



Demand analysis for the "more capacity" market survey

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1. Introduction and background

Alongside the network development planning procedure, the transmission system operators (TSOs) GASCADE Gastransport GmbH (GASCADE), Gasunie Deutschland Transport Services GmbH (Gasunie) and ONTRAS Gastransport GmbH (ONTRAS) – hereinafter referred to as the "Involved TSOs" – carried out a market survey to determine the need for new transport capacities for high calorific natural gas at the boundaries of the GASPOOL market area from August 21 until October 16, 2015. The aim of this market survey was to be able to estimate the future need for new cross-market-area transport capacities as early and as realistically as possible and thus support the proper development of the relevant gas pipeline infrastructure. With regard to the non-binding inquiries submitted for the purposes of the survey, this demand analysis determines whether the demand stated necessitates the further planning of new development projects. If this is the case, the inquiries will be collected together and used to dimension various capacity levels on the basis of technical studies for each market area boundary.

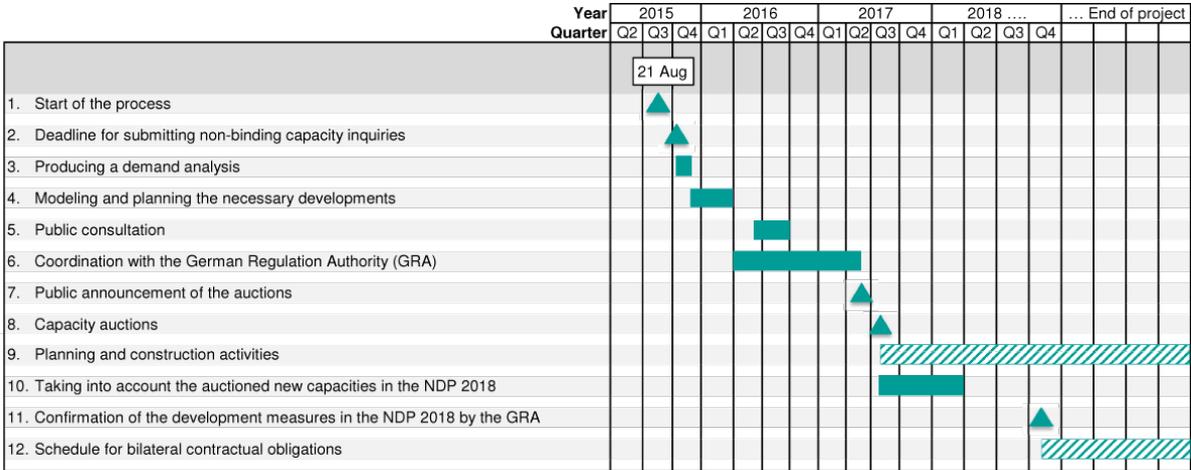


Figure 1: Schedule of planned steps in the "more capacity" process

The schedule (Figure 1) shows where the demand analysis fits into the overall "more capacity" process. For further information, we would like to refer you to the description of the project on the www.more-capacity.eu website. The results of the demand analysis are shown below.

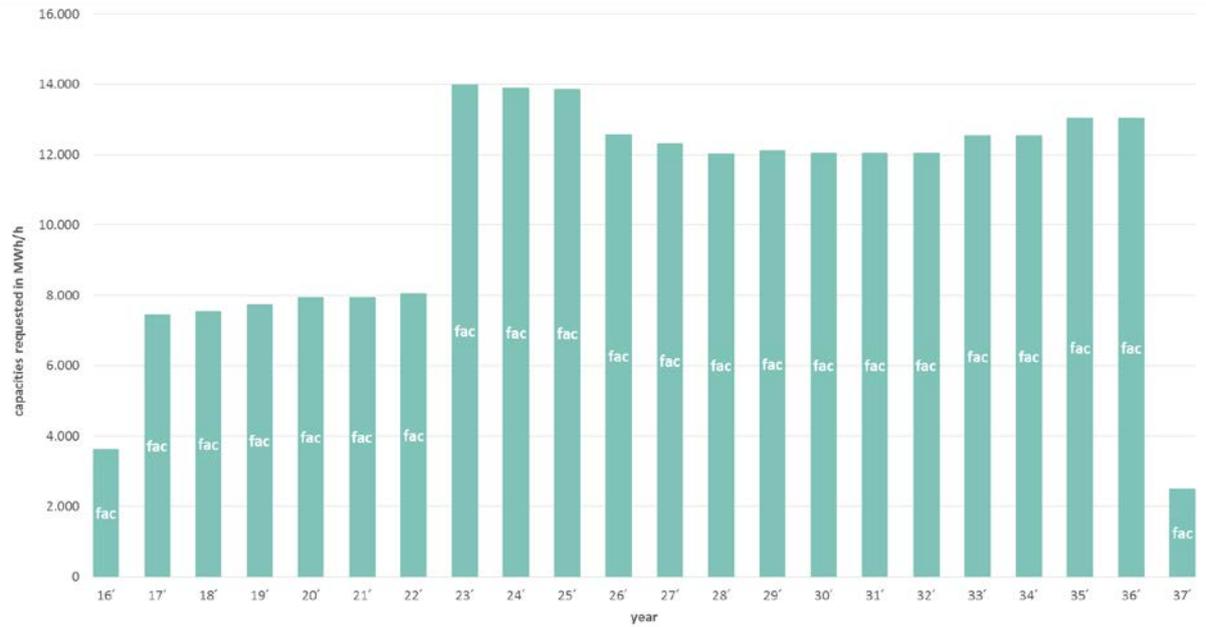
2. Inquiries as part of "more capacity"

In order for incoming inquiries to be taken into account in the demand analyses, the inquiries needed to be received by the deadline of October 16, 2015 and the inquirer had to accept the requirements set out in the terms and conditions of participation. All inquiries received satisfied the formal requirements and will therefore be taken into account in the demand analysis.

