

## ***Consultation document on ENTSG TYNDP 2013-2022***

Through this document, European Network of Transmission System Operators for Gas (ENTSOG) launches a formal public consultation on its Ten-Year Network Development Plan (TYNDP) 2013-2022

This third edition of the European-wide statement on long-term gas infrastructure development has been published today. ENTSG published its previous TYNDP 2011-2020 in February 2011 and, during the subsequent consultation, received valuable feedback from the stakeholders, including the ACER Opinion (September 2011). For this TYNDP 2013-2022, ENTSG has extended its stakeholder engagement process organizing Stakeholder Joint Working Sessions from January to May 2012, 3 public workshops in September 2011, June and November 2012 and many bilateral talks.

ENTSOG has endeavoured to take into account all comments received and encourages stakeholders to stay actively involved in the TYNDP process and provide their response to this public consultation, in particular the questions included therein. The consultation will be open for 3 months starting today and ending on 21 May 2013.

The Report, including its 5 Annexes is available at

<http://www.entsog.eu/publications/ten-year-network-development-plan-tyndp>

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## 1. Infrastructure

### 1.1. Collection process

In order to ensure a consistent, transparent and non-discriminatory collection process of infrastructure projects, ENTSG launched a public Call for project information during Summer 2012. Information collected through this process has been used to provide an overview of potential infrastructure development for the next 10-year and, in particular, as input for the network modelling. Detailed infrastructure project profiles are included in the TYNDP 2013-2022 Annex A.

- > **Q 1:** Could you suggest any further ways to enhance the Call for project information process?
- > **TAP does not have any additional suggestion to enhance the call for the project information process.**
- > **Q 2:** If you are a project promoter that participated in the data collection process, how did you find the on-line application used for that purpose? Do you have concrete proposals on how to improve this process further?
- > **The on-line application used for the data collection process represents a user-friendly tool to collect data. The process could be further improved by using a completely web-based programme to collect the data. The use and upload/download of an excel file unnecessarily complicates the uploading of data for the user and it may lead to mistakes in the uploading of data.**

### 1.2. Collected data

Collection of data has been quite challenging for ENTSG in terms of the amount of data to be collected and the willingness of project promoters to submit data.

- > **Q 3:** As project promoters found it difficult to fill in the “project phase” part of the questionnaire, what changes should be made (which steps and associated definition) to cover all relevant parts of a project development? Please list maximum 4 project phases.
- > **One possibility to facilitate project promoters in completing the “project phase” section of the questionnaire would be to consider the following phases of the project, which are generally relevant for any project development: FEED, construction, commissioning/start-up, and operation.**
- > **Q 4:** Do you think that ENTSG should or should not include projects in the TYNDP where not all mandatory information (i.e. information necessary for network modelling) has been submitted?
- > **Projects should be included in the TYNDP when questionnaires by project promoters have been submitted. Some projects may be at an early stage of development and not all information necessary for network modelling may be available. In these cases, project promoters should provide provisional/indicative data when needed for**

## modelling purposes.

### 1.3. Criteria and clustering

In order to build different infrastructure clusters to better assess the possible evolution of the European gas network, ENTSOG has chosen to aggregate projects according to their FID status (Final Investment Decision taken/ not taken). It is seen by ENTSOG and by many stakeholders as the only transparent, pragmatic and non-discriminatory parameter. It is noted that projects of a cluster are considered simultaneously for network modelling purposes and hence the choice of the parameter has a significant impact on the results of any given case.

- > **Q 5:** Do you see any other relevant criteria? If yes, which ones?

**The FID/non-FID parameter remains the only one that is transparent, pragmatic and non-discriminatory in order to assess the possible evolution of the European gas network.**

## 2. Network model

ENTSOG's modelling approach has been based on market Zones linked by entry-exit capacity in line with the framework established for access to capacity by Regulation (EC) 715/2009. To consider the underlying physical infrastructure correctly, this approach has nevertheless been further refined to include a specific Zone for an independent infrastructure within a country and specific representation of long-haul pipelines.

- > **Q 6:** Which further improvements regarding the network topology would you consider useful, if any?
- > **The network topology further refined by ENTSOG in the latest TYNDP already represents a substantial improvement from the previous edition.**

Based on feedback received on the TYNDP 2011-2020 approach (equal load factor) to allocating supply from a given supply source to an import route, ENTSOG has considered a load-factor derived from the average load factor observed during the last 3 years.

