Project application for approval

on the procedure initiated in 2019 for incremental capacity at the Market Area Border between TTF and THE

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This documents represents a joint assessment of the demand for incremental capacity by the following companies:

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I. Introduction

After completion of Phase 1 of the procedure initiated in 2019 pursuant to Regulation (EU) 2017/459 (Network Code on Capacity Allocation Mechanisms in Transmission Networks; hereinafter "NC CAM") for incremental capacities at the market area boundary between the Trading Hub Europe (THE) and Title Transfer Facility (TTF) market areas, the involved transmission system operators (TSOs) have started the planning phase for the related projects (Phase 2).

As shown in the 2019 Market Demand Assessment Report, there is a permanent demand for additional capacity at the market area boundary THE-TTF. The market demand assessment reports based on the submitted market demand indications are publicly available on the website of FNB Gas e. V and on the website of GTS.[1,2] The conclusion of both market demand assessment reports was that the involved TSOs would initiate a project to create new capacity.

As this is a project proposal for the market area border between THE and TTF, the following sections describe all the necessary measures resulting from the request for incremental capacity at the market area borders towards the Netherlands and the Russian Federation. There are, however, two separate project application for approval.

This project application for approval is a joint document of GASCADE Gastransport GmbH (GASCADE), Open Grid Europe GmbH (OGE) und Gasunie Deutschland Transport Services GmbH and the Dutch transmission system operator Gasunie Transport Service B. V. (GTS).

II. Approval content of the project Proposal for Incremental Capacity at the market area border THE-TTF (Exit THE)

1. Measures to accommodate the incremental capacity

Technical studies were carried out on the basis of the non-binding demand indication described in the market demand assessment report for THE-TTF. At the exit in the direction of TTF, 10.7 GW of additional capacity were indicated. The exit incremental capacities are to be offered as dynamically allocable capacity (DZK) with allocation requirement Entry Russia (hereinafter "Entry RU") and Entry Mallnow.

The non-binding request for incremental capacity on the Dutch border was requested be considered in a joint approach with incremental capacity on the Russian market area border: At Entry RU, a demand indication for incremental capacity of 7.8 GW as freely allocable

[1] To be found at: https://www.fnb-gas-capacity.de/zyklen/incremental-capacity-zyklus-2019-2021/marktnachfrageberichte/

[2] To be found at: https://www.gasunietransportservices.nl/en/gasmarket/incremental-capacity/incremental-capacity-process-2019-2021

capacity (FZK) and 4.1 GW as DZK with allocation requirement Exit Netherlands has been submitted.

One project has been developed to provide the incremental capacity from the market area border from Russia and towards the Netherlands. However, the project applications for the market area borders will be separately. All demand indications were made for the period from gas year (GY) 2025/2026 up to and including GY 2039/2040. The realisation of the incremental capacity will lead to extensive need for expansion, which means that the capacity cannot be made available until GY 2027/2028.

In total, the technical studies of the present cycle for incremental capacity considered 47 scenarios, each based on a different combination of projects based on non-binding demand indications. The expansion measures were developed under the premise that all indicated capacities would be booked and that all economic tests would be positive. In this document, only those measures of the maximum variant are described in text form that are partly caused by the above-mentioned requested capacities. All expansion measures of the maximum scenario are shown in Figure 1. A detailed breakdown of costs is not provided here. The basis of the listed expansion measures is the infrastructure contained in the draft document for the NEP, including the network expansion measures resulting from the so called "basic variant". The investment costs are initial estimates. In addition to the investment costs, there will also be operating costs for fuelgas required for operation of the compressors and other expenses. The annual costs for the maximum scenario are given below. These costs include the price of the commodity, natural gas tax and CO_2 costs.

