investment chapter analyses the obstacles to future investment in gas infrastructure as perceived by project promoters. Do you consider all potential barriers are covered?**

Yes

**Q37: Annex A provides project-level information, through project fiches and overview tables (including on perceived barriers to investment). Do you find the Annex A format adequate?**

*Respondent skipped this question*

**PAGE 13: Assessment, Energy Transition and Gas Quality Outlook**

## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q38: Would you like to provide input to the Assessment section?**

No

### PAGE 14: Assessment, Energy Transition and Gas Quality Outlook

**Q39: ENTSOG endeavoured to increase the usability of the Assessment chapter in different ways. Please specify whether these were useful to you:**

*Respondent skipped this question*

**Q40: TYNDP 2017 introduces a country-level monetisation of supply configurations resulting in country-level supply prices. Do you find it valuable?**

*Respondent skipped this question*

**Q41: TYNDP 2017 introduces an assessment based on actual import price information. Do you find it valuable?**

*Respondent skipped this question*

**Q42: Which elements would you suggest to further improve?**

*Respondent skipped this question*

**Q43: ENTSOG publishes all TYNDP assessment results in Annex E – Modelling results. Are these results valuable to you?**

*Respondent skipped this question*

**Q44: ENTSOG provides the description of the modelling tool and modelling methodology as part of Annex F. Is this information valuable to you?**

*Respondent skipped this question*

**Q45: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Do you want to provide comments? (On how to handle this chapter in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

**Q46: TYNDP 2017 includes a long-term gas quality monitoring outlook. Do you consider it valuable that this analysis is included in TYNDP? (On how to handle this outlook in the future, please refer to the TYNDP 2018 part of this questionnaire.)**

*Respondent skipped this question*

### PAGE 15: Towards TYNDP 2018

**Q47: Would you like to provide input to the TYNDP 2018 section?**

Yes

### PAGE 16: Towards TYNDP 2018

**Q48: Do you have suggestions on how ENTSOG could improve the stakeholder engagement process?**

Yes

**Q49: On which topics do you consider ENTSOG would need specific stakeholder engagement?**

Gas quality

# ENTSOG TYNDP 2017 Public consultation questionnaire

<b>Q50: This process has already started, with a public consultation (12 May – 12 June 2016), workshops (2 June and 5 July 2016) and a Webinar (10 October 2016). Have you been involved in this process?</b>	No
<b>Q51: As part of this process, ENTSOG intends to provide the TYNDP 2018 demand and supply elements as part of the joint ENTSOs Scenario Report, planned to be released mid-2017 for public consultation. Do you support this approach?</b>	Yes
<b>Q52: For which supply source do you expect to need the most intense stakeholder involvement?</b>	National production – Biomethane & Power-to-gas , LNG imports
<b>Q53: TYNDP uses publicly available information to build supply potentials. Would you have specific suggestions on publicly available information ENTSOG could use? Which supply source(s) would that cover?</b>	<i>Respondent skipped this question</i>
<b>Q54: Do you have any views how to plan for the stakeholder engagement on supply potentials based on the TYNDP 2017 material?</b>	<i>Respondent skipped this question</i>
<b>Q55: Would you see additional elements regarding infrastructures that could be included in TYNDP 2018?</b>	<i>Respondent skipped this question</i>
<b>Q56: Would you see additional elements that could be included in the TYNDP 2018 assessment?</b>	<i>Respondent skipped this question</i>
<b>Q57: Regarding LNG diversification, TYNDP 2018 could maintain the qualitative approach retained for TYNDP 2017 or treat LNG as a multi-source supply including in the TYNDP assessment. This is a question of finding the right balance between the added-value of the information and the potential increased complexity of the assessment. What are your views:</b>	<p>Treating LNG as a multi-source supply would bring further added-value to the assessment.</p> <p>,</p> <p>If LNG is to be treated as a multi-source supply, this case, could you specify what added-value you would see in this approach? If the answer above is no, could you specify why?</p> <p>the composition of the gas quality of LNG is very different and could be relevant for regional differences of gas quality specifications in general and for exit points in particular.</p>
<b>Q58: TYNDP 2017 presents the long-term perspective on the gas infrastructure in the Energy Transition Chapter. Would you agree that this is a topic of long-term relevance and that it should be covered in TYNDP 2018?</b>	Yes
<b>Q59: TYNDP 2017 introduces for the first time a long-term gas quality monitoring outlook. Would you have any suggestion how to further develop this analysis in TYNDP 2018? (e.g. including additional parameters, defining other inputs for the reference values of gas quality parameters, sharing views on the evolution of these parameters, etc.)</b>	<p>Yes,</p> <p>Please provide your suggestions below: Current analyses is very general and hard to verify. We recommend more coordination and cooperation with EASEEgas, CEN and Marcogaz.</p>
<b>Q60: Do you have other expectations regarding TYNDP 2018?</b>	<i>Respondent skipped this question</i>



## ENTSOG TYNDP 2017 Public consultation questionnaire

**Q61: Do you have any other comment to TYNDP 2017?** *Respondent skipped this question*

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# List of Annexes

All Annexes are available as PDF or Excel-file on [www.entsog.eu/publications/tyndp](http://www.entsog.eu/publications/tyndp)

<b>A</b>	<b>Infrastructure Projects</b>
<b>A 1</b>	<b>Project Tables</b>
<b>A 2</b>	<b>Project Details</b>
<b>A 3</b>	<b>Projects reported as not in NDP</b>
<b>B</b>	<b>TYNDP 2017 map</b>
<b>C</b>	<b>Demand and Supply</b>
<b>C 1</b>	<b>Country Specifics</b>
<b>C 2</b>	<b>Demand</b>
<b>C 3</b>	<b>Power Generation Assumptions</b>
<b>C 4</b>	<b>Demand Methodology</b>
<b>C 5</b>	<b>Supply</b>
<b>C 6</b>	<b>Fuel Prices</b>
<b>D</b>	<b>Capacities</b>
<b>E</b>	<b>Modelling Results</b>
<b>E 1</b>	<b>Flows</b>
<b>E 2</b>	<b>Disrupted Demand</b>
<b>E 3</b>	<b>Disrupted Rate</b>
<b>E 4</b>	<b>Remaining Flexibility</b>
<b>E 5</b>	<b>N-1 for ESW-CBA</b>
<b>E 6</b>	<b>Import Route Diversification (IRD)</b>
<b>E 7</b>	<b>Modelling Indicators</b>
<b>E 8</b>	<b>Monetisation</b>
<b>E 9</b>	<b>Monetisation per Country</b>
<b>E 10</b>	<b>Import Price Spread</b>
<b>E 11</b>	<b>Marginal Price</b>
<b>F</b>	<b>Methodology</b>
<b>G</b>	<b>Gas Quality Outlook</b>
<b>H</b>	<b>Feedback</b>
<b>H 1</b>	<b>Public Consultation: Questionnaires</b>
<b>H 2</b>	<b>Public Consultation: Data Summary</b>



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