



Minutes

3rd SJWS for the development of TYNDP 2017

Vienna, 9 February 2016, from 10:30 to 16:30

Energy Community Secretariat, Am Hof 4, 1010 Vienna

Introduction

Céline Heidrecheid, ENTSOG Business Area Manager

Reminder on SJWS#1

Céline Heidrecheid, ENTSOG Business Area Manager

ACER proposal on maturity criterion

Juan Lopez Vaquero, ACER
Presentation available for download

Idoia Lejona Nuñez- ENAGAS

Q: You stated that the ENTSOG proposal produces too wide a range of projects for the infra level, can you explain why you have proposed your maturity criteria? For you, what is the difference between the FEED and the feasibility study? For us, the feasibility study is considered enough to classify a projects 'maturity', why is this not enough for ACER?

A: The ENTSOG proposal contains three conditions, one of which was the feasibility study, ACER discussed this with the NRA's and ENTSOG and came to the conclusion that there should be something else on the promoters side, which as shown in the presentation is demonstrating the intention to implement the project with a third party (FEED or permitting). Feasibility studies do not cost that much for promotors so we do not believe this offers enough assurance, there are many projects with feasibility studies that do not get started and consider FEED is a better indicator.

Q: But this is being applied to a non-FID cluster, this infrastructure level will be used to determine benefits...maybe if the project shows benefits as part of this analysis then it will be implemented or not...



A: If there is an additional infrastructure level category for mature or advanced projects, when looking at the statistics comparing TYNDP 2013 and TYNDP 2015 for projects included in both plans only 3% changed from Non-FID to FID, therefore mature/advanced criterion must generate lower numbers of projects.

Q: Another reason could be the commission date, if the project was in the TYNDP 2013 and the commissioning date was 2016 then it would be FID, but 2020 is not reasonable? Maybe this is a reason for the low number of projects moving to FID?

A: From ACER or NRA side, we do not have the weight of testing for how the specific criteria will determine the real numbers, but we do have clear principles. We are open to further suggestions, but believe the options presented in the slides will provide a good basis for selection.

Laurent Hamou - ENGIE

Q: Corridor projects are often split into several projects when submitted. Is the corridor project considered as a whole when these criterion are applied or is it by the individual projects?

A: For assessment within the TYNDP, criteria considered at project level. Later in presentation today, ENTSOG will discuss the lesser of rule relating to capacities and how this applies to corridor projects ...this rule also applies to these maturity criteria if only part of corridor is mature

However, when determining the common benefit, the assessment is done at the level of the group of the projects as a rule.

Céline Heidrecheid - ENTSOG

ENTSOG would like to take this opportunity to remind people to carefully consider the projects submitted, there were very high numbers in TYNDP 2015. When removing projects one by one to determine the benefits, as per the CBA assessment methodology, if so many projects are submitted it can dilute the benefits produced by this assessment.

ENTSOG would also like to highlight the criterion used to determine mature/advanced projects need to be transparent and available before submission.

There could be the possibility of applying the criteria to TYNDP 2015 to determine what project numbers this would produce to use as a feedback loop.

In response to the views on Demand Scenarios presented by ACER, ENTSOG takes on board the comments around the justification of the assumptions used by TSOs to produce the data and transparency of this. ENTSOG already has the plan of hosting a dedicated session to present the results of the demand scenarios once all the data has been collected and checked. This will also



include a comparison against well-known external sources, which has been an element of prior TYNDPs.

In response to the views on Supply Configurations presented by ACER, ENTSOG notes the comment regarding the use of volume rather than price, this will be considered.

Regarding the suggestion of a 'Tomorrow as Today' configuration, ENTSOG has developed an additional configuration for consideration that will go in this direction; the presentation of this is planned for SJWS #4

From submission to modelling

Adam Balogh, ENTSOG Adviser

Presentation available for <u>download</u> (includes presentation given earlier: Reminder on SJWS#1)

Laurent Hamou - ENGIE

Q: Regarding the lesser of rule, when it applies to an area where multiple TSOs exist, does it affect all the TSOs? For example, when you have several TSOs in a country with the same entry/exit area. These are represented by just one point in model. How can you say who will define the capacity?

