european network
of transmission system operators
for gas

Brussels, 4th December

ENTSOG's view on Firm Capacity Products with conditions

ACER workshop on conditionalities in firm gas capacity products

Image Courtesy of Thyssengas

Why conditional products?

Why conditional capacity products?

Theory

- Entry-exit systems aim for independent and seamless use of flexible entry and exit capacity regardless of underlying system characteristics (“Free allocability”)

Practice

- In reality in specific entry-exit zones physical flows, the design of the networks and their interaction can limit the ability of TSOs to guarantee firm and freely allocable capacity

Challenges in specific entry-exit-zones – example from Germany

- Specific growing entry-exit-systems increase the shippers' freedom to combine entry and exit points which may lead to a shift in gas flows
- However, in some cases it may be not possible or efficient to design a network in a way that all potential shifts in gas flows are physically possible
- Solutions to optimize the capacity offer with existing assets:
  - Commercial instruments (e. g. flow commitments)
  - Introducing conditional capacity products
  - lower the level of firm capacity (free allocability)

Why conditional capacity products?

- in specific entry-exit systems maximising the offer of firm capacity taking into account market needs and efficient network operation requires the introduction of conditional products

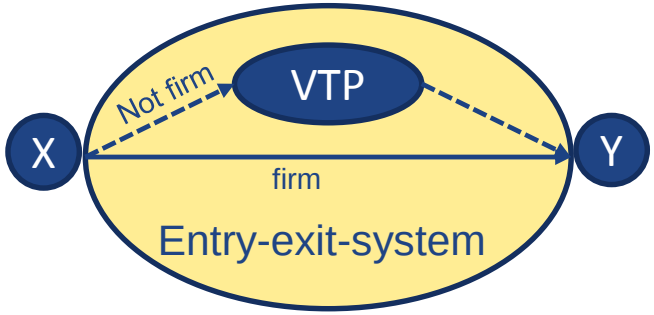
- Different solutions in different situations:
  - Need for a sufficiently high exit flow/load
    - Products with temperature as an indicator for demand
    - Products with a direct link to exit flow/demand
  - Need to integrate transit pipeline into an entry-exit system
    - Point to point connection with possibly some freedom concerning allocability
    - Alternative: not to integrate the transit pipeline at all
- Maximize the offer firm exit capacities to other member states to increase security of supply of these member states.

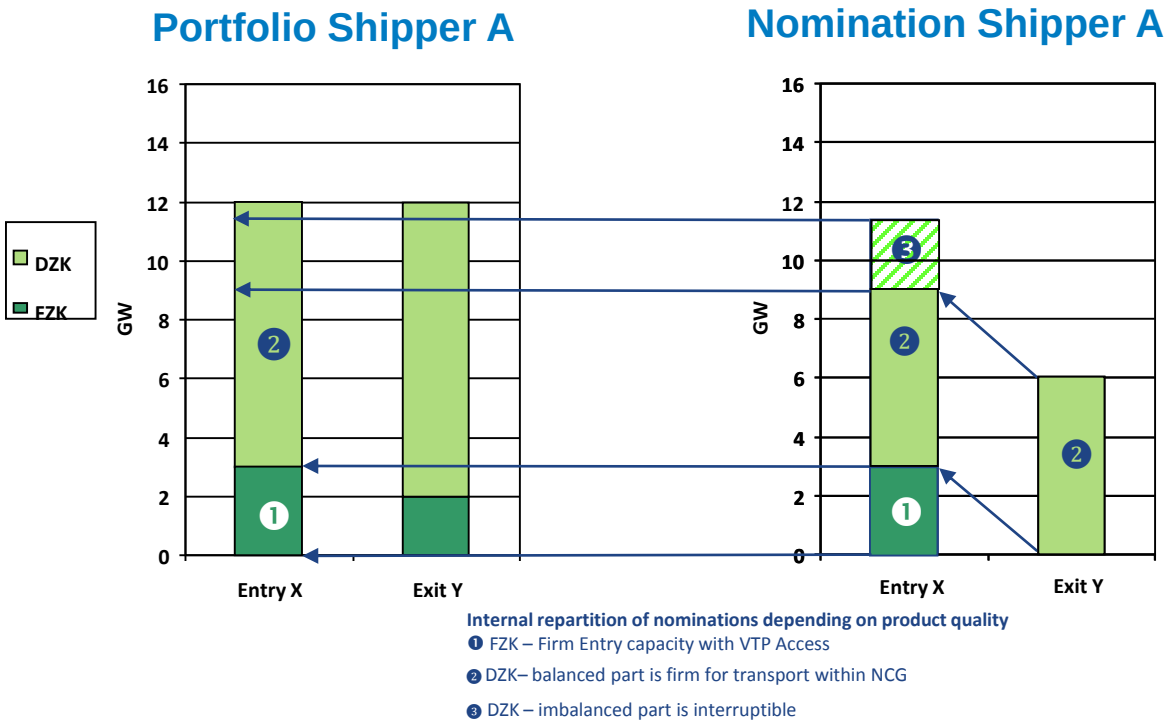
Transparency – Why is it important?

