

BEATE provisions as of 1 January 2016

Cross-market area usage at UGS Jemgum

EWE-BEATE-User-Manual

- non binding –

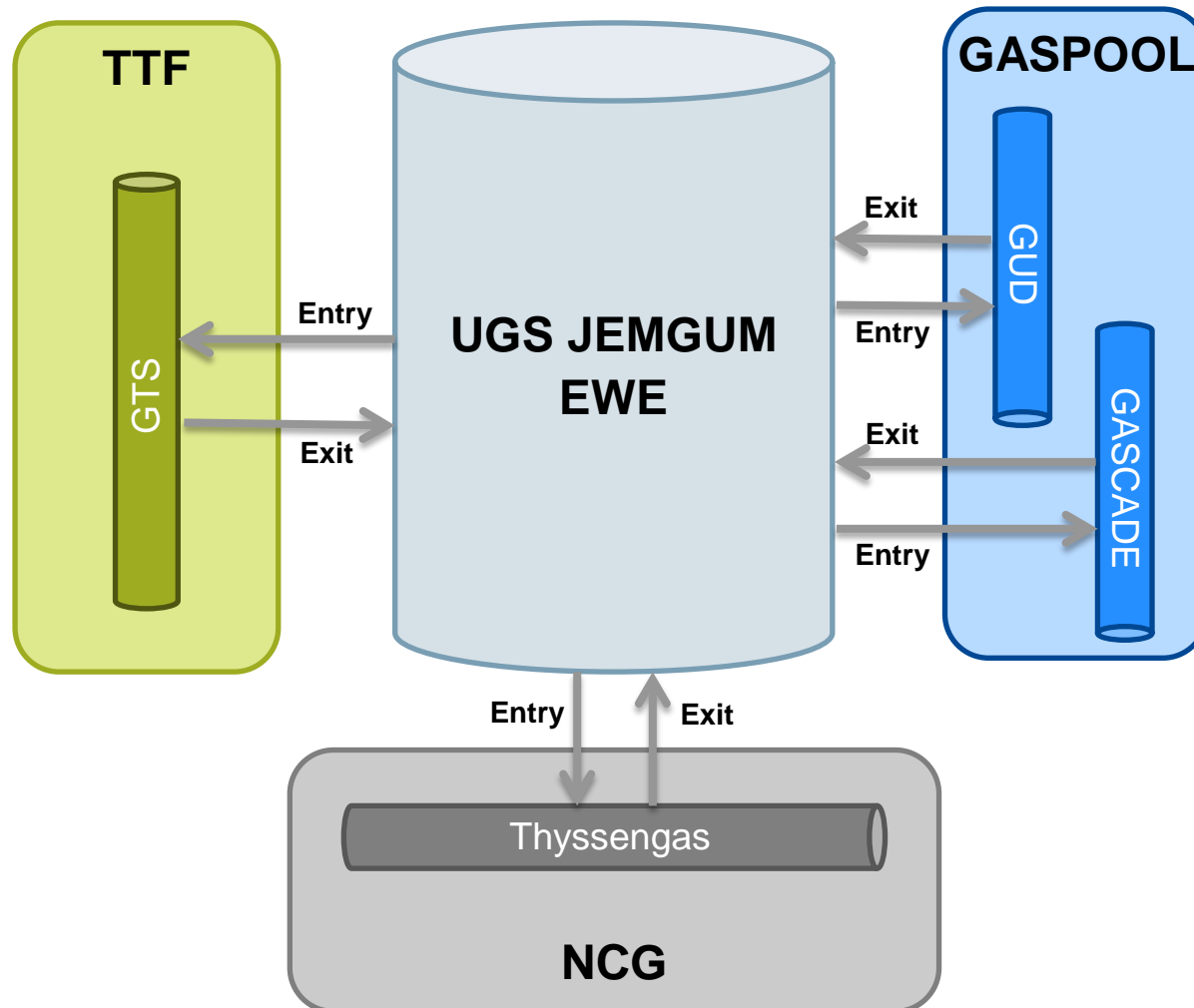
BEATE provisions as of 1 January 2016

As of 1 January 2016 the provisions of Bundesnetzagentur „Festlegung von Vorgaben zur Umrechnung von Jahresleistungspreisen in Leistungspreise für unterjährige Kapazitätsrechte sowie von Vorgaben zur sachgerechten Ermittlung der Netzentgelte nach § 15 Abs. 2 bis 7 GasNEV“ (following: BEATE) apply to the calculation of transmission fees in Germany. In this context the fees for transmission capacities at storage facilities will be reduced by granting a 50% discount.