A: It is not the area that matters but the interconnection point itself, this can be checked in reports available on the transparency platform where all the point and capacities can be compared

Q: But if TSO A is at the IP, what about a TSO further on in the pipeline?

A: A balancing zone is considered as a perfect entry exit system, internal bottlenecks that may exist are not considered

Q: If the second TSO disagrees on the technical entry at an IP, so no constraints but say the value of 200 GWh/d – this will create an issue for the other TSO, so how is this challenged?

A: ENTSOG will not decide on this, it needs to be discussed internally between the TSOs for the correct number to be submitted. We can provide advice on the topology, but the IP capacity figure should be agreed.

E-Control

Q: Also regarding the lesser of rule - how does this relate to the CAM network code?

A: Answer comes from the network modelling, trying to create consistent but conservative approach, which only considers firm capacity and smaller of the two numbers submitted. It does



not do any checking to the CAM or incremental approach. This is not a technical issue, but from law point of view this needs to be considered.

Q: It would be good to highlight the existing capacity on a border point, how much of this is used and how much is firm etc?

A: TSO's are able to see this type of data in the transparency platform. ENTSOG would not consider this necessary to publish as part of the TYNDP.

Q: I think this would be useful to see this information all in one document. It would take a lot of comparison work using the TP. Might be a good idea to provide a summary?

A: ENTSOG have noted the point but will have to see how this is possible

Bundesnetzagentur

Q: Regarding projects that are submitted but do not form part of NDP, do you ask promotors for justification – how is this done, manual or automated? If none, how is this processed further, minor/critical errors?

A: We can make the explanation field compulsory if answer is yes. Our understanding of the ACER view on the topic is that if the project is not in a NDP it can be part of TYNDP if an explanation is given.

ONTRAS Gastransport GmbH

Q: In the portal, the slide shown with the number of red and yellow alerts – is this for all the projects or those that have been submitted?

A: This is just a test area with artificial errors. When it is live you will see the errors that correspond only to your project submissions.

15th March documentation will be made available, please ask questions if you have any as this will save both our and your time in future...

Questions submitted by email...

CRE

Q: Could OPEX be collected via the Data portal as well?

A: In the project questionnaire, there will be CAPEX and OPEX fields where a range can be entered (due to the fact an exact number may not be possible to provide at this stage)

Q: TSOs should be able to check all submitted projects affecting their market zone (not only affecting their network), especially when there are several TSOs in the same market zone.



A: Question has been noted but we need to check with our systems team what the current situation is and what is possible with regards to the TSOs/balancing zones.

Reminder on SJWS#2

Céline Heidrecheid, ENTSOG Business Area Manager

Supply potentials in TYNDP

Stefan Greulich, ENTSOG Adviser
Presentation available for download

ENGIE

Q: For these figures, we are surprised to see how the Algerian production progresses. We would consider this at best to be flat. We do not see any big developments upstream to raise production and do not understand the high scenario. History has been a slow decrease due to a demand rise, 250 TWh/y is not an accident. We do not see how you can above this level in the near future. Chart shows double this potential at the starting in 2017...

A: ENTSOG rely on studies that people provide us, study from Medpro 2012 showed an increase of production figures. If these are outdated, please mention another study where we can check the figures

CH: ENTSOG are not looking at base case, but a reasonable min/max range to allow some flexibility for the model. Happy to receive and look at new figures if you can provide them

Q: With the low oil price, there is less reason for LNG development. With the figures shown for the Max scenario – how do you intend to use these? What is the probability of this occurring? Every month it becomes less probable? Has does this effect the model? 140bcm incentivises LNG Terminal development. How are these figures used in a reasonable way?

A: Is the max represented by the blue section of the chart over optimistic?

Q: Depends on the probability, if this is an extreme scenario then maybe it is fair enough, but if it is a range then it is over optimistic. Probability is reduced dramatically. Reduced shale in US and oil prices all have an impact...

A: Comments and news stories made today are not factored into the studies used for this TYNDP. If these elements come to pass and are factored into future studies then this will be possible –but this is why TYNDP is produced every 2 years.