- Conditional products can be useful and efficient means to optimize the offer of firm capacity

- These conditional products need to be transparent

Transparency – Example curtailment DZK





Internal repartition of nominations depending on product quality

❶ FZK – Firm Entry capacity with VTP Access

❷ DZK– balanced part is firm for transport within NCG

❸ DZK – imbalanced part is interruptible

The imbalanced parts of the DZK (❸) will be curtailed pro rata.

Within 7 years of operation never occurred a need to interrupt DZK in Germany.

Transparency – Where to find?

- GT&Cs of the TSO
- TSOs' websites: detailed explanations of conditional capacity products
- Booking platforms such as PRISMA
- ENTSOGs transparency platform

Transparency – GTCs of the TSO

GRTgaz Deutschland

General Terms & Conditions for Entry/Exit Contracts (entry/exit system)

2. The use of the capacity portion of DZK, which is used in excess of a balanced transport between entry and exit points of GRTgaz Deutschland – in particular when the VTP is concerned – may be restricted, if, due to current nominations within the whole market area, transport is not possible for network reasons.

3. In the event that the restriction of use of a portion of DZK pursuant to Paragraph 2 is utilized, the shipper shall neither be entitled to a claim for reimbursement against GRTgaz Deutschland in the event that DZK are not used, nor to a claim for damages due with respect to the payments which may be incurred for balancing energy.

Section 5

Conditionally firm freely allocable capacities (bFZK) (pursuant to Paragraph 1 of Section 9, last paragraph of the Standard Terms and Conditions)

1. The use of bFZK may be restricted in the event that, due to current nominations within the whole market area, the physical gas flow from the stations Rimpar and Gernsheim in the northerly direction into the system of Open Grid Europe GmbH exceeds a limit value defined by Open Grid Europe GmbH and the forecast for the previous day for the average daily temperature at Essen meteorological station (Meteorological Service Essen) is above zero degrees Celsius. This condition shall only occur in the event that restrictions of use for entry capacities pursuant to Paragraph 2 of Section 4 in conjunction with Section 7 are utilized.

2. In the event of the utilization of the restriction of use of bFZK pursuant to Paragraph 1 the shipper shall neither be entitled to a claim for reimbursement against GRTgaz Deutschland in the event that the bFZK are used, nor to a claim for damages with respect to payments which may be incurred for balancing energy.

3. Shippers who have booked bFZK may send to GRTgaz Deutschland a binding request to convert their bFZK into freely allocable capacities (FZK) by means of load flow commitments. If, as a result, GRTgaz Deutschland contract load flow commitments for a

Transparency – Website of the TSO

Capacity Products

As an efficient and reliable partner in gas transport, GRTgaz Deutschland plays an innovative role in the development of new capacity products to provide optimised solutions for customers. One example is the new developed product DZK (Dynamically Allocable Capacity). GRTgaz Deutschland offers the following capacity products:

Free Allocable Capacity (FZK) ◁

Conditionally Firm Freely Allocable Capacity (bFZK) ◀

Conditionally firm freely allocable capacities are, in principle, both firm and freely allocable within the whole market area, and have access to the Virtual Trading Point of NCG. They only become interruptible capacities, if the physical northbound flow into the system of OGE at the stations Rimpar and Gernsheim both exceeds a particular limit, which is defined by OGE, due to the current nominations within the market area, and if the forecast of the average daily temperature for the previous day at the meteorological station at Essen is above Zero degrees Centigrade.

Dynamically Allocable Capacity (DZK) ◀

Dynamically allocable capacities are FZK capacities comprising restrictions of use. DZK are firm capacities, provided they are exclusively used for the purpose of a balanced transport between entry and exit points within the system of GRTgaz Deutschland without the inclusion of the Virtual Trading Point, at which an obligation to nominate exists according to Article 15 GasNZV. The interruptible portion therefore depends on the current nomination or renomination of the shipper. The restriction of use and its utilization are specified in Article 5 and Article 8 of GRTgaz Deutschland's GTB.