Some special provisions relating to the transmission fee discount are applicable to storage facilities in Germany which are connected to more than one market area or to the market area of a neighbouring country and which allow a “cross-market area usage”.

Due to the fact that the Jemgum storage facility is connected to several market areas (GASPOOL, NCG and TTF), EWE GASSPEICHER GmbH as the storage system operator (SSO) has to demonstrate the compliance with the BEATE provisions to the TSO(s). This is a precondition for TSOs to offer discounted transmission fees to storage customers for a „single-market area usage“.

UGS Jemgum connected to several market areas



Transfer

means the virtual movement of stored gas of the storage customer from one discounted gas-account to another discounted gas-account. A Transfer is triggered by the storage customer and operationally carried out by a Transfer Nomination towards EWE.

Transfer Nomination

means the notification of gas quantities to be transferred between discounted gas-accounts (Trans-Out_{discounted gas-account_TSO_A} and Trans-In_{discounted gas-account_TSO_B}) on an hourly basis by the storage customer towards EWE. The lead time for a Transfer Nomination is 30 minutes before the next full hour.

Transfer-Charge

means the amount in Euros (EUR) payable by the storage customer for the Transfer of gas volumes between discounted gas-accounts in different market areas. The Transfer-Charge will be invoiced by EWE and will be passed through to the respective TSO(s).

Definitions

Trans-In Fee

means the fee for the Transfer of gas volumes into a discounted gas-account of the corresponding TSO. The fee will be calculated by the delta between the maximum yearly entry fee (in most cases undiscounted “FZK”) and the minimum yearly entry fee (in most cases discounted interruptible capacity) at the storage connection point of the respective TSO and divided by the number of days per year and multiplied by the factor 1.4.

Trans-In Rate

means the maximum hourly amount of gas in kWh per gas day during a Transfer of gas volumes entering into a discounted gas-account.

Trans-Out Fee

means the fee for the Transfer of gas volumes out of a discounted gas-account of the corresponding TSO. The fee will be calculated by the delta between the maximum yearly exit fee (in most cases undiscounted “FZK”) and the minimum yearly exit fee (in most cases discounted interruptible capacity) at the storage connection point of the respective TSO and divided by the number of days per year and multiplied by the factor 1.4.

Trans-Out Rate

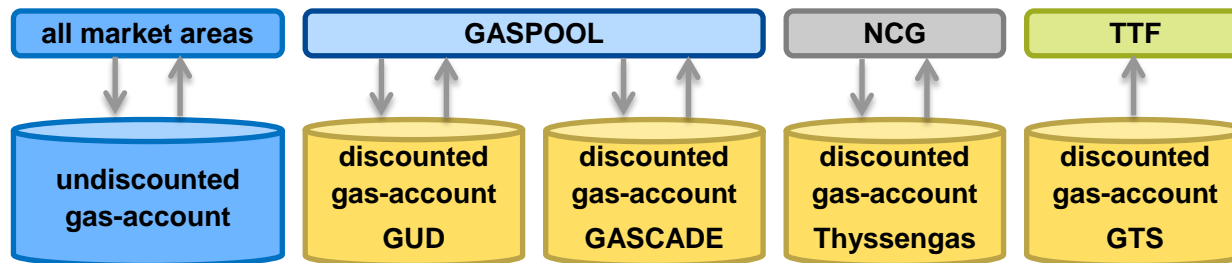
means the maximum hourly amount of gas in kWh per gas day during a Transfer of gas volumes leaving a discounted gas-account.