Eight market players submitted 73 individual inquiries relating to both freely allocable capacity (fac) and dynamically allocable capacity (dac). The capacity inquires relate to the market area transitions from GASPOOL to Poland, Russia, the Czech Republic, the Netherlands and NetConnect Germany (NCG). The following diagrams (Figures 2 to 7) show an aggregated overview of all inquiries for each market area transition:

Market area transition from GASPOOL to Poland

Figure 2: Total capacities requested at the market area transition from GASPOOL to Poland



Market area transition from Poland to GASPOOL

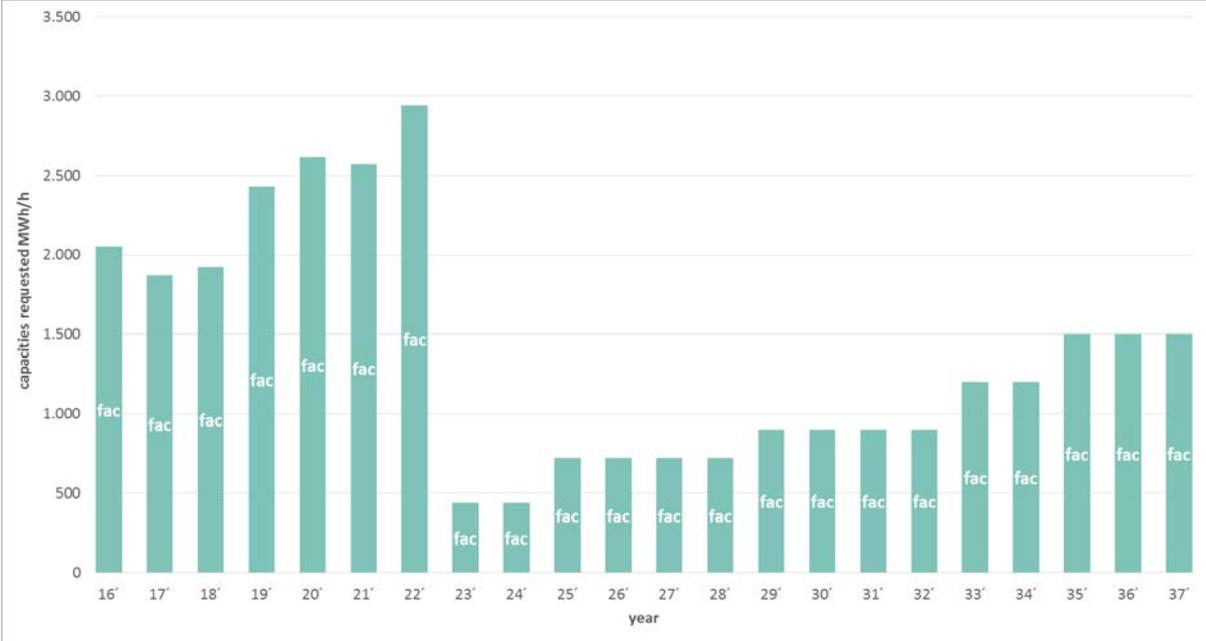


Figure 3: Total capacities requested at the market area transition from Poland to GASPOOL

Market area transition from Russia to GASPOOL

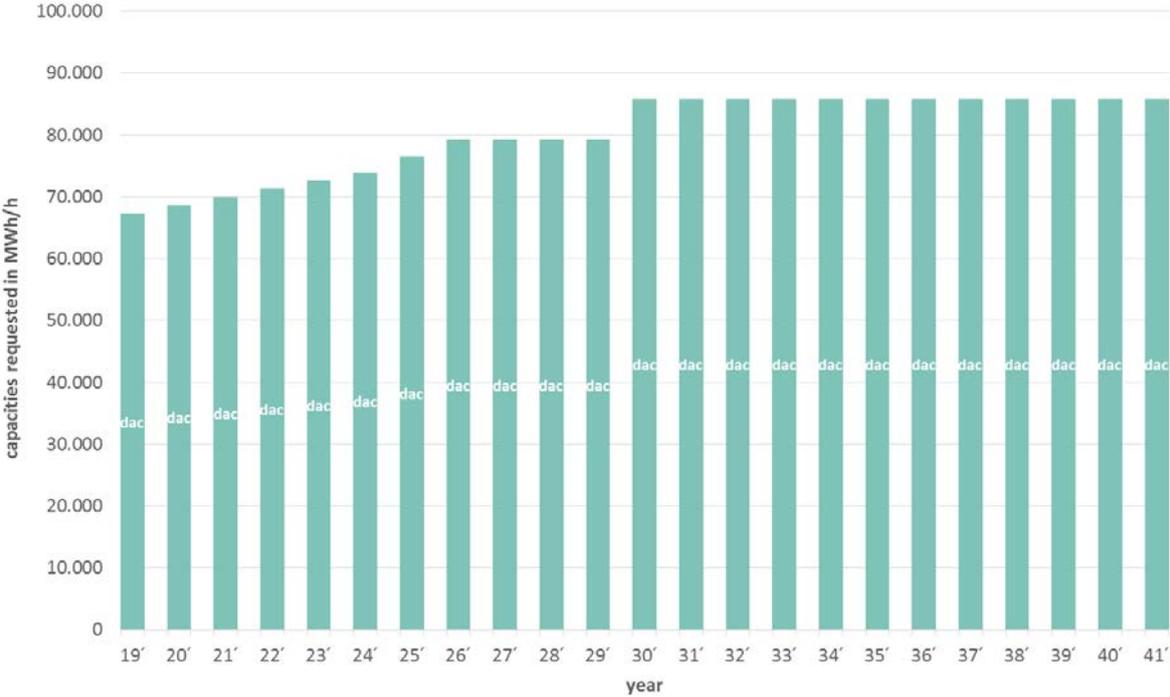


Figure 4: Total capacities requested at the market area transition from Russia to GASPOOL