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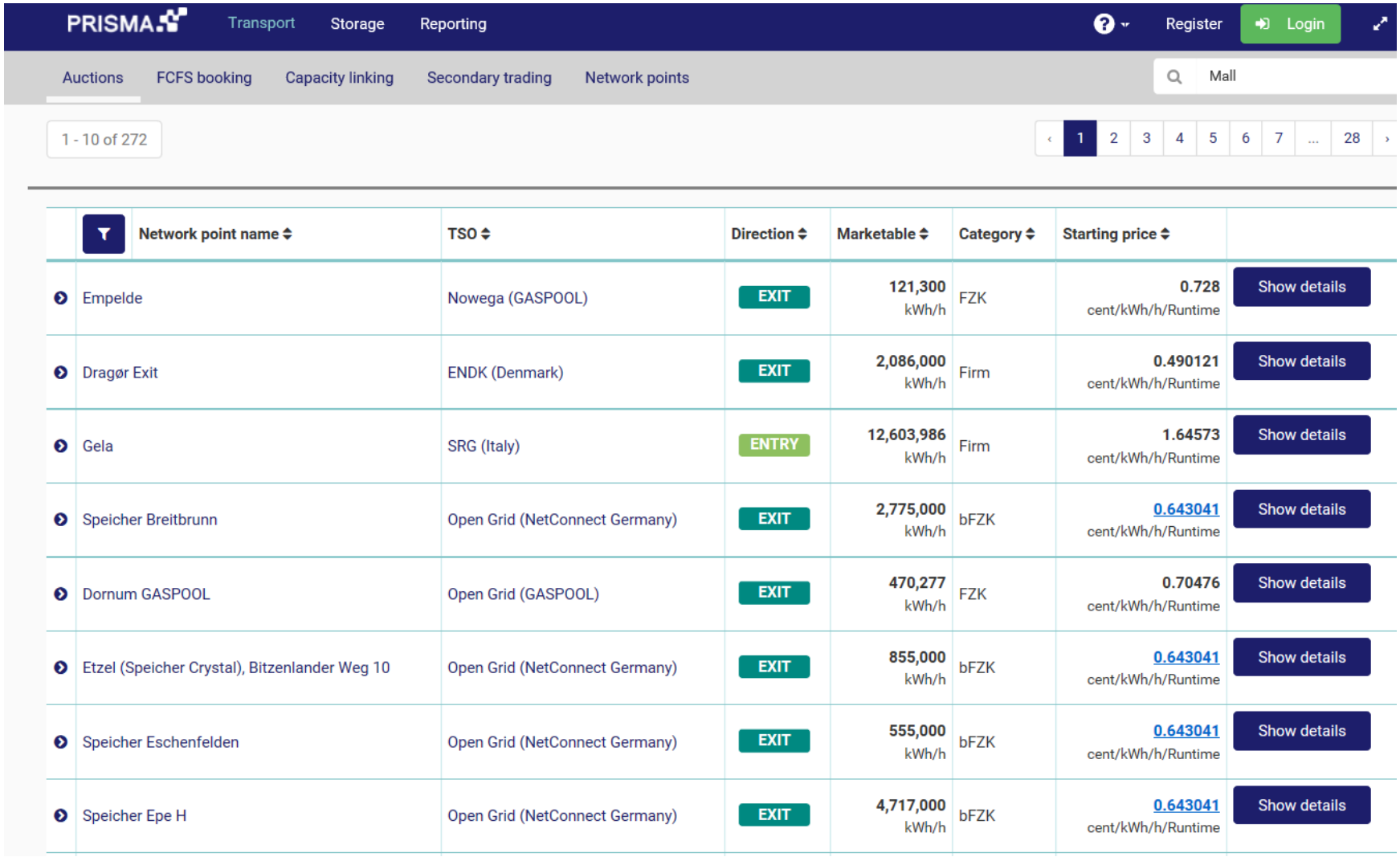
Capacity Information

- Information about the procedure in accordance with Article 40, Section 4 GasNZV here.
- Detailed information in our GTCT.