Set up of separate gas-accounts

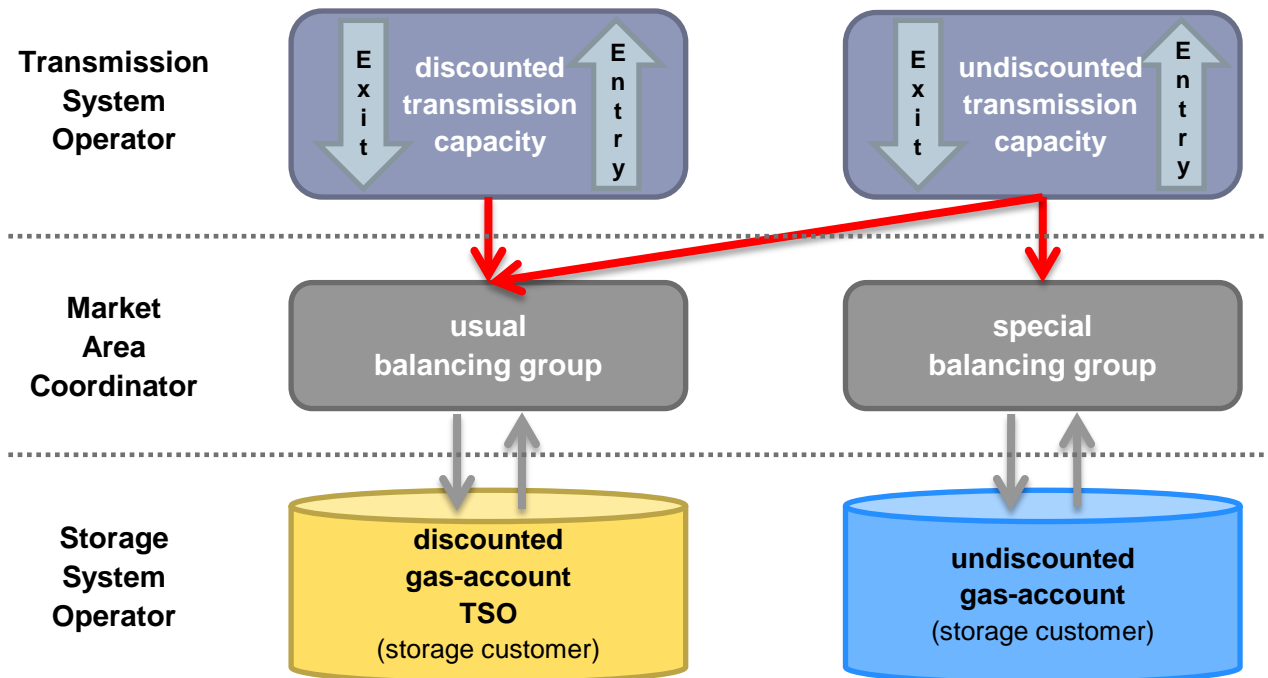
As of 1 January 2016 the storage customer has the possibility to book discounted or undiscounted entry and exit transmission capacity at the Jemgum storage connection points to the GASPOOL and NCG market areas (with separate balancing groups for discounted and undiscounted transmission capacity).

According to the BEATE provisions the SSO has to set up and operate corresponding discounted and undiscounted gas-accounts for each storage customer.

As the Jemgum storage facility is connected to four transmission systems, the SSO has to set up four discounted gas-accounts (one per TSO) and one undiscounted gas-account for each storage customer, regardless of whether the storage customer uses only one connection point or more than one.



Balancing groups for discounted and undiscounted transmission capacity



! Undiscounted transmission capacity can be included either in a special balancing group for undiscounted capacity or in a usual balancing group !

For further information please contact the relevant TSO.

Utilization of the storage service: cross-market area and/or single-market area

The storage customer has in general three possibilities to use the storage service in the connected market areas GASPOOL and NCG:

1. Single-market area usage: use of discounted gas-accounts
⇒ the storage customer gets a transmission fee discount of 50% (see scenario 1*)
2. Cross-market area usage: use of undiscounted gas-accounts
⇒ the storage customer gets no transmission fee discount (see scenario 2*)
3. Cross-market area usage: use of discounted gas-accounts
⇒ the storage customer gets a transmission fee discount of 50%, but a Transfer-Charge for cross-market area usage will be applicable (see scenario 3*)

The storage customer can use these possibilities separately or in parallel.

Cross-border usage D↔NL is also possible and will be described in scenario 4a and 4b.

In addition two further special scenarios will be shown on pages 20-23.