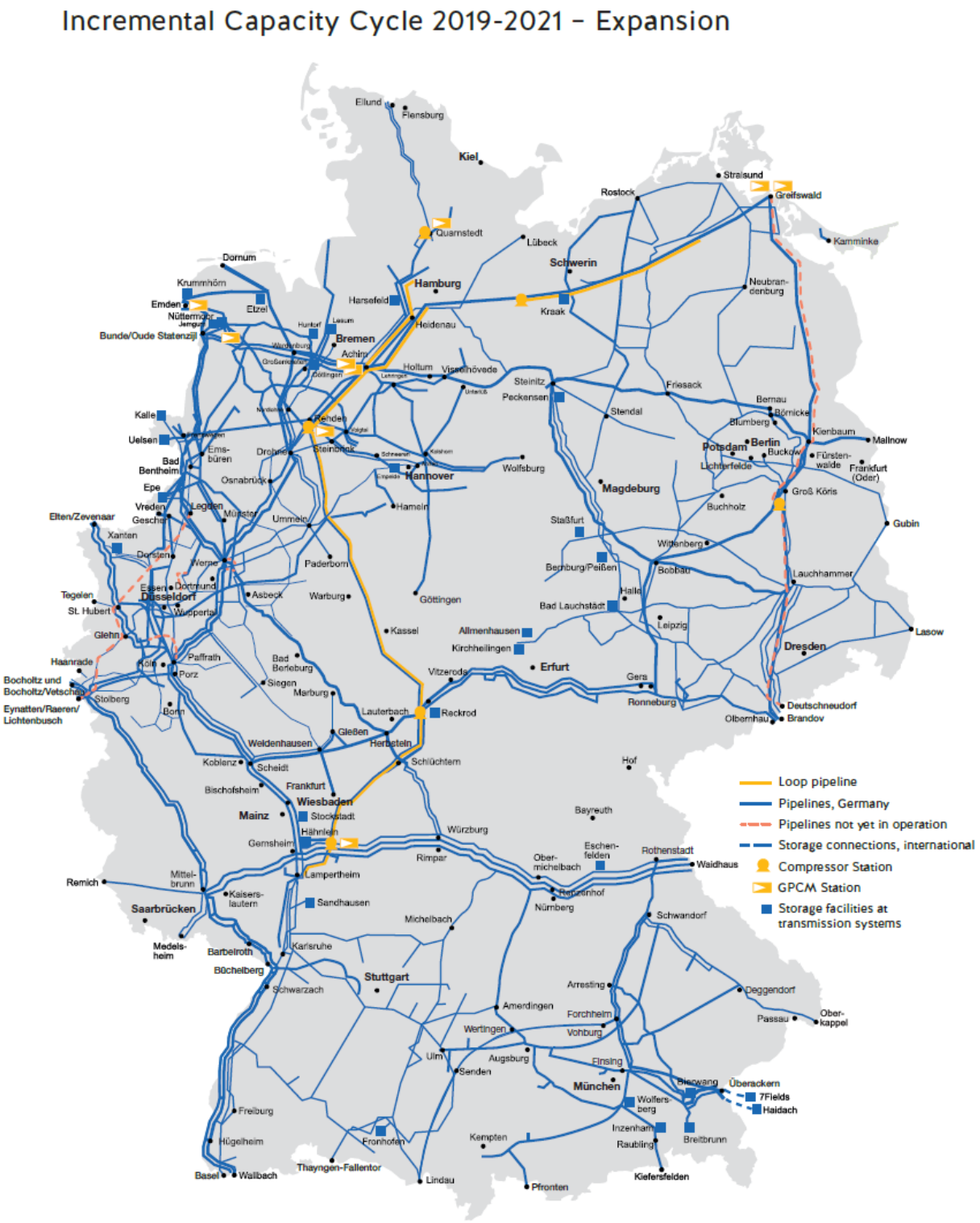

Figure 1: Expansion Measures for the Maximum Scenario

The following measures are required for the scenario considered here. It is important to note that both separate project proposals for the Russian and the Dutch market area border are considered in one single scenario as both stem from one single combined request:

The Greifswald landfall station and the Lubmin II natural gas receiving station must each be expanded. The measures are already included in the NEP (GPRM facility landing station Greifswald — facility expansion 3, ID no. 632-01; GPRM facility Lubmin 2, ID no. 631-01). All in all, no additional investments will be required here.

The following measures are necessary on the NEL pipeline east of the Achim shut-off station: A compressor station with a compressor capacity of about 75 MW. This is already included in the NEP with a compressor capacity of 50 MW (VDS NEL (middle), ID No. 633-01). The additional investments amount to approx. EUR 636 million. East of the compressor station, a loop line with a length of approx. 85 km is to be constructed in DN 1400. The investments amount to approx. EUR 360 million. To the west of the compressor station, a loop pipeline with a length of approx. 57 km in DN 1400 is to be constructed, ending at the Achim shut-off station. The investments amount to approx. EUR 242 million. In total, the additional investments on this pipeline section amount to approx. EUR 665 million. The annual cost of fuelgas for this section is approximately EUR 19.6 million.

An alternative using two compressor stations was considered: one station with approximately 99 MW, of which a compressor capacity of 50 MW is already included in the NEP (VDS NEL (Middle), ID No. 633-01), and another station with 99 MW near Buchholz. The additional investment for this option would be around EUR 547 million compared to the NEP. The annual operating costs would be a maximum of approximately EUR 87 million. This option is not being pursued at present. The TSOs reserve the right to revert to this option for the concrete specifications of the measures during the preparation of the NEP Gas 2022–2032.

On the NEL gas pipeline west of the Achim shut-off station, the following measure is necessary: A loop pipeline with a length of approx. 67 km in DN 1400 has to be constructed. Of this, 52 km in DN 1400 are already included in the NEP (pipeline NEL West, ID no. 634-01). The additional investments amount to approx. EUR 118 million. In total, the additional investments on this pipeline section amount to approx. EUR 118 million.

In the western part of the GUD transmission system, the following expansion measures are necessary. The GPRM facility Achim must be expanded. The expansion has already been included in the NEP (GPRM facility Achim, ID No. 639-01). The GPRM facility Embsen must also be expanded. The expansion has already been included in the NEP (GPRM facility Embsen, ID no. 635-01). The GPRM facility Folmhusen must also be expanded. The expansion has already been included in the NEP (expansion GPRM facility Folmhusen, ID No. 504-02b). In addition, the already in NEP 2018 approved transfer station must be expanded between the GUD transmission system and the GTS transmission system. The expansion has already been included in the NEP (GPRM facility Emden, ID no. 504-02c). As stated above, the confirmation of these measures in the NEP is pending. They have been included in Figure 1 for this reason.