Market area transition from GASPOOL to the Czech Republic



Figure 5: Total capacities requested at the market area transition from GASPOOL to the Czech Republic

Market area transition from GASPOOL to the Netherlands

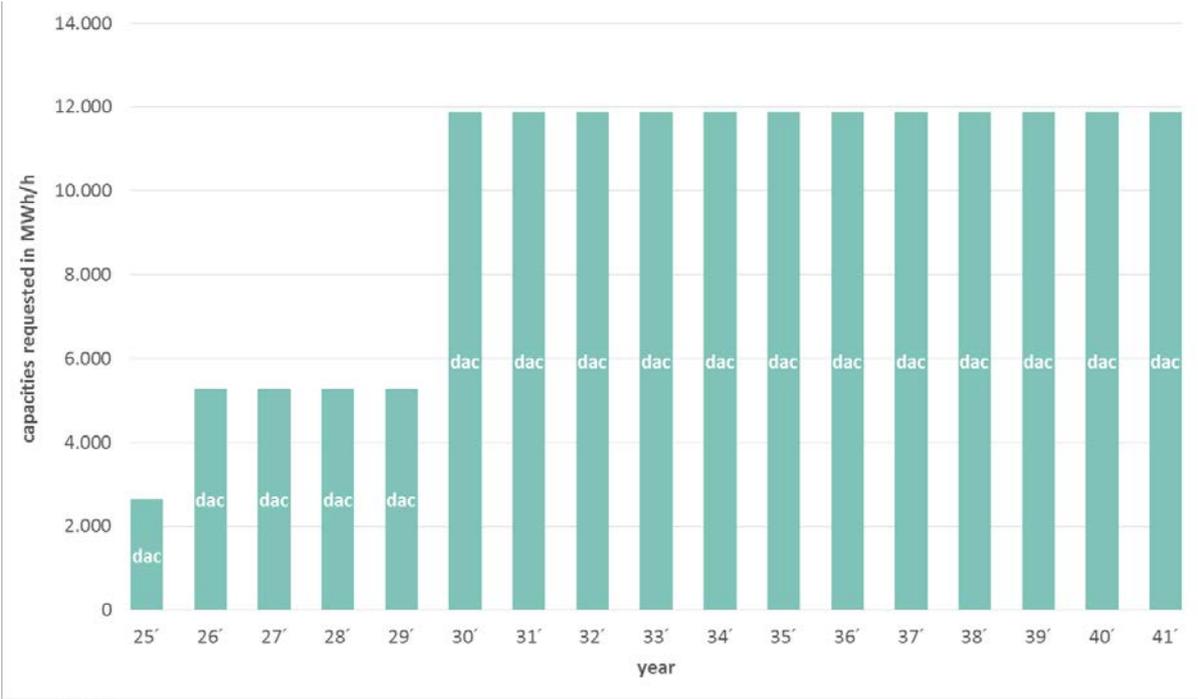


Figure 6: Total capacities requested at the market area transition from GASPOOL to the Netherlands

Market area transition from GASPOOL to NCG

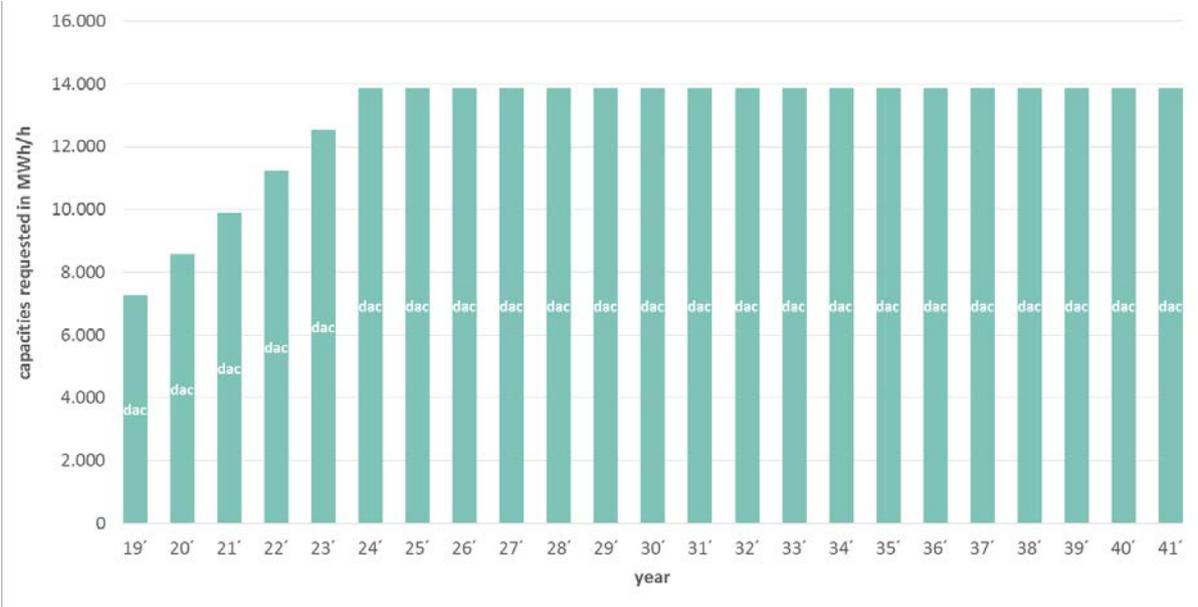


Figure 7: Total capacities requested at the market area transition from GASPOOL to NCG

In order to analyze the requested capacity requirement, the survey participants were also asked to state whether they had taken part in auctions in connection with the requested capacities in the past. Seven of the eight participants answered this question. According to the information provided, six

companies had not taken part in auctions for these capacities to date. One company had successfully taken part in auctions for part of the requested capacities.