* cf. scenarios below

Nomination procedure

There will be no change in the nomination procedure, if the storage customer uses the storage service as follows:

- Single-market area usage
- Cross-market area / cross-border usage with undiscounted transmission capacity

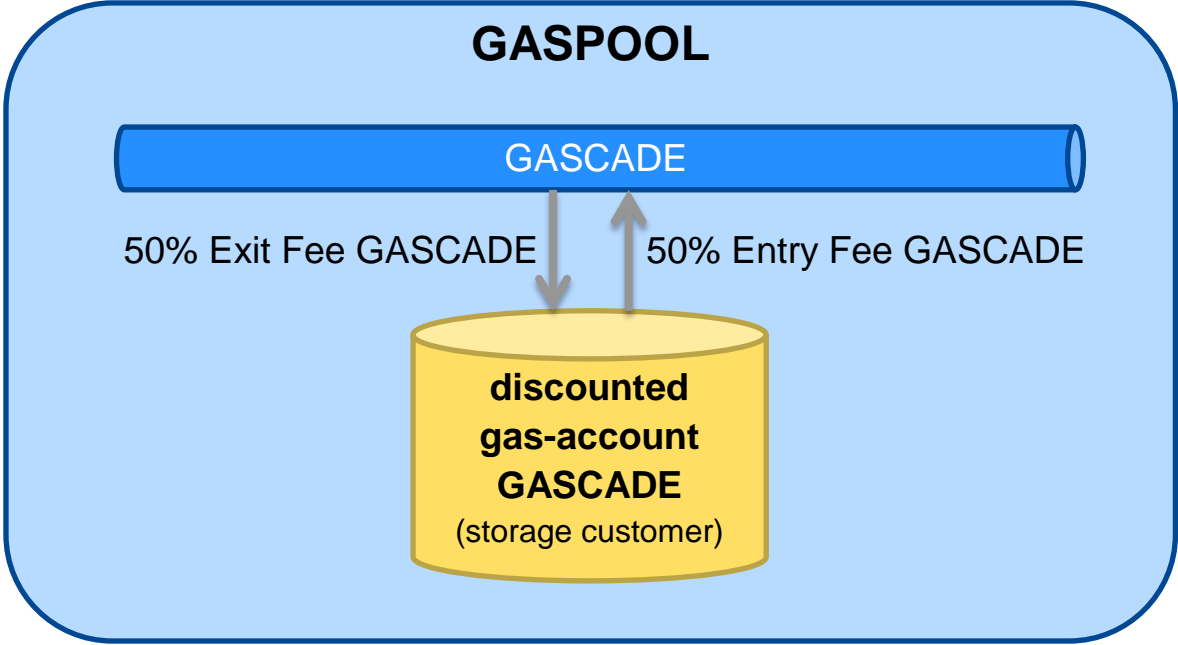
NEW:

If the storage customer wants to use the storage service as follows:

- Cross-market area / cross-border usage with discounted transmission capacity

the storage customer has to initiate additional Transfer Nominations between the discounted gas-accounts towards the SSO.

Scenario 1: Single-market area usage: use of discounted gas-accounts



This example is similar for the discounted gas-accounts GASPOOL/GUD and NCG/Thyssengas