If the measures are not confirmed in the NEP, the additional investments on this pipeline section would amount to approximately EUR 26.8 million.

The following expansion measures are necessary on the MIDAL gas pipeline: The Rehden compressor station must be extended by a compressor capacity of approx. 48 MW. The investments amount to approx. EUR 250 million. In Rehden, a GDRM station with a capacity of 2.2 million Nm³/h must also be constructed. The investments amount to approx. EUR 17 million. A loop pipeline with a length of approx. 260 km in DN 1400 is to be constructed from Rehden to Reckrod. Of this, 61 km are already included in the NEP (pipeline MIDAL Mitte Nord, ID no. 627-01; pipeline MIDAL Mitte Süd, ID no. 628-01). The additional investments amount to approx. EUR 905 million. A compressor station with a compressor capacity of 84 MW is to be built near Reckrod. This is already included in the NEP with a compressor capacity of 36 MW (VDS Reckrod, ID-No. 629-01). The additional investments amount to approx. EUR 150 million. From Reckrod to Lampertheim a loop pipeline with a length of approx. 200 km in DN 1400 is to be constructed. Of this, 115 km in DN 1000 are already included in the NEP (Wirtheim-Lampertheim line, ID no. 609-01). The additional investments amount to approx. EUR 535 million. A compressor station with a compressor capacity of approx. 46 MW is to be built near Herchenrode. The investments amount to approx. EUR 180 million. In addition, a GDRM station with a capacity of approx. 4 million Nm³/h is to be built in Herchenrode. The investments amount to approx. EUR 31 million. In total, the additional investments on this pipeline section amount to approx. EUR 2,063 million. The annual cost of fuelgas for this section is approximately EUR 33 million.

Due to the large number of non-binding demand indications for incremental capacity, depending on booking behaviour in the 2021 annual auctions , there are interdependencies with regard to the project costs to be allocated. Depending on the incremental capacity to be provided on a grid section, synergies or dyssynergies may arise. Synergies are mainly generated by economies of scale. For example, the larger the diameter of a loop line is selected, the lower the specific transport costs will generally be for the same relative capacity utilization. Dyssynergies arise mainly through additional investments, e.g. when the combined incremental capacity requirements of several projects trigger a dimensional leap in a line measure. The cost per measure are allocated to the projects according to the provided incremental capacity. The dependencies of the projects as well as the present value of increase of allowed revenues are shown in the Annex 4 to this consultation document.

The costs to be compared to the bindingly submitted bookings will therefore only be known finally after the annual auctions have been carried out.

2. Information on handling statements received regarding the project proposal

During the consultation period of the project proposal for THE-TTF, no statement regarding this consultation document was submitted.

3. Approval content according to Art. 28 (1) NC CAM

a. Offer Level

The economic test pursuant to Art. 22 NC CAM determines for each offer level whether the present value of the total revenues from binding commitments of network users for contracting capacity in July 2021 ("revenues") are at least equal to the present value of the estimated increase in the TSOs' allowed revenue included in the offer level as defined by the f-factor ("costs"). The process under discussion in this document involves one offer level per project proposal; consequently, there are no competing offer levels.

Product Design

As defined in Article 3 (5) NC CAM, an offer level means the sum of available[3] capacity and the incremental capacity. In conjunction with Art. 29 (1) NC CAM, an offer level may possibly have to contain a number of standard bundled capacity products (e.g. in the event of more than two relevant network interconnection points (IP) between market areas). The relevant capacities will be published in May 2021 as standard products bundled as far as possible for each GY, IP, TSO and product. The offer level is published on the website www.fnb-gas-capacity.de. The offer level includes all incremental capacity products as well as the existing capacity products for which there must be binding commitments as a prerequisite for initiating the economic test.

Potentially equivalent existing capacity products are shown in Table 1. The extent to which they are taken into account is described in more detail in the section "Concrete Offer Levels".

Demand for incremental capacity product indicated	Potentially equivalent or higher-value products (at the indicated IP/market area boundary)
DZK with allocation to specific IP/market area boundaries	➢FZK ➢DZK with allocation to the indicated IP/market area boundaries as a minimum

Table 1: General Case Matrix of Products of Equal or Higher Value Compared to an Indicated Capacity Product

Marketing Horizon

In accordance with Art. 11 (3) second sentence NC CAM, offer levels that include incremental capacity can be offered and booked for a period of up to 15 years after the projected start of

[3] The terms "available" and "existing" are used synonymously in NC CAM.

operational use of the incremental capacity products. This corresponds to the period from GY 2027/2028 up to and including GY 2041/2042.

Allocation Methodology for Existing Products

In 2021, the involved TSOs plan to market the existing capacity as well as the offer levels which include the incremental capacity. Capacity products for existing capacity and incremental capacity have to be booked separately. Transport customers interested in existing capacity products must take into account that they need to participate in multiple auctions if such a capacity product is offered in both the regular yearly auction as well as the offer level for incremental capacity.