The participants were also asked whether they had submitted corresponding inquiries regarding the requested capacities to neighboring network operators. Seven companies confirmed that they had. This information relates to requested capacities for the market area boundaries from GASPOOL to Poland and the Czech Republic.

3. Identifying necessary technical studies

a) Objective, scheduling and content of the technical studies

Depending on the cross-market-area capacity requirements determined during the demand analysis, the Involved TSOs will produce technical studies. The extent to which new capacity is subsequently offered as set out in the project description depends on the project course and results of these technical studies. Accordingly, the production of a technical study does not automatically mean that new capacities will be offered on the market as part of the project.

During these studies, plans for the provision of the necessary capacity at the relevant market area transitions will be developed, taking into account the available transport systems of the Involved TSOs and the TSOs integrated into GASPOOL via partnerships. On this basis, the necessary technical development measures, e.g. new pipeline links, entry/exit stations and new compressor stations, will be determined.

In order to limit the development of new capacities to an efficient level, full use of the potentially available existing capacities of the Involved TSOs and their partners will initially be made. In addition, the upgrading of existing infrastructure on the basis of flow calculations for one or more capacity levels per market area transition and TSO will be taken into account.

Once this step is complete, capacity levels for specific network points will be defined. These will be made up of existing capacities (if available) and new capacities. These will then be used to come up with individual development proposals as well as an initial indication of the necessary investments.

In order to identify possible links to projects which are part of the NDP Gas 2016 early on and compile details of these for the German Regulation authority, there are plans to produce the technical studies at the same time as modeling the NDP 2016. The technical studies will be completed by the end of March 2016.

The established capacity levels for new cross-market-area capacities will then be coordinated in a separate process which will begin in April 2016. The underlying development measures are not part of the NDP Gas 2016.

The following tasks in particular will be carried out during the technical studies:

- Comparing and assessing alternative network development options.
- Determining the network development measures necessary for the capacity levels at specific network points, the costs, and distributing these measures and costs between the Involved TSOs.
- Holding in-depth discussions with neighboring network operators in other market areas regarding delivery points and conditions.
- The rough schedule for carrying out the relevant network development measures.

b) Criteria for carrying out a technical study

As explained under Point 2., all inquiries received comply with the terms and conditions of participation and can be taken into account in the subsequent analysis.

On the basis of two criteria, the check below is carried out to determine whether a technical study needs to be produced for a requested market area transition. The Involved TSOs have defined the following criteria for this purpose. If one of the two criteria is met, the Involved TSOs will deem it necessary to produce a technical study.

Criterion I: Requested capacity > technically available capacity (TAC) at the market area transition

If at any point the total requested capacity exceeds the aggregated technically available capacity (TAC) of the Involved TSOs and their partners at a market area transition, a technical study will be necessary.

Criterion II: Requested capacity > potentially available existing capacity at the market area transition

The second criterion for evaluating the necessity of a technical study checks whether the potentially available existing capacities at the relevant market area transitions are sufficient to cover the total capacity requested. The procedure for determining the potentially available existing capacity is described in Point 3c).

If the total requested additional capacities in relation to the individual market area transitions exceeds the relevant potentially available existing capacity at any point, the Involved TSOs will deem it necessary to carry out a technical study.

c) Potentially available existing capacities

In order to determine the potentially available existing capacities, the boundary and market area transitions to the relevant market areas are analyzed. Projects currently under construction and planned projects from the German Network Development Plan Gas (NDP) 2015 are also taken into account. The analysis of historical interruptions from the NDP Gas 2016 scenario indicates no additional need for capacity that would need to be taken into account when producing the technical studies.

The amount of potentially available existing capacities was determined on the basis of the data of the Involved TSOs and their partners published in October 2015. It was calculated until the end of 2024 and then continued to the end of the inquiry period on the basis of the 2024 level. The free capacities during the period under consideration minus the necessary reserves of 10% or 20% of the technically available capacity (TAC) for short-notice bookings in accordance with Art. 8 of the NC CAM give the potentially available existing capacities.

Reference is also made to the fact that the current potentially available existing capacities will be on offer during the subsequent annual auction in March 2016 and may be booked by shippers. As a result, they will not be available at the given levels for the annual auction in 2017.

d) Necessary technical studies from the perspective of the Involved TSOs

In order to determine whether a technical study is necessary, the criteria defined under Point 3b) must be checked. This check is carried out for each market area transition below. In conclusion, a statement is made as to whether a technical study needs to be produced in the eyes of the Involved TSOs.

Market area transition from GASPOOL to Poland

At the market area transition from GASPOOL to Poland, the total requested capacities exceed both the technically available capacity and the potentially available existing capacity (Figure 8). As a result, Criteria I and II for this market area transition are met. From the perspective of the Involved TSOs, a technical study is necessary for this market area transition.