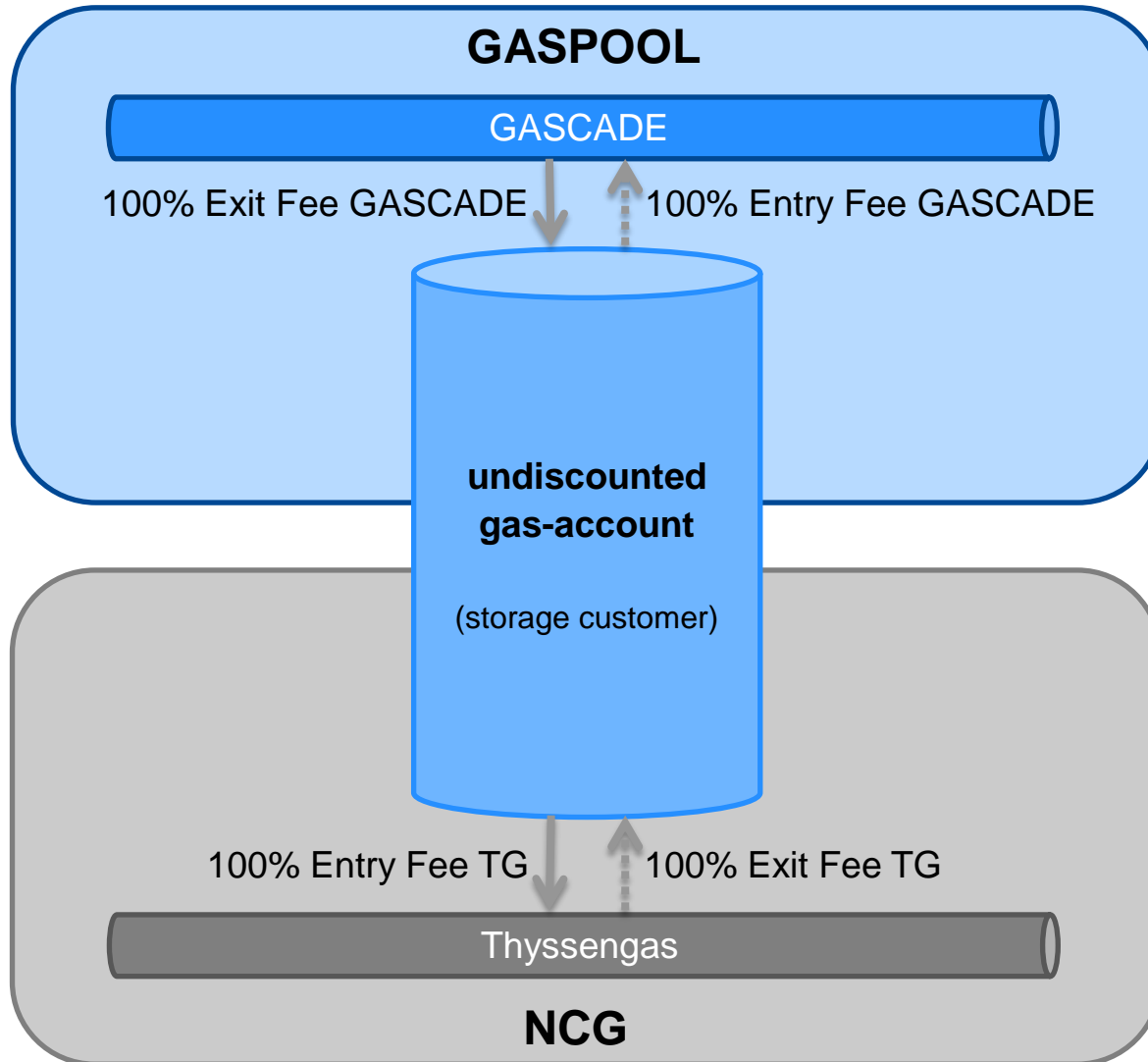
Scenario 1: Single-market area usage: use of discounted gas-accounts

The storage customer uses the storage service „single-market“, e.g. GASPOOL/
GASCADE:

- The storage customer has booked discounted exit and discounted entry capacity with GASCADE
- The storage customer nominates exit from and entry into the GASCADE system and the corresponding injection and withdrawal towards the SSO
⇒ all injected and withdrawn gas-volumes will be allocated to the discounted gas-account GASCADE

! The storage customer can use all discounted gas-accounts in parallel, but they have to be operated separately **!**

Scenario 2: Cross-market area usage GASPOOL ↔ NCG: use of undiscounted gas-accounts