At the market area border THE in the direction to TTF existing capacity products at the VIP TTF-NCG-H and VIP TTF-GASPOOL-H have to be booked as a prerequisite for initiating the economic test. At both VIP FZK is offered.[4]

Amount of Offered Capacity

The amount of offered capacity per product is calculated in accordance with Article 11 (6) NC CAM. The reservation rate of 20 percent for existing as well as new capacities pursuant to Art. 8 (8) NC CAM and determination of the Federal Network Agency (Bundesnetzagentur, hereinafter: ”BNetzA*”)* BK7-15-001 (hereinafter: “KARLA Gas”) is taken into account.

Concrete Offer Levels

Offer Level 1 is shown in Annex 2. The economic test is positive when there are binding commitments for 100 percent of the offered capacities. The offer level includes the following products:

Existing Capacity Products		
TSO/IP	**VIP TTF-GASPOOL-H Exit**	**VIP TTF-NCG-H Exit**
GASCADE	./.	./.
GUD	FZK	

Table 2: Overview of Existing Capacity Products in the Offer Level

[4] In the annual auction 2021, this only applies to the gas years for which the existing FZK will be offered parallel to the incremental capacity offer. The affected TSOs will inform the market in good time before the annual auction 2021 regarding the marketing horizon of the existing capacity in July 2021.

New Capacity Products		
TSO/IP	**VIP TTF-GASPOOL-H Exit**	**VIP TTF-NCG-H Exit**
GUD	DZK (with allocation RU, Mallnow)	./.

Table 3: Overview of Incremental Capacity Products in the Offer Level

b. Supplementary Terms and Conditions

A draft of the Supplementary Terms and Conditions (ST&C) is attached to this consultation document as Annex 3.

c. Provisional Scheduling

All above mentioned projects will be initialized after the auction in July 2021. All technical measures will be ready for operation at 1st of October 2027 if the economical test is passed after the auction.

The following steps of the incremental process can be described as follows:

Start Date	End Date	Description
31.08.2020		Publication of the consultation documents
31.08.2020	01.10.2020	Public consultation
01.10.2020	01.11.2020	Planning of the offer levels by the TSOs in close cooperation with the NRA
01.11.2020		Submission of the project proposal to the NRA
01.11.2020	06.04.2021	Processing of the project proposal by the NRA
07.04.2021		Approval and publication of the required parameters by the national regulatory authorities pursuant to Art. 28 (1) NC CAM
08.04.2021	04.05.2021	Adaptation of the offer levels by the TSOs in consideration of the requirements of the NRA
05.05.2021		Publication of the approved parameters, the capacity products and the template of the contract(s) for the capacities offered within the framework of the network expansion project
05.07.2021		Annual auction/Economic test

Table 4: Provisional Scheduling Incremental Capacity process

The stated dates have provisional character and are therefore subject to change.

If the economic test was positive, the project will feed into the national development process for the national development plan NEP Gas 2022-2032 and will be considered in its scenario framework and the (national) modelling. The milestones are available in Table 5.

Milestones	Years of completion of project phases of the measures
Project concept	2021
Basic evaluation/feasibility review	2021-2022
Design planning	2022-2023
Preparation of general planning procedure	2022
Implementation of general planning procedure	2023-2024
Preparation of Federal Emission Control Act (BImSchG)	2023
Property acquisition	2025
Preparation of plan approval procedure	2023
Implementation of plan approval procedure	2024-2025
Acquisition of right of way	2025-2026
Implementation of Federal Emission Control Act (BImSchG)	2024-2025
Construction approval process	2025
Material and service procurement	2023-2026
Preparation and start of construction	2025-2026
Assembly/construction	2025-2027
Commissioning	2027
Project conclusion/completion	2028

Table 5: Milestones in the implementation schedule of technical measures

The provisional timeline for technical measures In the western part of the GUD transmission system are shown in table 6.

Subproject	Start	Duration	Description
GPRM facility Folmhusen & GPRM facility Emden	Aug 21	2 months	Project initiation
	Oct 21	3 months	Detail Engineering
	Jan 22	4 months	Applications and approval
	May 22	3 months	Tender and order placement
	May 22	3 months	Order/Delivery
	Aug 22	3 months	Assembly/Construction
	Nov 22		Commissioning
	Nov 22	4 months	Project conclusion/completion
	Mar 23	6 months	Project initiation

GPRM facility Embsen & GPRM facility Achim	Sep 23	4 months	Detail Engineering
	Jan 24	6 months	Applications and approval
	Jul 24	6 months	Tender and order placement
	Jul 24	8 months	Order/Delivery
	Mar 25	8 months	Assembly/Construction
	Oct 25		Commissioning
	Oct 25	4 months	Project conclusion/completion

Table 6: Provisional Timeline Technical measures GUD transmission system

d. Defined parameters according to Art. 22 (1) NC CAM (Art. 28 (1) lit. d NC CAM)

Estimated reference price according to Art. 22 (1) lit. a No. i NC CAM

The current forecast of the reference price is the reference price for freely allocable capacity of the market area THE for the year 2023 published in the draft of the BNetzA decision REGENT 2021 in the amount of EUR 3.73/(kWh/h)/year. This reference price is used solely for the economic test and does not become part of the contract.