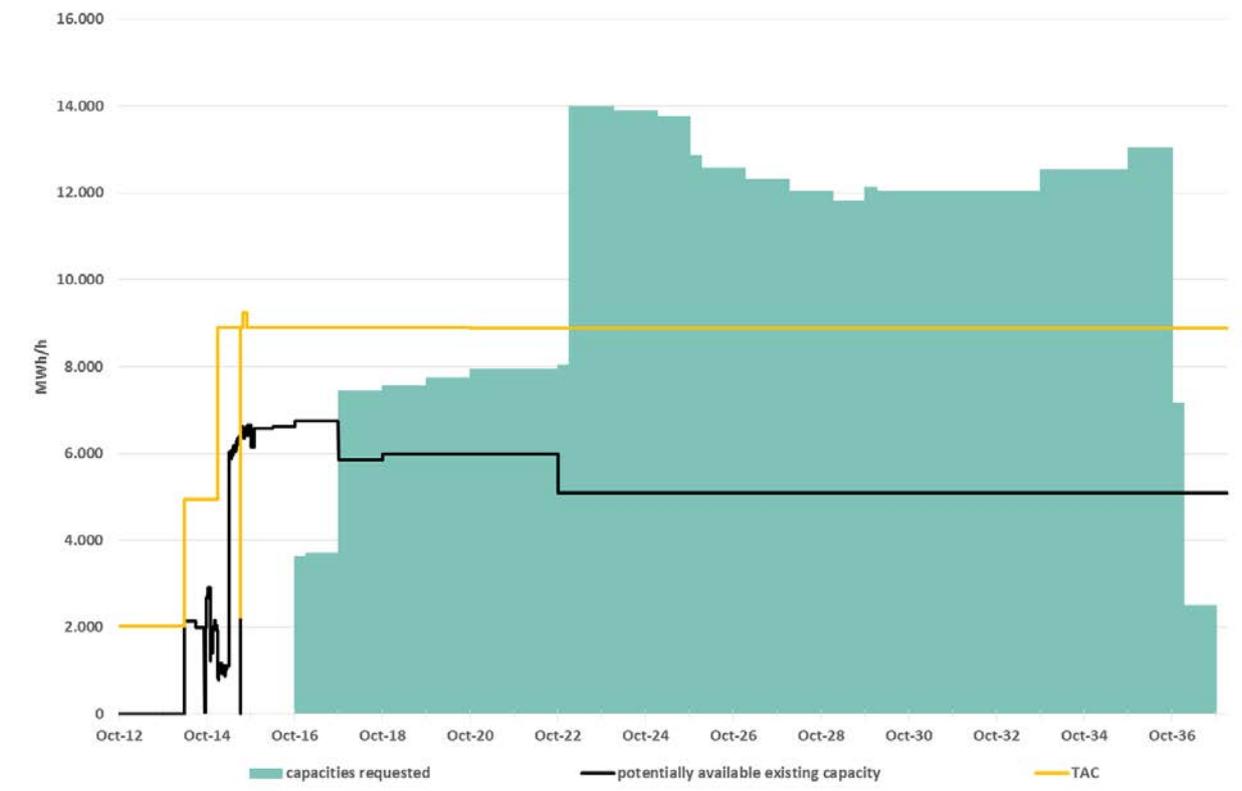


Figure 8: Requested and technically available capacities as well as potentially available existing capacities for the GASPOOL → Poland market area transition

Market area transition from Poland to GASPOOL

In the opposite direction, from Poland to GASPOOL, the requested capacity does not exceed the technically available capacity at any point in time. The potentially available existing capacity will however be exceeded by the requested capacity (Figure 9). As a result, Criterion I, but not Criterion II, is met at this market area transition. The production of a technical study for this market area transition is therefore necessary in the eyes of the Involved TSOs.