- > **Q 7:** Do you consider it as an appropriate methodology? If not what alternative approach would you advocate?
- > **The average load factor approach used by ENTSOG seems appropriate.**

Considering that not every theoretical Situation could be run (TYNDP 2013-2022 is based on more than 200 situations compared to the 67 of the previous edition), what should be the priority for an even more robust assessment:

- > **Q 8:** Running some scenario-based assessments on demand? If yes, which types?
- > **Please see answer in Q10.**
- > **Q 9:** Considering additional Supply Stress Situations under Infrastructure Resilience? If

yes, which ones?

- > **Please see answer in Q10.**
- > **Q 10:** ENTSOG has run 4 different infrastructure assessments in the TYNDP. Do you consider these to cover all essential aspects of the European gas system or would you recommend applying any alternative analysis?
- > **The 4 different infrastructure assessments presented by ENTSOG cover all essential aspects of the European gas system. The number of simulations run by ENTSOG (200) should already allow for an assessment of the situations most likely to occur in the European gas network.**
- > **Q 11:** All flow patterns used by ENTSOG in its TYNDP are considered technically feasible by TSOs, do you consider there is a need to define non-technical criteria in order to select only the most probable flow patterns? If yes, which criteria?
- > **Scenarios run in the TYNDP should be based on the technical feasibility of the flow patterns.**

### 3. Demand and Supply

#### 3.1. Demand

- > **Q 12:** What is your opinion on ENTSOG's approach to demand? Does a single demand scenario analysed through different daily situations cover a sufficiently wide range?
- > **TAP believes that one single demand scenario analysed through different daily situations covers a sufficiently wide range.**
- > **Q 13:** If not, what is the added value of multiple demand scenarios, and what parameters should be used?
- > **See answer in Q12.**
- > **Q 14:** Is the introduction of Uniform Risk Situation a valuable improvement? If yes, which added value does it bring for you?
- > **The use of a Uniform Risk Situation represents an improvement for the TYNDP assessment as it provides a common definition of conditions that define all the demand assessments done in the TYNDP.**
- > **Q 15:** Is the introduction of 14-day Situation a valuable improvement? If yes, which added value does it bring for you?
- > **The introduction of a 14-day Situation represents a valuable improvement in order to assess the behaviour of the gas transportation system in Europe under a prolonged supply disruption.**

#### 3.2. Daily Demand Situations

In addition to the 1-day Design-Case Situation which ensures consistency with national plans and represents the benchmark for the transportable energy, the assessment also includes a 14-day Uniform Risk Situation to capture the temporal dimension using the same occurrence

at country level.

- > **Q 16:** As storage is analysed only through simulations of extreme situations (high daily demand), do you consider that other situations should be covered in order to assess the role of storage under less stressful conditions? If yes, please specify.
- > **TAP has no comment on storage simulations under extreme situations.**
- > **Q 17:** Considering the interaction between gas and electricity, should the consistency between gas and electricity scenarios be based on installed capacities (indirectly linked to the peak utilisation of the infrastructure in case of their concurrent use) or forecasted utilisation factors?
- > **The consistency between gas and electricity scenarios should be based on forecasted utilisation factors in order to have a coherent approach with the gas scenario used. Gas demand projections used for the assessments done in the TYNDP are in fact based on forecasts of gas demand in Europe.**

### 3.3. Supply

Under Average Day, supply shares for the Reference Case Situations are based on the historical data of 2009, 2010 and 2011, and then increased according to the Net Demand (National Demand minus National Production) growth. In order to assess both capacity and supply availability, a defined supply potential was used for each source as a supply cap.

ENTSOG has introduced three Potential Supply scenarios for each supply source in order to capture supply uncertainty. The Intermediate Potential Scenarios have been used as a supply cap for the Reference Case Situations.

- > **Q 18:** Do you agree on the way to define supply shares under the Reference Case?
- > **TAP has no comment on the definition of supply shares.**
- > **Q 19:** Do you consider the introduction of the three Potential Supply scenarios as beneficial?
- > **The introduction of three Potential Supply scenarios is a beneficial improvement to the methodology in order to better assess the supply potential, based on information publicly available.**
- > **Q 20:** What is your opinion on the level of each of the 3 Potential Supply scenarios (Minimum, Intermediate and Maximum) for each source (Azerbaijan, Algeria, Libya, LNG, Norway and Russia)? In case you consider them inadequate, please specify why and which sources of information should be used for an enhanced definition.
- > **TAP has no comment on the level of the 3 Potential Supply scenarios per source.**
- > **Q 21:** Regarding the definition of LNG supply scenarios, the Minimum and Intermediate scenarios have been defined on the basis of the historical load factors of European LNG terminals, while the Maximum was defined according to the evolution of liquefaction capacities by basin and the historical shares of the production of each basin exported to the EU. Is this approach adequate? If not, what other parameters are missing?
- > **TAP has no comment on the definition of LNG supply scenarios.**