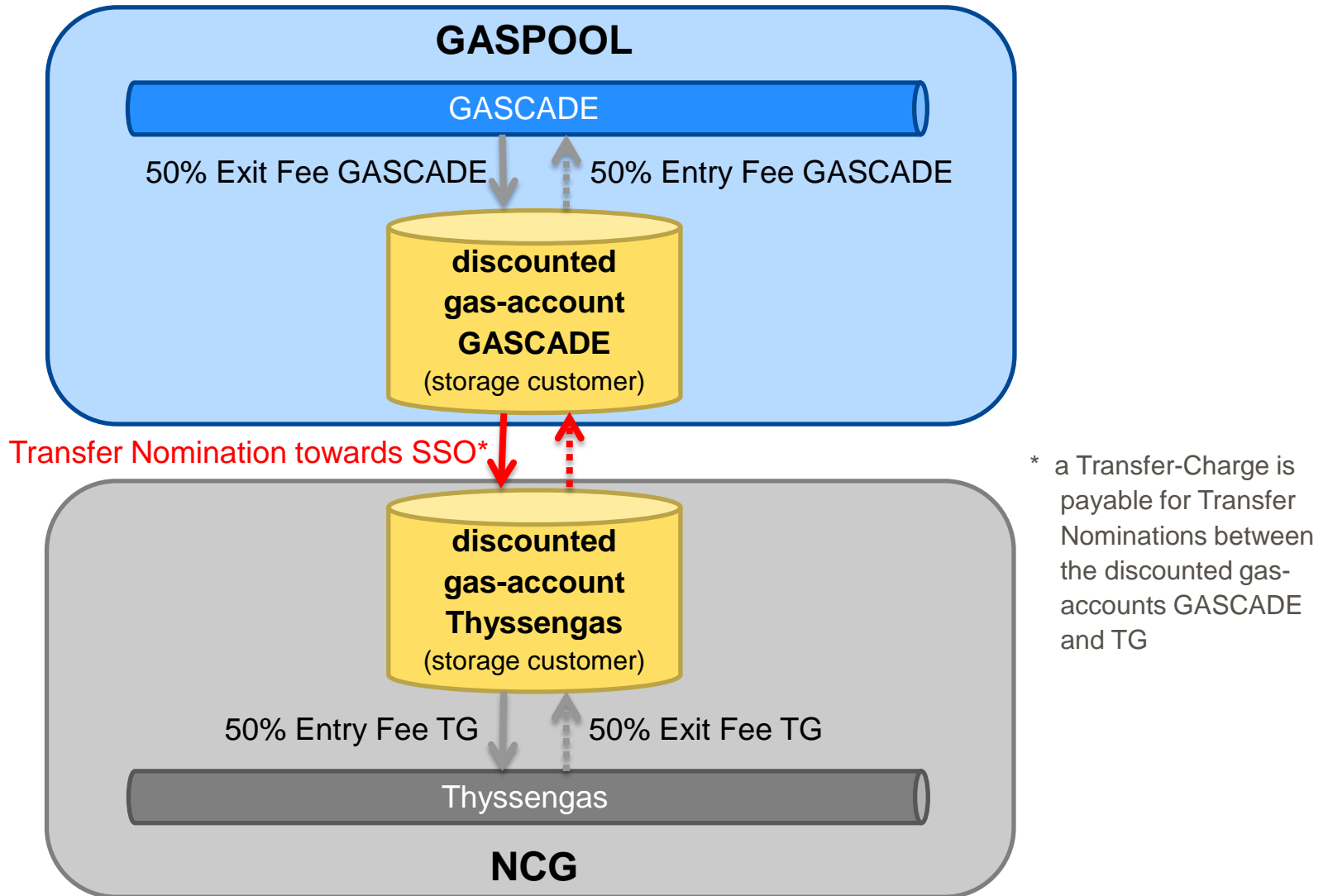
Scenario 2: Cross-market area usage GASPOOL ↔ NCG: use of undiscounted gas-accounts

The storage customer uses the storage service „cross-market“:

- The storage customer has booked undiscounted exit and undiscounted entry capacity with the respective TSOs (e.g. GASCADE and TG)
 - ➔ for the booking of undiscounted capacity the storage customer has to enter into a special balancing group contract for undiscounted capacity with the respective market area coordinator
- The storage customer nominates exit from the GASCADE system and the corresponding injection towards the SSO
 - ⇒ the injected gas-volumes will be allocated to the undiscounted gas-account
- The storage customer nominates withdrawal towards the SSO and the corresponding entry into the TG system
 - ⇒ the withdrawn gas-volumes will be allocated to the undiscounted gas-account

! If the storage customer knows that the storage service will be used „cross-market“, this scenario will be the most beneficial !