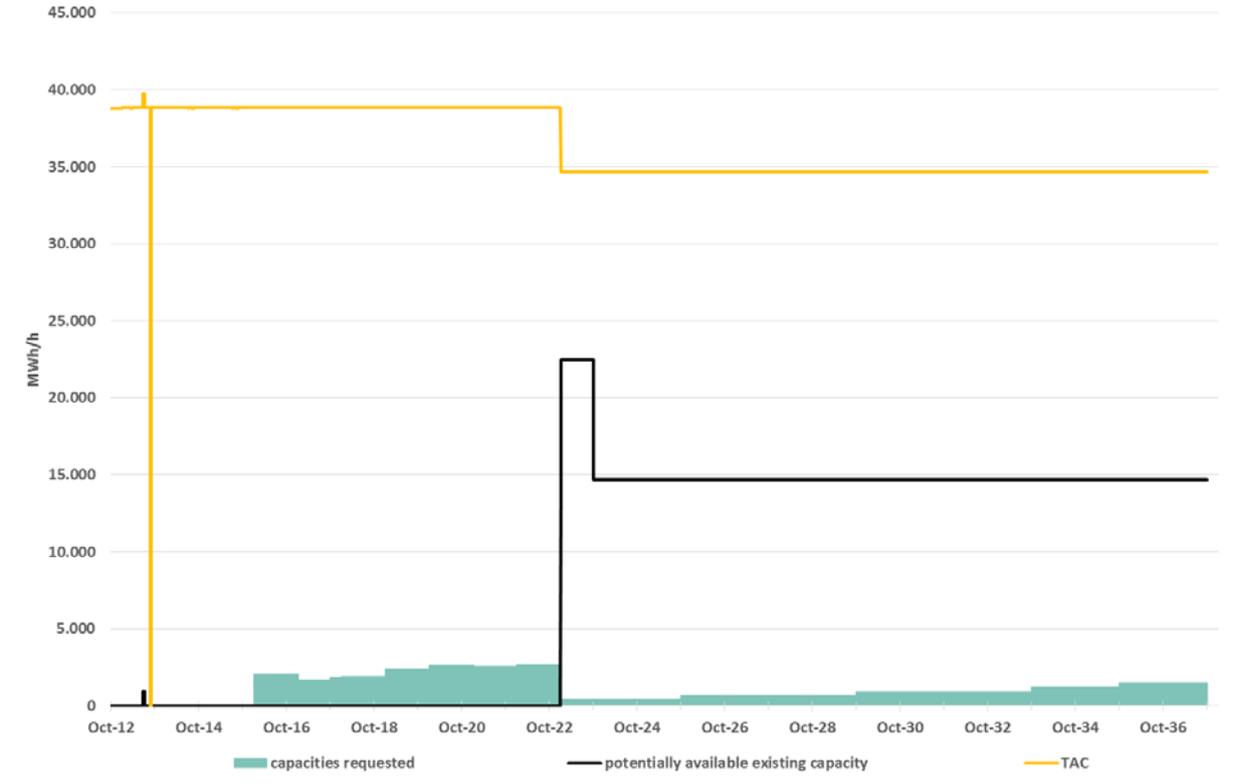


Figure 9: Requested and technically available capacities as well as potentially available existing capacities for the Poland → GASPOOL market area transition

Market area transition from Russia to GASPOOL

At the market area transition from Russia to GASPOOL, the requested capacities are higher than the technically available capacity and the potentially available existing capacity (Figure 10). Criteria I and II are therefore met and a technical study is necessary.

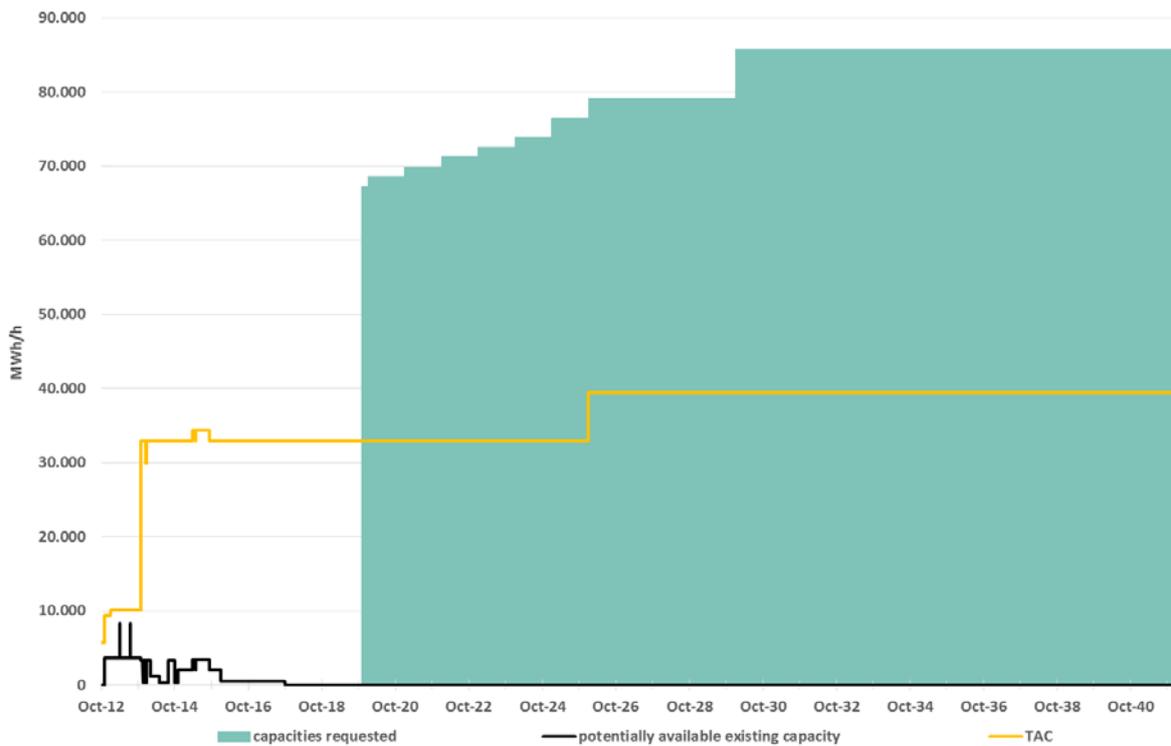


Figure 10: Requested and technically available capacities as well as potentially available existing capacities for the Russia → GASPOOL market area transition

Market area transition from GASPOOL to the Czech Republic

The requested capacities are higher than the technically available capacity and the potentially available existing capacity at the market area transition from GASPOOL to the Czech Republic too (Figure 11). Criteria I and II are therefore met here too and a technical study needs to be produced for this market area transition.