Transparency – booking platforms



Network point name	TSO	Direction	Marketable	Category	Starting price	
Empelde	Nowega (GASPOOL)	EXIT	121,300 kWh/h	FZK	0.728 cent/kWh/h/Runtime	Show details
Dragør Exit	ENDK (Denmark)	EXIT	2,086,000 kWh/h	Firm	0.490121 cent/kWh/h/Runtime	Show details
Gela	SRG (Italy)	ENTRY	12,603,986 kWh/h	Firm	1.64573 cent/kWh/h/Runtime	Show details
Speicher Breitbrunn	Open Grid (NetConnect Germany)	EXIT	2,775,000 kWh/h	bFZK	0.643041 cent/kWh/h/Runtime	Show details
Dornum GASPOOL	Open Grid (GASPOOL)	EXIT	470,277 kWh/h	FZK	0.70476 cent/kWh/h/Runtime	Show details
Etzel (Speicher Crystal), Bitzenlander Weg 10	Open Grid (NetConnect Germany)	EXIT	855,000 kWh/h	bFZK	0.643041 cent/kWh/h/Runtime	Show details
Speicher Eschenfelden	Open Grid (NetConnect Germany)	EXIT	555,000 kWh/h	bFZK	0.643041 cent/kWh/h/Runtime	Show details
Speicher Epe H	Open Grid (NetConnect Germany)	EXIT	4,717,000 kWh/h	bFZK	0.643041 cent/kWh/h/Runtime	Show details

Transparency – ENTSOG's TP – transport data

Point	Operator	TSO Point Identifier	Direction	Period	Indicator	Value	Status	Last date of value update
Gernsheim	GRTgaz Deutschland	37Z000000006481P	exit exit	06/11/2017 06:00 - 27/11/2017 06:00	Firm Available	9,832,992 kWh/d		05/01/2018 05:49
Gernsheim	GRTgaz Deutschland	37Z000000006481P	exit exit	06/11/2017 06:00 - 27/11/2017 06:00	Firm Booked	0 kWh/d		05/01/2018 05:49
Gernsheim	GRTgaz Deutschland	37Z000000006481P	exit exit	05/11/2017 06:00 - 06/11/2017 06:00	Firm Available	FZK + DZK + bFZK 3,352,992 kWh/d		06/11/2017 05:38
Gernsheim	GRTgaz Deutschland	37Z000000006481P	exit exit	05/11/2017 06:00 - 06/11/2017 06:00	Firm Booked	6,480,000 kWh/d		06/11/2017 05:38

Transparency – ENTSOG's TP – tariff data

Tariff data

Tariff Period	Point Name	Direction	Operator	Capacity type	Product Type	Applicable tariff in common unit [value]
Tariff Peri	Point Name	Direction	Operator	Capacit	Product	Applicable
01/01/2017 06:00 01/01/2018 06:00	Medelsheim (DE) / Obergailbach (FR) (GRTgaz D)	entry	GRTgaz Deutschland	Firm	Yearly	N/A
01/01/2017 06:00 01/01/2018 06:00	Medelsheim (DE) / Obergailbach (FR) (GRTgaz D)	exit	GRTgaz Deutschland	Firm	Yearly	0.0074322
01/01/2017 06:00	Oberkappel (GRTgaz D)	exit	GRTgaz	Firm	Yearly	0.0074322

DZK : 0,00706059 €/kWh/h/d

Back Up

List of capacity types and descriptions

EXAMPLES OF FIRM CAPACITY PRODUCTS WITH 'CONDITIONS'		
Firm capacity product with 'conditions'	**Explanation**	**TSOs offering a given firm capacity product with 'conditions'**
Restrictedly usable firm	Capacity that ensures firm freely allocable network access within an entry-exit-system on a firm basis within certain gas flows, within certain temperature ranges and/or entry-exit-system load/demand; Access to the VTP included	Thyssengas, Fluxys TENP, GRTgaz Deutschland, GTG Nord, OGE (called 'bFZK' in Germany – used on entry points to control local distribution of incoming flows; called 'TAK' if used at network points to storage facilities) Creos
Restrictedly allocable firm	Restrictedly allocable capacity ensures the injection of gas on a firm basis at entry point(s) and the withdrawal of gas at explicitly dedicated exit point(s) and vice versa on a firm basis Can use this capacity with 'explicitly dedicated exit point(s)', but not in combination with other exit/entry points or VTP	bayernets, Fluxys TENP, OGE, GUD (called 'BZK' in Germany; if the distance between the entry and exit points is short, the product may be called 'Shorthaul') Fluxys Belgium (called 'Wheeling and OCUC – Operational Capacity Usages Commitments')[6)] GTS[7)]
Dynamically allocable firm	Dynamically allocable capacity ensures the injection of gas on a firm basis at entry point(s) and the withdrawal of gas at explicitly dedicated exit point(s) and vice versa on a firm basis Functions as interruptible capacity in combination with the VTP and all exit/entry point(s) other than 'explicitly dedicated exit points'	GASCADE, GRTgaz Deutschland, GCA, TAG, NEL, GTG Nord, Fluxys Deutschland, Lubmin-Brandov Gastransport, ONTRAS OGE, (called 'DZK' in Germany)