Scenario 3: Cross-market area usage GASPOOL ↔ NCG: use of discounted gas-accounts



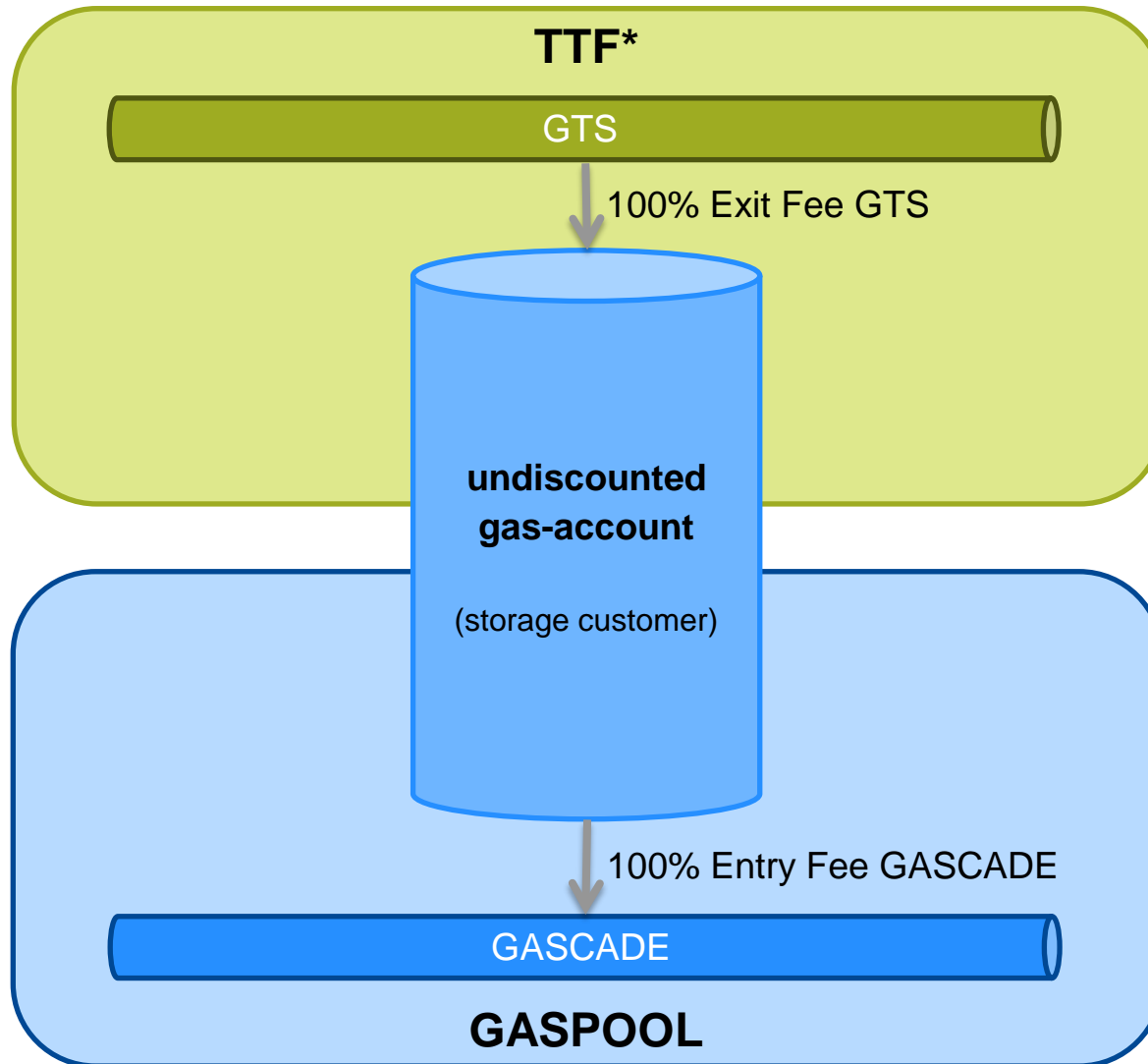
Scenario 3: Cross-market area usage GASPOOL ↔ NCG: use of discounted gas-accounts

The storage customer uses the storage service „cross-market“:

- The storage customer has booked discounted exit and discounted entry capacity with the respective TSOs (GASCADE and TG)
- The storage customer nominates exit from the GASCADE system and the corresponding injection towards the SSO
 - ⇒ the injected gas-volumes will be allocated to the discounted gas-account GASCADE
- The storage customer nominates withdrawal towards the SSO and the corresponding entry into the TG system
 - ⇒ the withdrawn gas-volumes will be allocated to the discounted gas-account TG
 - ➔ if there are no or not enough gas-volumes in the discounted gas-account TG, the storage customer has to nominate a Transfer from another discounted gas-account into the discounted gas-account TG prior to the withdrawal or at least simultaneously