The capacity requested shall be a DZK product. DZK capacity is discounted at 10 % compared to the tariff for FZK products. This results in a price of EUR 3.36/(kWh/h)/year for incremental capacity.

Auction premium according to Art. 22 (1) lit. a NC CAM

The auction of incremental capacities to be built according to Art. 29 (1) NC CAM makes use of the algorithm for multi-step, ascending price auctions pursuant to Art. 17 NC CAM. It is possible that this will result in an auction premium. This will be known after the 2019 annual auctions. For this reason, it was not included in the calculation of the F-factor, but pursuant to Art. 22 (1) lit. a NC CAM, it must be entered in the economic test.

Cash value of the estimated increase in allowable revenue according to Art. 22 (1) lit. b NC CAM

The present value of the estimated increase in EOG depends on inflation and the amount and timing of the costs allocated to the project. The costs depend on the other projects for incremental capacity. The present value of the estimated increase in EOG is shown in Annex 4.

Mandatory minimum premium according to Art. 22 (1) lit. a No. ii NC CAM

Analogously to the f-factor and the present value of the estimated increase in the EOG, the obligatory minimum mark-up also depends on what measures become necessary due to the marketing of incremental capacity on 05/07/2021. The obligatory minimum mark-up to be

applied to the pertinent booking scenario is shown in Annex 4. The amount for each scenario has been measured so that the economic test will be positive solely if the capacity included in the offer level is fully booked.

f-factor according to Art. 22 (1) lit. c NC CAM

According to Article 27 (3) NC CAM the consultation shall cover the level of user commitments, expressed as an estimate of the f-factor in accordance with Article 23, which, after having consulted with the transmission system operators, is proposed and subsequently approved by the concerned national regulatory authorities.

The f-factor for each offer level shall be set by the national regulatory authority, taking into account the following (Article 23 (1) NC CAM):

a) the amount of technical capacity set aside in accordance with Article 8(8) and (9);

b) positive externalities of the incremental capacity project on the market or the transmission network, or both;

c) the duration of binding commitments of network users for contracting capacity compared to the economic life of the asset;

d) the extent to which the demand for the capacity established in the incremental capacity project can be expected to continue after the end of the time horizon used in the economic test.

The BNetzA tool contains mathematical analyses for determination of the f-factor. The f-factor is calculated pursuant to point (a) of Article 22 (1) NC CAM as the ratio of the present value of the binding commitments of network users to contract capacity over the time horizon of the first yearly auction in which the incremental capacities were offered to the present value of all expected commitments of network users to contract the pertinent capacities.

In the BNetzA tool, the estimated reference price pursuant to subpoint (i) of point (a) of Art. 22 (1) NC CAM is the current reference price known at present and updated up to the year in question. Since inflation is not taken into account when determining the increase in the revenue ceiling of the pertinent TSO resulting from the incremental capacities in each offer level, the inflation index for the reference prices was also set at 0 percent.

For the purposes of the economic test application pursuant to Art. 23 NC CAM, it has been assumed that the existing capacities within the offer level were completely booked in the initial marketing in which the incremental capacity was offered. The assumptions relating to the booking of the new capacities are explained below.

The proposed f-factors were determined as follows:

a) Pursuant to Art. 8 (8) NC CAM and KARLA Gas, technically available capacity is retained in the amount of 20 percent of the incremental technical capacity contained in the pertinent offer level. It is assumed here that the retained capacities will be fully utilised in subsequent years as part of the marketing of the capacities and will therefore also be booked.

b) No other positive external effects have been evaluated.

c) Pursuant to Article 11 (3) NC CAM, offer levels for incremental capacities can be offered in yearly auctions for a maximum period of 15 years after the start of operational use.

   For the period from GY 2027/2028 up to and including GY 2041/2042, it was assumed that the incremental capacities offered in the 2021 yearly auction would be fully booked.

   The start of operational use is scheduled for 2027. The economic useful lives of the assets were determined in accordance with the regulatory depreciation periods. The investments described above relate to both compressor stations and pipeline construction. As a result, a normal useful life of 45 years is assumed for pipelines in accordance with the Gas Network Charges Regulation (Gasnetzentgeltverordnung; GasNEV). The start of operational use is scheduled for 2027; the end of operational use is assumed for the time being in GY 2071/72.

   The gas infrastructure will also be of great importance on the future energy market. The TSOs assume that the infrastructure will be reused with hydrogen. The transport potential for the transport of hydrogen is assumed to be lower. As a result, a 65 percent use of the infrastructure is assumed for the period from GY 2053/2054 up to and including GY 2071/2072.

   The key year for determining the time horizon of the economic useful life and economic test is 2072. No bookings have been taken into account for the period after 2072.

