

## ANNEX

### Collection Process

- **Was the call for information process sufficiently well-advertised (a press release, a banner on the ENTSOG website, an email to all participants to the GIE conference 2010). What other communication channels should be used?**

At this level, the advertising of the information is adequate, but the key communication tool underlying the development of the TYNDP should be regular dialogue between national TSOs and users

### Collected Data

- **Considering the different interests of the European institutions & MSs (cf. Communication of the European Commission on Energy Infrastructure Priorities for 2020 and beyond; Council Regulation (EC) 617/2010 concerning the notification to the Commission of investment projects in energy infrastructure within the European Union), energy regulatory authorities (cf. ERGEG TYNDP recommendations) and network users, incl. third party project sponsors, with regards to the TYNDP, do you consider the requested data as too detailed, balanced or not detailed enough? Please explain your choice.**
- **If you are a third party project sponsor would you be willing to provide to ENTSOG your project cost estimate if ENTSOG committed to keeping it confidential and would use the same aggregation for such information as in the current TYNDP (FID/non-FID projects separately for transmission, storage and LNG)?**
- **Do you think that ENTSOG should or should not include projects in the TYNDP where not all requested information has been submitted?**

The questionnaire is comprehensive, but in its wide range of questions does not distinguish between TSO focused operational questions and wider questions of market benefits which other market participants are better placed to answer. Perhaps in the future questionnaires could be targeted at different groups.

Also key standard questions from any project assessment methodology could be added.

- Which market needs is this project seeking to meet?
- Are there alternative ways of meeting the market needs?
- Why the proposed timing?

In addition, it would be useful if information could be made available on storage facilities which are connected to the TSO network via dedicated pipelines.

With regard to disclosure of projected cost-estimates, even if ENTSOG undertakes to keep data confidential and aggregated, the possibility to provide such data can be expected to vary with each project, depending on the binding confidentiality agreements signed by the sponsors. Furthermore cost estimates may be difficult to compare/aggregate because of differences in accuracy (some estimates may be +/- 40%, others +/- 25%, etc.). the communication of such sensitive data should be invited on a voluntary basis, with guaranteed confidentiality.

Even if information on some projects is incomplete, they could be included by ENTSOG on a second-tier basis, in light of the different information quality.

### **Criteria and Clustering**

- **Do you consider the FID criterion as relevant?**
- **Do you see other relevant criteria? If yes, which ones?**

The FID criterion is relevant, but implies consultation closed. Even when non FID projects are added, there is still a strong impression of a TYNDP which is bottom-up, without real opportunity for projects of wider European interest to be introduced. Yet surely this must be an objective of the plan if it is to serve as a useful tool in relation to European infrastructure policy development.

In the preceding TYNDP (2010-2019), the *Demand Scenarios vs Capacity* report showed a need for additional capacity in eleven countries for 2018 and 2019. In the current TYNDP, the level of flexibility in the reference case scenario is much higher in almost all these regions. The question arises, therefore, if the nature of the grid developments could be because TSOs are opting for national solutions rather than for European development involving cross border interconnections.

If, however, other criteria for project clustering are to be investigated, they should furnish the basis for better evaluating the maturity of projects, in a way that is easily and objectively verifiable.

Thus a more varied system of classification could be introduced in future TYNDPs.

- a) Pre-feasibility studies completed
- b) Feasibility studies completed
- c) FEED underway
- d) Authorizations awarded
- e) FID taken
- f) Under construction

To avoid subjectivity in categorizing projects, terms and definitions should be harmonized.

Another axis of qualification may be related to received or requested financing (e.g. from ECAs, institutional lenders like the EIB/EBRD, public financing (EERP) etc. or from ordinary lenders.)

A richer set of categories as suggested above may help provide a better overall picture of the current status of projects and their realistic potential.

### **Demand**

- **What is your opinion on ENTSOG's approach to demand? Do you think that ENTSOG should apply a demand definition based on more criteria than climatic conditions?**
- **If yes, what parameters should be used?**
- **Is the current comparative approach to demand outlooks published by other organisations/stakeholders sufficient or should more analysis be done? (Please consider that currently only the PRIMES and ENTSOG data are provided on country basis).**

Demand estimates are challenging, not least when there are so many uncertainties surrounding the future energy mix, and sudden policy shifts can change outlooks. ENTSOG should continue to make use of existing scenarios/forecasts, but with appropriate caveats.