Currently there are 200 bcm of existing capacities. Algerian supply is not considered to be pipe or LNG but a mix, in line with the assumptions shown.

These supply potentials are used as min/max boundaries, within which the model allowed to play – it doesn't deal with probabilities. The mix of the supply the model uses depends on the price assumptions, and it is therefore more likely to use the high potential if the price is assumed to be low.

In the previous stakeholder session, a more detailed price configuration presentation described how these are used to trigger supply mixes. Six were suggested, which included one that maximises LNG. In the model the upper range will be reached in the configuration.

Q: Yes there is a global view of LNG, but if I see this 140bcm scenario then I see an increased appetite for LNG terminals in Europe due to the economics...

A: But it is also a case of diversity. New LNG terminals might benefit this, but in terms of social welfare - this may not materialise.

Q: I see this point. Finally regarding the model - different price scenarios and general prices...depending on how these are set will trigger highest use of LNG. This is not criticism as I have no other suggestion for how to model this, but in the 6 scenarios, half of them should not be considering 140bcm from LNG as an option.

A: We are not looking at probability and will not give a view on this. Assessment of the infrastructure is completed for a variety of scenarios and ENTSOG will need to state this again that it is not probabilistic within the TYNDP.

Naftogaz

Q: Cyprus is listed as a source, but what about Israel – they also may provide gas to Europe? It also seems you forgot Turkey and Poland?

A: For Israel, there is some potential from our studies but not that we can quantify at the moment. If you have any studies that show this and projects that can bring this gas to Europe we will consider it.

Even if we have something that is considered realistic here, for the potential to materialise in TYNDP requires a project that reaches border of EU to be considered (lesser of rule again applies).

On the LNG chart, Poland is considered – end of year. Turkey – not in our scope.

Edison SpA

Q: Mediterranean sources. Leviathan - they will take FID this year 2016, the delay of field was caused by export issues due to the natural gas law, but this was resolved December 2015.



Project East Med Pipeline PCI would bring this this source to Europe – is this mature enough for this year?

A: ENTSOG is happy to look at supply potentials for this if we can see studies to support this **Q:** If we can share this information we will.

Naftogaz (Answers from SOCAR - Parviz Babayev & Ali Shahbazov)

Q: What is the current status of the project AGRI?

A: Feasibility study for this project, work is under progress but no final decision about the date or implementation. Information will be announced as soon as this decision is made.

Q: AGRI was submitted in the last TYNDP, can you tell us more about the supply source that would be available through this project?

A: AGRI project is based on Caspian basin supplies, Azeri gas and Turkmenia sources and depends on several scenarios but with a max of 8bcm/y. Current status – accepted in TYNDP, but left out of 2nd PCI List. There are discussions to include in BRUA project (Bulgaria - Romania interconnector)

ENTSOG: When we consider 8bcm Azeri it comes through TAP. With AGRI, this would mean no gas would reach this project in the modelling?

A: Azeri has potential to reach EU depending on TAP commissioning date.

ENTSOG Q: All gas from Azeri is contracted to TAP. ENTSOG do not have info on Turkmen gas so this cannot be considered, how would this reach Europe and AGRI?

A: Turkmen gas is considered to be transported by the route Azerbaijan – Georgia pipeline to Constanta in Romania via LNG vessels. Best case 8bcma, but we cannot elaborate more.

CRE

Q: Is it relevant to have min/max figures also for the first year of analysis, ie 2017? Arguably the supply picture will not change drastically by then, so contrasted supply configurations could be more relevant for 2020 and beyond. Having contrasted pictures in 2017 could also be misleading when assessing the value of projects. In 2017, it could be preferable to have only a "business as usual/tomorrow as today" supply configuration.

A: For ENTSOG it makes sense to use a min max potential, so that the model can look for the best solution. Supply outlooks use this approach due to the flexibility of supply sources. If a tighter gap is recommended then it is something that can be considered.

Q: Could the historical range shown be used for near years rather than potentials?

A: This could be an option to consider, for 2017 but not 2020.

ENGIE



C: Difference is linked to investments for some sources. In beginning, for example, Russian supply would be possible to have a wider range but not some other sources.