The proposed f-factor is oriented to the accounting scenario that has occurred and is included in Annex 4.

e. Differing marketing timeframe (Art. 28 (1) lit. e NC CAM)

A differing marketing timeframe does not apply.

f. Alternative Allocation Mechanisms

The involved TSOs plan to offer the incremental capacity in the standard yearly auction in 2021.

g. Elements IND and RP Pursuant to NC TAR

The current cycle for incremental capacity does not follow a fixed-price approach. In consequence, there is no need to consider here the elements IND and RP pursuant to point (b) of Art. 24 NC TAR.

h. Economic Test

The BNetzA has developed and issued a calculation tool for the economic test pursuant to Art. 22 NC CAM (hereinafter: the "BNetzA Agency tool"[5]) with the intent of increasing transparency. This was used by the TSOs for the calculations set out below.

According to point 1 of the summary of the resolution of the BK 9 (file number BK9-17/609) entitled INKA, the economic test for each offer level of a project for incremental capacity is carried out by the BNetzA in accordance with Art. 22 NC CAM. In Part II of the determination decision, the BNetzA states that the economic test is an element of the project proposal and that all fundamental questions of the economic test must be clarified therein. The following fundamental questions of the economic test must still be defined:

1. Derecognition requirement of existing capacity products
2. Economic test of the offer levels

The TSOs therefore plan to submit application to the BNetzA for the following procedure for conduct of the economic test:

1. Derecognition Requirement of Existing Capacity Products

The economic test should, pursuant to subpoint (i) of point (a) of Art. 22 (1) NC CAM, include the incremental capacities for which binding commitments have been obtained and, pursuant to subpoint (ii) of point (a) of Art. 22 (1) NC CAM, the amount of available capacity that has been contracted.

A prerequisite for the initiation of the economic test is the determination in consultation with the BNetzA of whether the available capacity products (existing capacity) are fully

[5]It can be found at:
https://www.bundesnetzagentur.de/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/NetzentwicklungundSmartGrid/Gas/IncrementalCapacity/IncrementalCap_node.html

booked in each GY as shown in the project application so that efficient network expansion is assured.
This includes offered existing capacity products at all (virtual) interconnection points at the respective market area border, which correspond to the requested capacity in respect to product quality or which can be used due to their product characteristics in the sense of the requested capacity (especially existing FZK can be used in the sense of requested DZK). The existing capacity to be booked is listed in Annex 5.

If the offered existing capacity in each GY is fully booked, the amount of the incremental capacity in (kWh/h)/year for each GY for which there is a binding commitment is entered in the BNetzA tool for the economic test. If the offered existing capacity in a GY is not fully booked, the requirements for conducting the economic test for this GY have not been met. No quantities will be included in the economic test for any such GY.

The information regarding bookings of existing capacities is provided to the BNetzA by the involved TSOs. The BNetzA determines whether the condition for derecognition of the existing capacity in each GY is fulfilled.

2. Economic Test of the Offer Levels

Since six projects for incremental capacity are under consideration in this cycle for incremental capacity, there is extensive overlap of the measures necessary to provide capacity at the various market area boundaries as described under II.1. For this reason, a case-by-case examination of the demand indications and the associated measures is not expedient. The procedure agreed by the TSOs to map all possible booking scenarios is described below.
The requested incremental capacity at the market area border THE-TTF and at the border Russian Federation – THE were analyzed in a single scenario since they stem from one single combined request for incremental capacity and, hence, the necessary technical measures cannot be allocated to the either market area border, individually.
For the economic test, the cost of the necessary measures shall be allocated to the respective market area border pro rata based on the requested incremental capacity per border.

Overall, there are demand indications for incremental capacity at five market area boundaries in the current cycle. There was a demand indication for a capacity upgrade at the market area boundary to Russia from the existing DZK to an FZK in addition to a demand indication for incremental capacity at the IPs Greifswald and Lubmin II. Consequently, offer levels can be booked for the following projects in the current cycle:

1. Poland TGPS
2. Russian Federation (in combined in an alternative allocation mechanism)
3. The Netherlands
4. Russian Federation/Greifswald (capacity upgrade)
5. Russian Federation/Lubmin II (capacity upgrade)
6. Denmark

For these six projects there are seven offer level (two separate offer level for Russian Federation/The Netherlands). Each of the offer levels can be requested independently and must pass the economic test. As a result, all combinations of positive and negative economic tests results are conceivable. Which of the above-mentioned demand indications are actually binding cannot be determined until after the auctions or the assessment of the alternative allocation mechanism.

The TSOs have mapped every possible combination of demand indications and determined the expansion requirements necessary for each as a means of assuring efficient network expansion. An overview of all 47 combinations can be found in Annex 1. The scenarios concerning the projects at the border to the Netherlands/Russian federation are shown in on divided into a) and b) options. This is necessary since the incremental capacity at the border to the Netherlands can be allocated by itself. However, the incremental capacity at the border to the Russian federation is planned to be allocated in combination with the incremental capacity at the border to the Netherlands in one alternative allocation mechanism.
The costs of a necessary expansion measure including operating costs are allocated to the demand indications causing this measure in proportion to the requested service. The present value of the sum of these pro rata costs for specific measures results in the total allowed increase in the revenue ceiling (hereinafter “EOG”) assumed for a project in the economic test.