- > **Q 22:** Considering that supply is out of TSOs' remit and that stakeholders have not provided any detailed information on the topic during SJWSs, in which direction, do you think, could the supply analysis be investigated further?
- > **TAP has no comment on how the supply analysis can be investigated further.**

#### 3.4. Supply allocation

Under high daily demand Situations, each import source has been set at the maximum reached between the years 2009 and 2011. This value has been increased only in case of a new project increasing the capacity of the import routes coming from that source. UGS and LNG terminals (their storage component) are then used as sources of last resort supply. LNG storage component is based on the Average Day value increased by 10% to capture the seasonal swing.

- > **Q 23:** Do you agree with the evolution of import based on historical values and its increase according to the import route capacity development?
- > **Historical values represent one possible way to assess maximum import levels per source into Europe. Independently from the methodology used, imports should be increased correspondingly as new import routes from a given source are developed.**
- > **Q 24:** Do you agree with the dual approach established for LNG (import and storage component)?
- > **TAP has no comment on the dual approach established for LNG.**

#### 4. Assessment Results

As an answer to stakeholders' concerns that Security of Supply should not be seen as separated from market integration, and that TYNDP does not assess directly such integration, the links between the Energy policy pillars and market integration, and the assessment provided by the TYNDP have been reviewed and redefined.

- > **Q 25:** Do you consider this new structure as more representative? If not, which modifications do you see as necessary?
- > **TAP considers this new structure as more representative.**

##### 4.1. Infrastructure Resilience

For this third edition, ENTSOG considered the following Supply Stress events: technical disruptions (from Norway to France and the UK, and from North Africa to Italy and Spain), transit disruptions (Russian gas through Ukraine and Belarus), supply disruption (Azeri gas) and the low deliverability of LNG terminals.

- > **Q 26:** Do you consider these events appropriate?
- > **The events above seem appropriate.**
- > **Q 27:** What other events should, in your opinion, be accounted for?
- > **The events considered in the TYNDP already cover the range of events that need to be**

considered.

#### 4.2. Supply Source Dependency

This new approach aims at identifying Zones whose annual balance depends on at least 20% of a given source.

- > **Q 28:** Do you value this addition?
- > **This represents a valuable addition as it allows to better identify zones that are heavily reliant on one supply source.**
- > **Q 29:** Is the yearly analysis the right basis for this assessment?
- > **The yearly analysis is the right basis for this assessment.**

#### 4.3. Adaptability to Supply Evolution

This new approach aims at identifying the ability of the European gas system to balance each Zone on annual basis when each source moves from the Reference Case share up to the Maximum Supply Potential or down to the Minimum Supply Potential.

- > **Q 30:** Do you value this addition?
- > **This represents a valuable addition as it allows the modelling to provide a more detailed assessment of the supply evolution.**
- > **Q 31:** Is the yearly analysis the right basis for this assessment?
- > **The yearly basis is the right basis for this assessment.**

#### 4.4. Supply Source Diversification

ENTSOG has refined its approach to the assessment of the Supply Source Diversification by applying the Targeted Maximisation modelling approach. What is your view on the following parameters?

- > **Q 32:** The use of non-simultaneous targeted flow patterns to test the maximum physical reach of each source?
- > **The use of non-simultaneous targeted flow patterns to test the maximum physical reach of each source represents a valuable refinement of the methodology used in the TYNDP assessment to assess the maximum physical reach of each source.**
- > **Q 33:** The use of 5% and 20% as supply share thresholds?
- > **The two supply share thresholds should be both used to test the impact of different supply sources on different markets. Depending on the demand in the market considered and the level of diversification already existing, a 5% supply share could already represent a substantial diversification in some markets. Given the different supply diversification situation present in different countries in Europe, both thresholds should be used.**

#### 4.5. Pilot indexes

As a way to collect stakeholders' feedback on some indicators to be included in the Cost-Benefit Analysis methodology to be developed by ENTSOG, two capacity-based indexes have been introduced.

- > **Q 34:** Do you consider the Import Route Diversification Index as introducing the right approach for such analysis? Which further development would you consider valuable?
- > **The introduction of the Import Route Diversification Index represents the right approach for the analysis.**
- > **Q 35:** Do you consider the Import Dependency Index as introducing the right approach for such analysis? Which further development would you consider valuable?
- > **The introduction of the Import Dependency Index represents the right approach for the analysis.**

## 5. Barriers to investment and potential solutions

This new chapter has been introduced in consideration of the framework established for the TYNDP by Regulation (EC) 715/2009. It identifies the different factors that can negatively impact the appetite for new infrastructure projects and the willingness of project promoters to take a Final Investment Decision. At the same time, it describes positive elements which could help the system in overcoming these opposing factors.