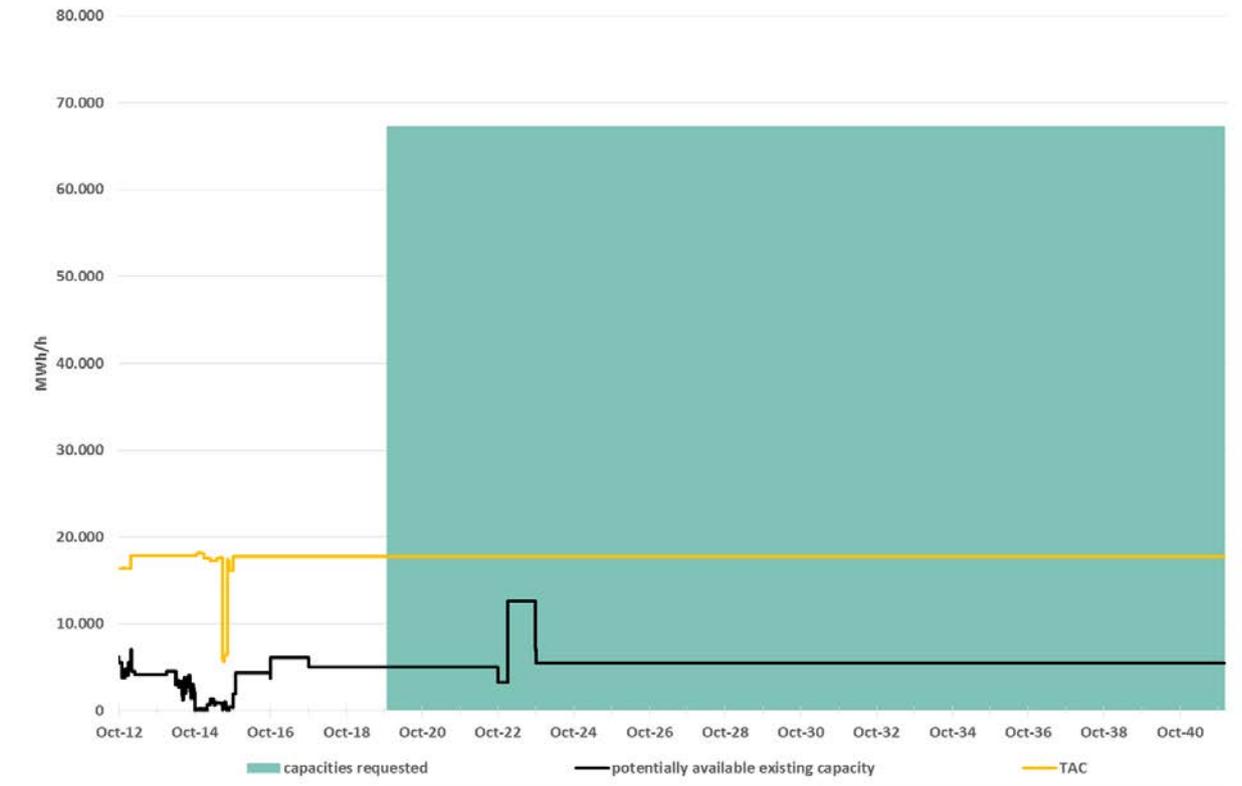


Figure 11: Requested and technically available capacities as well as potentially available existing capacities for the GASPOOL → Czech Republic market area transition

Market area transition from GASPOOL to the Netherlands

At the market area transition from GASPOOL to the Netherlands, the total requested capacities exceed the technically available capacity but do not exceed the potentially available existing capacity at any point in time (Figure 12). As a result, Criterion I is not met for this market area transition, but Criterion II is. From the perspective of the Involved TSOs, a technical study is necessary.

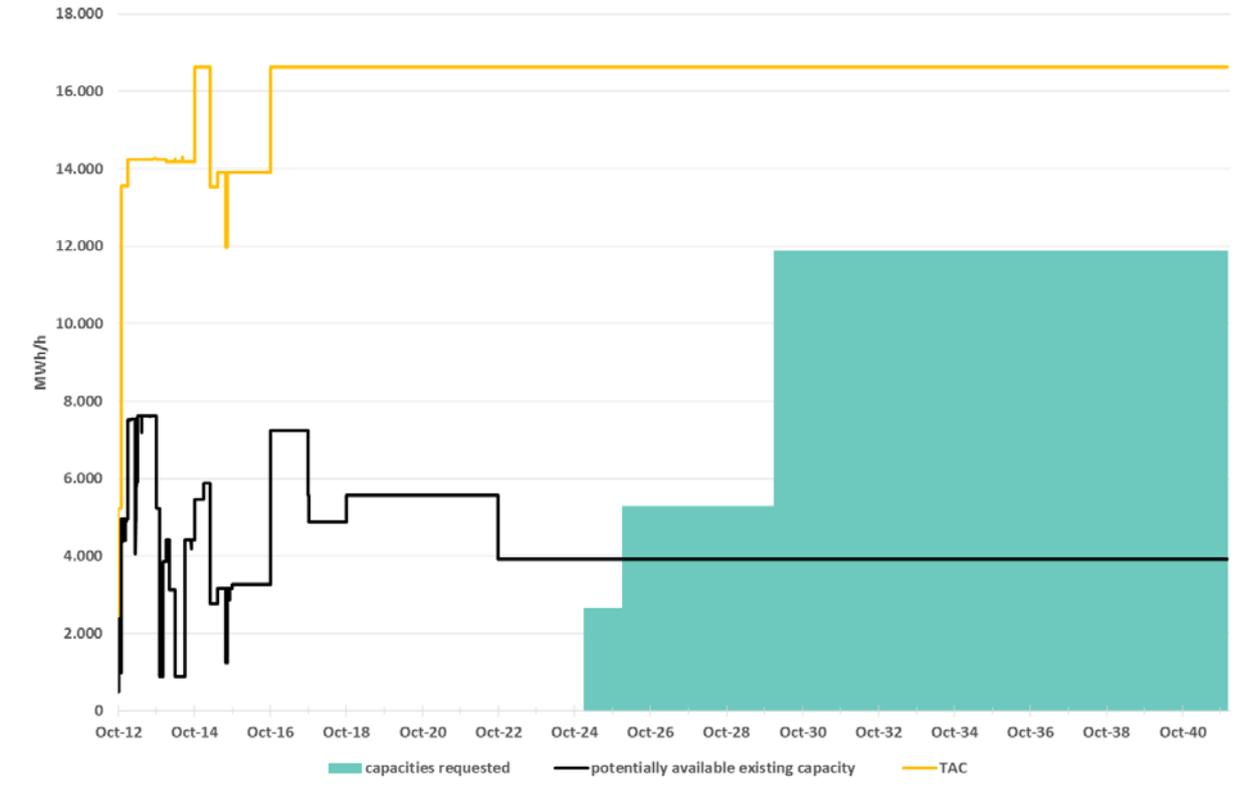


Figure 12: Requested and technically available capacities as well as potentially available existing capacities for the GASPOOL → Netherlands market area transition

Market area transition from GASPOOL to NCG

The scenario for the market area transition from GASPOOL to NCG within Germany is as follows: The requested capacities are below the technically available exit capacity and below the potentially available existing capacity of the GASPOOL TSOs for the entire inquiry period (Figure 13). As a result, neither Criterion I nor Criterion II is met here. There is therefore no need to produce a technical study for this market area transition as part of this project.