There are 24 scenarios of combinations with demand indications at the other market area boundaries for each indication. Each of these scenarios has the following specific components that are listed in Annex 4:

1. f-factor
2. Present value of the estimated increase in EOG
3. Obligatory minimum mark-up

When carrying out the economic test using the BNetzA tool, it must first be determined which of the 47 posting scenarios has occurred so that the three components listed above can subsequently be entered in the tool for the economic calculation.

III. Application for approval

GASCADE, OGE and GUD request approval from BNetzA for the content under section II and in the corresponding enclosures for the continued implementation of the procedure to build new capacities according to NC CAM.

IV. Dutch Side of the Market Area Border

1. Introduction

The Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems (Regulation 2017/459) (NC CAM) requires the introduction of an EU-wide harmonized process for the inventory of market demand for incremental capacity by transport system operators (TSOs).

NC CAM states that each odd-numbered year, immediately after the start of the annual yearly capacity auctions, the TSOs shall cooperate in a market demand assessment[6] and consequent activities such as a technical study, consultation and project proposal.

The latest market demand assessment has resulted in one viable non-binding demand indication from Gazprom Export for incremental capacity on the border between THE and TTF.

The following table shows the **non-binding demand indications**:

From "EXIT CAPACITY"	To "ENTRY CAPACITY"	Gas year	Amount (kWh/h)	Request is submitted to other TSOs	Conditions[1]	Period when Demand Indication was received[2]	Additional Information
German market area: Trading Hub Europe	*Netherlands*	*2025/26 – 2039/40*	*10.700.000*	*No*	*d)Restricted allocable firm capacity from Russian Federation and Poland*	*2*	*The capacity is requested in addition to the existing technical capacity*

In the demand assessment phase, the THE and TTF TSOs have analyzed whether the existing capacity is sufficient to accommodate the demand indication. The requested capacity in the demand assessment stage is slightly lower than the capacity requested in the Incremental Capacity process 2017-2019. In coordination with the German TSOs, a proposed route to TTF via GUD connection has been chosen (see also the German project proposal as location where the gas enters the TTF market area), because this is the overall most cost effective route to accommodate the additional capacity. This route requires no additional measures on the Dutch side, as the requested capacity can be accommodated using existing and planned infrastructure.

[6] The following standardised period shall be used for indicating the receiving date of the demand indication: 1) later than eight weeks after the annual yearly capacity auction in the previous incremental capacity cycle, that have not been considered previously; 2) within eight weeks after this year's yearly capacity auction (0 – 8 weeks after yearly auction in year); 3) later than eight weeks after this year's yearly capacity auction, but that will be considered in this incremental capacity cycle (9 – 16 weeks after yearly auction in year).

Please see the Demand Assessment Report TTF-THE and the Consultation Document for the Market Area Border Between THE and TTF for more information.
The demand indication has been used to conduct a technical study to identify the possible technical measures to increase capacity at the market area border, to carry out the consultation and to prepare the present project proposal. This joint project proposal will be submitted to the Dutch regulatory authority, the Autoriteit Consument & Markt (ACM) and the BNetzA, to request approval for continuation of the incremental capacity process 2019-2021. The THE TSOs will submit a project proposal for the measures on the German side of the border to the German regulator, Bundesnetzagentur.

2. Technical information

At present, the THE and TTF market areas are connected via three physical entry H-gas connections: one connection with GUD, one connection with GASCADE and one connection with OGE. The connection via GUD is sufficient to honor the demand indication. The network capacity in the market area TTF is sufficient to accommodate the capacity requested in the demand indication.

The network technical capacity is the volume of gas that the network can handle at a given time. The network capacity from the market area border to the rest of the Netherlands is also sufficient to accommodate the capacity requested in the demand indication.

3. Commercial and economic information

Art 28 (1) of NC CAM prescribes that the project proposal shall contain the following commercial and economic information.

Offer levels – Art 28 (1) (a) NC CAM
According to article 3 (5) NC CAM an offer level means “the sum of the available capacity and the respective level of incremental capacity offered for each of the yearly standard capacity products at an interconnection point”.

Offer level I

Technical capacity and offer levels
In order to accommodate the demand indication, only one offer level is required. GTS is not required to take measures and therefore can match the German offer levels with existing capacity.

Reserve percentages

For the offer level containing solely existing capacity, the standard reservation quota for existing capacity for the short term auctions of 20% is taken into account.

The tables below describe the matching of the German offer level. The letters in the first table correspond to description in the NC CAM of the capacity to be offered during the annual yearly capacity auction. This description explains that the capacity offered shall be equal to 'A – B C + D + E – F'.