- > **Q 36:** Do you share the same view regarding the identified barriers? If not, please explain. Which other factors would you like to be considered?
- > **The identification of barriers to investment and potential solution represents a positive development of the TYNDP report. This new section should be further developed in future TYNDP editions based on the experience of stakeholders involved in the TYNDP and experience of TSOs.**
- > **Q 37:** Do you see other ways to reduce barriers besides those proposed in the Report?
- > **TAP has no further ways to indicate at this point.**

## 6. Future role of the TYNDP in the PCI process

TYNDP 2013-2022 is released before the entry into force of the Infrastructure Guidelines Regulation defining the PCI selection process. Nevertheless, the TYNDP already provides a definition of demand and supply Scenarios, a system-wide analysis of the European gas system and some indicators assessing the infrastructure-related market integration.

- > **Q 38:** In that respect, do you consider TYNDP 2013-2022 methodology as a sound basis for the development of the future Energy System-Wide Cost Benefit Analysis (CBA)? If not, what should be further elaborated?
- > **TAP believes that the methodology considered in the TYNDP 2013-2022 represents a first step for the development for the future Energy System-Wide Cost Benefit Analysis. However, in order for this methodology to be applicable to the assessment of**

**Projects of Common Interest (PCI) under the Energy Infrastructure Package (EIP), the methodology will need to be further developed in order to be able to assess the ability of projects candidate to the PCI status to impact competition in the market and other variables as foreseen by the EIP.**

ENTSOG is planning to launch a public consultation on the CBA methodology Scoping document soon. This will provide stakeholders with further opportunity to comment on the future role of TYNDP in the PCI process.

## 7. General questions

### 7.1. Stakeholder engagement

Considering that stakeholders' involvement in the TYNDP process is crucial regarding the identification of their expectations and the collection of data beyond TSOs' remit, are you satisfied with the dialogue between ENTSOG and stakeholders during the TYNDP process?

- > **Q 39:** How could this process be further improved?
- > **TAP is satisfied with the dialogue with ENTSOG and other stakeholders in the course of the stakeholders working sessions that contributed to the definition of the TYNDP.**

### 7.2. Use of graphics

Graphical layout of quantitative information is a key element helping the reader to grasp complex information.

- > **Q 40:** What is your opinion of graphical representation of information in the TYNDP 2013-2022 (Methodology, Supply and Demand, and Assessment Results chapters)?
- > **TAP believes that the graphical representation of information and its readability has largely improved from the previous TYNDP.**
- > **Q 41:** Which further improvement would you suggest?
- > **TAP has no further improvements to suggest.**

### 7.3. Data accessibility

ENTSOG has taken special care to make all TYNDP-related data available in an easy way and in a format that allows for further analysis.

- > **Q 42:** What is your opinion on the new format of Annex A and B? Do you have any proposals for further improvement?
- > **The new version of Annex A and B represent a substantial improvement from the previous version of the TYNDP.**
- > **Q 43:** Do you consider that hard copies of the TYNDP should be available upon request as a complementary option to the on-line download?
- > **Hard-copies of the TYNDP should be available upon request only.**

#### 7.4. Sustainability

ENTSOG has introduced some thoughts on the assessment of the role of gas and gas infrastructure for sustainability through the quantitative assessment of gas demand for power generation.

- > **Q 44:** Which other way(s) would you consider adequate for capturing the role of gas infrastructure in a sustainable energy policy?
- > **A detailed assessment of the share of gas-fired power generation used to support intermittent renewable energy sources would represent an additional improvement to highlight the ability of gas infrastructure to contribute to a sustainable energy policy.**

#### 7.5. Next focus

Considering the TYNDP as a continuous process facing a rapidly evolving market and expectations, which improvement do you value the most in comparison with the TYNDP 2011-2020?

- > **Q 45:** Which improvement should be given priority for the next edition (maximum 3 ranked answers)?
- > **As indicated above, the collection of data should be done through a completely web-based system to improve the collection process. In addition, the new section on barriers to investments and potential solutions should be further developed based on experience of stakeholders and TSOs.**

Please feel free to address any other issues that may not be covered by the questions above but, in your opinion, deserves further elaboration?

Thank you in advance for your participation in this public consultation.