TSOs, moreover, could aim to provide further national demand outlooks elaborated on different assumptions. An example could be the elaboration alongside a base case scenario of sensitivity analyses which assume differing levels of implementation of energy and environmental policies (eg RES penetration, energy efficiency targets).

### **Supply**

- **Considering supply outlook is beyond TSOs' remit, do you consider this first ENTSOG attempt being beneficial?**
- **Do you agree on the way to define supply shares under the Reference Case?**
- **Do you agree with the definition of the supply cap?**
- **If any, in which direction supply analysis could be investigated further?**

The information on supply shares and potential is a useful complement to the focus of the study which should be on market needs and the consequences for capacity demand. Where potential bottlenecks may be an obstacle to supply realization, these should be identified. A conservative approach however, on supply shares means that the projected network development envisages minimal change from the dependence from current supply sources.

### **SoS resilience**

- **Do you consider these scenarios appropriate?**
- **What other scenarios should, in your opinion, be used?**

The scenarios were well chosen for the TYNDP. Repeating the scenarios in future TYNDP will facilitate a transparent measurement of progress (or not). The scenarios can be further elaborated in line with information on the implementation of the Security of Gas Supply Regulation affecting infrastructure development.

### **Market integration resilience**

- **No limitation in supply in order to assess network robustness ('capacity potential' approach)?**
- **An even physical spread of each supply source one by one?**
- **3 different supply sources, including indigenous production, as being the benchmark?**
- **A 5% minimum share to consider a supply source within a given country?**
- **Do you consider this approach as requiring additional development? Or do you consider another approach as being more relevant?**

This can be cross-referenced with the supply section, but with a clear focus on network/capacity robustness, i.e. identifying bottlenecks to market integration. The capacity potential approach should be taken. [It is not clear what methodology is intended by "an even physical spread of each supply source one by one". This requires clarification]

"At least 3 different supply sources" could be compatible with the criteria for a functioning market currently under discussion in connection with a gas market target

model, and this parameter should be in line with any outcome from that exercise. Challenges, however, will face some markets in this respect, for whom this may remain a long-term objective. In any case, the number of different supply sources indicates neither the degree of market integration among neighbour markets nor the actual resilience of the systems.

Otherwise, with regard to the network modelling, a question to ask is whether potential LNG market integration increases in step with the development of pipeline interconnections. However, the market integration of LNG should respond to the implementation of new and spread LNG facilities across Europe. In the market resilience scenario, TYNDP could identify better than now when the lack of infrastructures hamper the fully integrated use of facilities.

Also for future plans ENTSG should aim to take account of the need for more flexible demand patterns consequent upon increased use of gas for power and the evolving role of storage, and new deliverability needs, perhaps also new indigenous gas production. More co-operation and integration of the work with ENTSO-E could bring added value.

The percentage could be higher.

The market integration aspect of the TYNDP requires a lot more development, to take into account current and future work to improve market dynamics, and in particular should be the key to focus on cross-border issues and realization of stronger regional and European criteria in network planning.

In terms of improving cross-border flows, TYNDP should identify the infrastructures needed to make physical capacity equal on both sides of a border, in other words, to optimise what already exists with a lower marginal investment costs, and enable the relevant TSOs to offer compatible products each side of the border. Also it should identify where there is a lack of capacity from an internal European market point of view.

### **Network Model**

- **Having in mind that translation of a physical network into a commercial offer is a TSO responsibility, how could the model be improved?**
- **Do you consider it as an appropriate methodology? If not what alternative approach would you advocate?**
- **Running some sensitivity on demand (severe climatic conditions, yearly...)? If yes which types?**
- **Considering additional SoS scenarios? If yes which ones?**
- **Considering additional Market integration scenarios? If yes which ones?**
- **Individual infrastructure corridors? If yes which ones?**

The above suggestions would contribute to a higher value assessment as to whether objectives of SoS and market integration could be achieved at lower investment costs inside Europe by network improvements within Europe.

### **General Questions**

- **How could this process be further improved?**
- **What were your main expectations regarding ENTSG TYNDP 2011-2020?**

- **Has the report met these expectations?**
- **Which improvement should be given priority for the next edition (maximum 3 ranked answers)?**

The dialogue between ENTSOG and Eurogas has been satisfactory. The report was a praiseworthy improvement on the earlier (pilot) Plan, although it still reflects too much of a bottom-up approach.

Improvements for the next Plan

- a more European approach
- more transparency on optional solutions, even if preferences are suggested
- a more robust approach to the market integration aspect