Existing capacity GTS (kWh/h) VIP TTF-Gaspool H											
Period from	Period to	Existing Technical capacity (A)	Incremental capacity (E)	Total capacity	Reserved existing technical capacity for short term auctions 20% (B)	Reserved incremental capacity for short term auctions 20% (F)	Currently booked capacity (C)	Available capacity	Additional capacity (D)	Long term auction capacity (80%)	Reserved for short term auctions (20%)
1-10-2027	30-9-2028	28.600.000	0	28.600.000	5.720.000	0	5.182.477	23.417.523	0	17.697.523	5.720.000
1-10-2028	30-9-2029	28.600.000	0	28.600.000	5.720.000	0	4.694.004	23.905.996	0	18.185.996	5.720.000
1-10-2029	30-9-2030	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2030	30-9-2031	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2031	30-9-2032	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2032	30-9-2033	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2033	30-9-2034	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2034	30-9-2035	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2035	30-9-2036	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2036	30-9-2037	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2037	30-9-2038	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2038	30-9-2039	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2039	30-9-2040	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2040	30-9-2041	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000
1-10-2041	30-9-2042	28.600.000	0	28.600.000	5.720.000	0	0	28.600.000	0	22.880.000	5.720.000

Existing capacity GTS (kWh/h) VIP TTF-NCG H											
Period from	Period to	Existing Technical capacity (A)	Incremental capacity (E)	Total capacity	Reserved existing technical capacity for short term auctions 20% (B)	Reserved incremental capacity for short term auctions 20% (F)	Currently booked capacity (C)	Available capacity	Additional capacity (D)	Long term auction capacity (80%)	Reserved for short term auctions (20%)
1-10-2027	30-9-2028	18.950.000	0	18.950.000	3.790.000	0	3.896.231	15.053.769	0	11.263.769	3.790.000
1-10-2028	30-9-2029	18.950.000	0	18.950.000	3.790.000	0	3.896.231	15.053.769	0	11.263.769	3.790.000
1-10-2029	30-9-2030	18.950.000	0	18.950.000	3.790.000	0	3.896.231	15.053.769	0	11.263.769	3.790.000
1-10-2030	30-9-2031	18.950.000	0	18.950.000	3.790.000	0	3.896.231	15.053.769	0	11.263.769	3.790.000
1-10-2031	30-9-2032	18.950.000	0	18.950.000	3.790.000	0	1.180.677	17.769.323	0	13.979.323	3.790.000
1-10-2032	30-9-2033	18.950.000	0	18.950.000	3.790.000	0	1.180.677	17.769.323	0	13.979.323	3.790.000
1-10-2033	30-9-2034	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2034	30-9-2035	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2035	30-9-2036	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2036	30-9-2037	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2037	30-9-2038	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2038	30-9-2039	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2039	30-9-2040	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2040	30-9-2041	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000
1-10-2041	30-9-2042	18.950.000	0	18.950.000	3.790.000	0	0	18.950.000	0	15.160.000	3.790.000

Supplementary Terms and Conditions – Art 28 (1) (b) NC CAM

Because the demand indication can be accommodated with existing capacity, there is no need to provide supplementary terms and conditions as all capacity shall be offered via the regular capacity auctions.

Timeline – Art 28 (1) (c) NC CAM

The below table provides the timeline for the incremental capacity process 2019-2021.

Start Date	End Date	Description
31.08.2020		Publication of the consultation documents
31.08.2020	01.10.2020	Public consultation
01.10.2020	01.11.2020	Planning of the offer levels by the TSOs in close cooperation with the NRA
01.11.2020		Submission of the project proposal to the NRA
01.11.2020	06.04.2021	Processing of the project proposal by the NRA
07.04.2021		Approval and publication of the required parameters by the national regulatory authorities pursuant to Art. 28 (1) NC CAM
08.04.2021	04.05.2021	Adaptation of the offer levels by the TSOs in consideration of the requirements of the NRA
05.05.2021		Publication of the approved parameters, the capacity products and the template of the contract(s) for the capacities offered within the framework of the network expansion project
05.07.2021		Annual auction/Economic test

The project proposals are submitted on 2 November, so that the NRAs have six months to consider the proposals, which would mean that their decision will be published at the latest on 2 May 2021. As the TSOs need to submit the data at the latest one month before the actual auction, they have one month to prepare the auctions.

Parameters – Art 28 (1) (d) NC CAM

Because the proposed route does not require any additional measures, GTS proposes there is no decision required regarding parameters.

F-factor

Because the proposed route does not require any additional measures, there is no decision required regarding the F-factor.

Extended time horizon – Art 28 (1) (e) NC CAM

An extended time horizon beyond the allocation of 15 years after Ready for Operation (RFO) for contracting capacity is not required.

Alternative allocation mechanism – Art 28 (1) (f) NC CAM

Gasunie Transport Services B.V. did not receive any conditional demand indications and therefore did not request approval of the ACM, to use alternative allocation mechanisms.

Fixed price approach – Art 28 (1) (g) NC CAM

Gasunie Transport Services B.V. is not going to apply the fixed price approach according to Article 25 (1), sub b, ii Reg. 460/2017 (NC TAR) for this incremental capacity project, as a variable price system is applied in the Dutch system.

Economic test

Article 22 of NC CAM states that after the yearly auction has taken place and binding commitments of network users to contract capacity have been obtained, an economic test shall be performed for each offer level of an incremental capacity project. If the economic test has a positive outcome on both sides of an interconnection point for at least one offer level, the technical measures shall be built. If the economic test is negative, the incremental capacity project shall be terminated.

However, because the demand indication can be accommodated with existing capacity, GTS will not have to perform an economic test. Nevertheless, If the economic test conducted by the German TSOs would have a negative outcome, any corresponding booking made on the Dutch side of the interconnection point would automatically be cancelled.

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