ACER

Q: TYNDP should refer to the last update of the data for the supply sources.

A: ENTSOG will make clear which source is used and when published (this was also provided in the last TYNDP)

E-Control

Q: When calculation LNG Supply potential, do you use contract data? Is this used for pipeline potentials?

A: GNI, GNL contract data used for LNG. For pipeline potentials, it depends if contracts were used in the study

Energy Community Secretariat

Q: LNG supply potential is drastically different from 2015, can you explain why?

A: ENTSOG has used a different methodology. TYNDP 2015 used the BP Statistical Review 2013. The methodology used with this data source, was that all the flexibility of global LNG could reach EU, but comments received after the last TYNDP stated that this was over optimistic. This is why we have developed a new method using a trading matrix from WEO.

Naftogaz of Ukraine

S: When analysing the use of LNG, our opinion is the possibility within the Black Sea and the border with 4 EU Countries with big capacity, that a project in Ukraine would be more preferable given infrastructure... storage etc. The main problem is the source, feasibility study, LNG Supply through Ukraine and Romania.

SOCAR: AGRI will be part of this Bulgaria-Romania project as mentioned earlier.

CRE

Q: Especially when it comes to Russian gas supplies, the "minimum" configuration appears rather unlikely under market conditions, as Russian suppliers tend to adapt their prices to cope with competing sources. If the configuration is kept, the gap between the "minimum scenario" for Russian supplies and the historic levels should be clearly displayed in the TYNDP (to at least show the "political nature" of such a scenario).

A: Presents the same discussion as before...



Norwegian supply

Britt Aarhus, Gassco

Presentation available download

ONTRAS Gastransport GmbH

Q: Do you know whether production outlook contains gas hydrate. What is the potential?

A: No only conventional gas is included. Hydrate is not a Gassco mandate, no idea on this

Q: Future fields + undiscovered – do you think these are promising?

A: Based on Norwegian petroleum directorates predictions – includes detailed analysis and models.

Naftogaz of Ukraine

Q: Do you consider another pipeline to Europe?

A: We have enough capacity based on current infrastructure. Norwegians do not see requirement to build more capacity, if other countries want to invest then it could be possible.

Energy Community Secretariat

Q: Does the Barents development have the option of LNG or Pipeline?

A: The current LNG 7bcm capacity (not Gassco) is not enough for the expected discovery. New capacity is required – this could be pipeline or LNG, it depends on how much is found or the market –does Europe need it or the rest of the world...

An approach to long-term gas quality monitoring

Antonio Gomez, ENTSOG Adviser

Presentation available <u>here</u>

Q: Can you say what the regions will look like?

A: This is yet to be decided. Considering overlaps like GRIPS. Similar specification and supply dependencies.

Elengy



Q: What is the relation between your work and CEN standard for gas quality?

A: Relationship not addressed in regulation, GQ from ENTSOG - GQ Harmonisation from CEN. Our task may contribute to the success of the CEN task, in terms of actual gas values being conveyed through the network

Q: Slide 15. Explain the relation between the expensive LNG scenario and the gas quality, what does this mean?

A: For any scenario we use the same data, supply origins are balanced between different sources for the region and so this as a whole drives different results.

Contrasted supply mixes are triggered through prices, the mix in terms of volume is used in this pilot study. Range is more defined by the quality range of sources, supply mix is a secondary impact – one of the interesting conclusions of pilot study.

Naftogaz

Q: Each TSO has its own quality specification. It would be good to have one GQ at interconnection points in contracts. When would this be implemented? How will it affect existing contracts?

A: Standardisation according to CEN may take 4 or 5 years and not clear if this would lead to a wobbe index or range change for Europe – this is to be discussed in another forum From GQ perspective member states are responsible for defining the GQ requirements. We will try to group countries will similar even if not equal specifications.

Conclusions

Projects – please start co-ordinating as soon as possible and ask us any questions Closure for projects: 8th May

Supply potentials – thanks to GASSCO and further discussion. Willing to get feedback, please provide documentation or studies or arrange meetings

Happy for further feedback surround GQ

Thanks to ECS for hosting and enabling participation of other countries TSO's