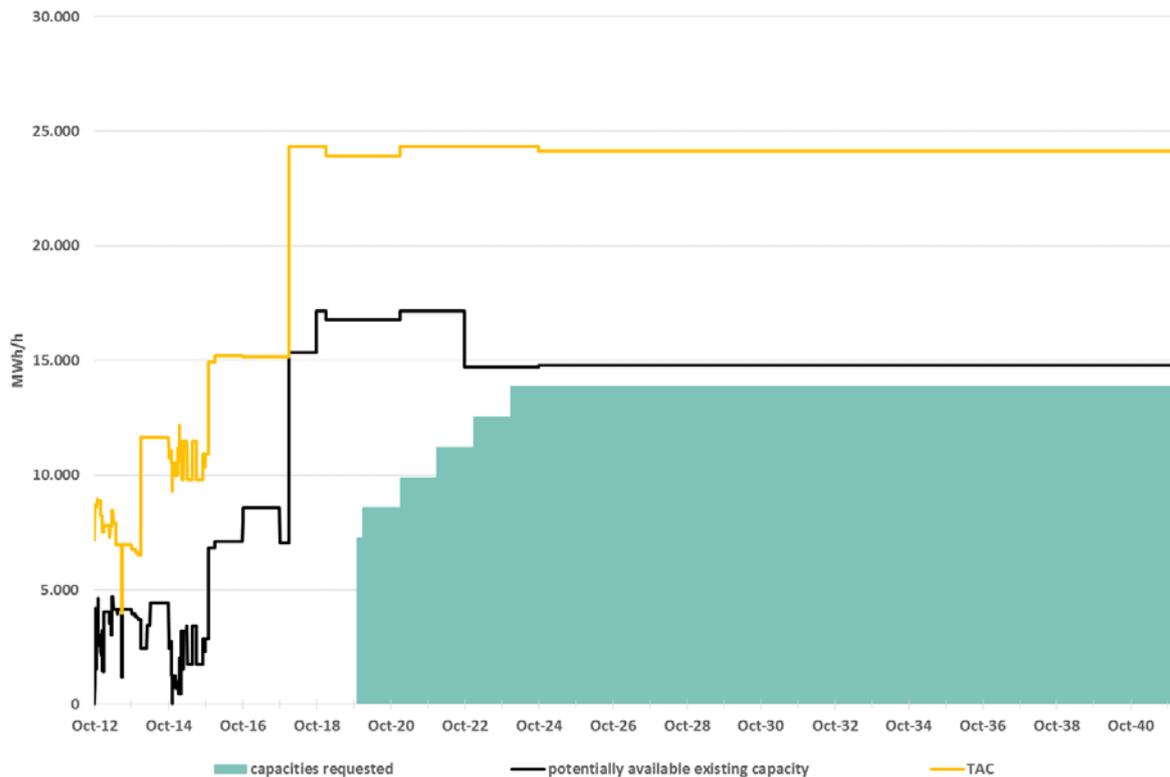


Figure 13: Requested and technically available capacities as well as potentially available existing capacities for the GASPOOL → NCG market area transition

e) Further factors which can influence the technical studies and possibly the capacity levels at the market area transitions

The capacity levels described in the previous sections are based on published data from GASPOOL TSOs for their part of the flange at the relevant market area transition and network interconnection point. In order to obtain a complete picture, further factors in addition to this view which focuses on the GASPOOL market area must be taken into account in the analysis to establish the new capacity actually needed. However, this cannot be determined until after consultation with the neighboring TSOs as part of the technical studies. These include:

- Non-availability of bundled capacity at the relevant network interconnection points of the neighboring TSOs.
- A different estimate of capacity development requirements on the part of the neighboring TSO with different capacity levels on both sides of the market area boundary.
- Reallocation of capacities to other points on the market area boundary or within the market area in consultation with the neighboring TSOs in order to maximize capacities at the market

area boundaries as described in Art. 6 of the Network Code Gas Capacity Allocation Mechanisms (NC CAM).

- The capacity stocktake for the GASPOOL market area produced within the Network Development Plan Gas 2016.

4. Summary and further procedure

The new capacities requested by market player in the non-binding market survey relate to the following market area boundaries:

- Russia → GASPOOL
- GASPOOL → Poland
- Poland → GASPOOL
- GASPOOL → Czech Republic
- GASPOOL → NCG
- GASPOOL → Netherlands

No capacities were requested for the remaining market area transitions (Norway, Denmark, Belgium).

In accordance with the analyses in Section 3, the Involved TSOs will produce technical studies for the following market area transitions (Figure 14):

Market area transition	Criterion I	Criterion II	Technical study
GASPOOL → Poland	Met	Met	Necessary
Poland → GASPOOL	Not met	Met	Necessary
Russia → GASPOOL	Met	Met	Necessary
GASPOOL → Czech Republic	Met	Met	Necessary
GASPOOL → Netherlands	Not met	Met	Necessary
GASPOOL → NCG	Not met	Not met	Not necessary

Figure 14: Results of the criteria check as to the necessity of technical studies

When carrying out the technical studies, the Involved TSOs will consult the affected neighboring TSOs in the weeks ahead and continue to involve the Federal Network Agency closely.

The extent to which new capacity is subsequently offered as set out in the project description depends on the project course and results of the technical studies.