! For the Transfer of gas volumes a Transfer-Charge is payable. For the calculation of the Transfer-Charge see calculation example on page 25 **!**

Scenario 4a: Cross-border usage NL⇌D



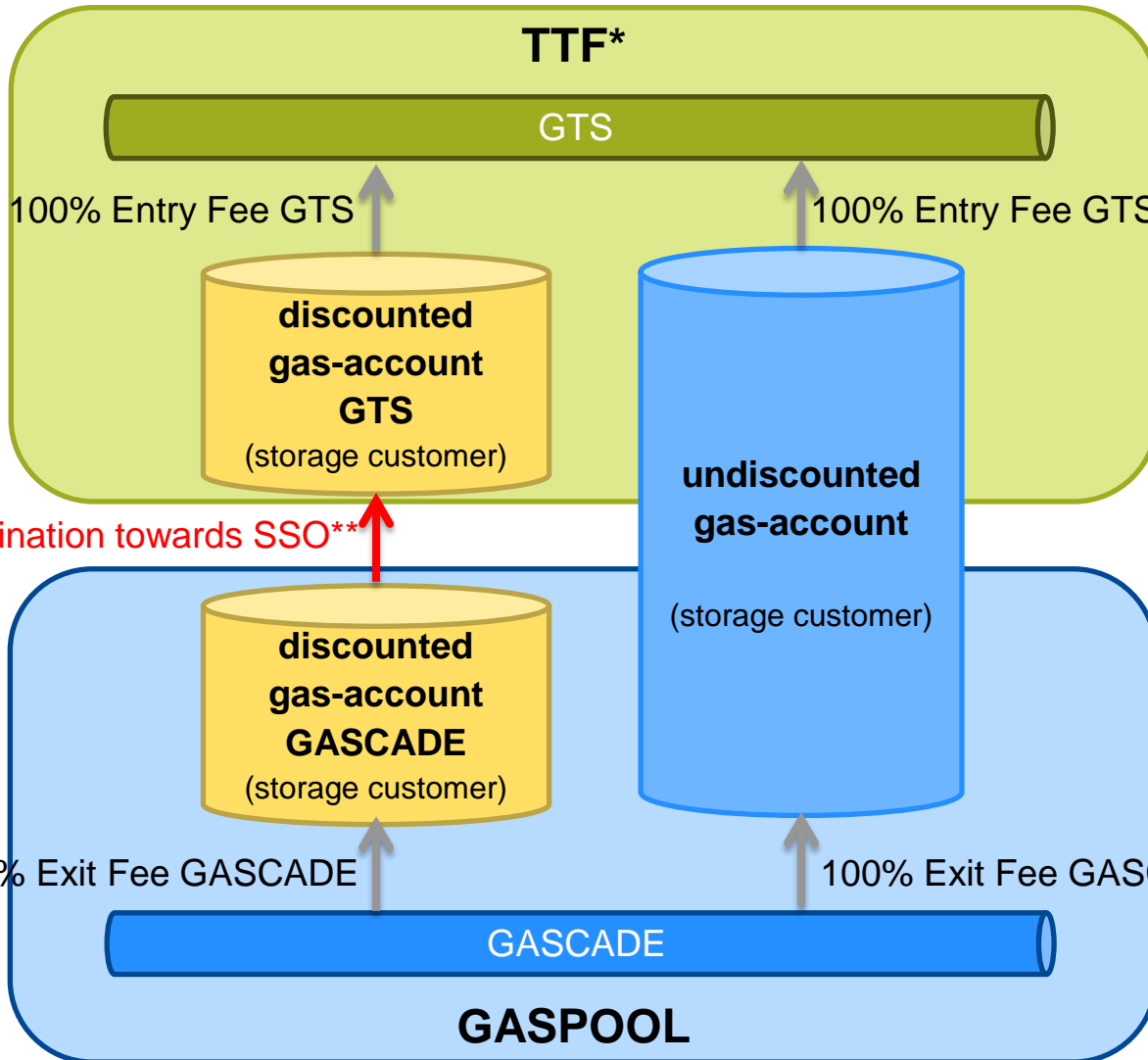
* BEATE rules do not apply in NL

Scenario 4a: Cross-border usage NL⇒D

For the cross-border usage from NL to D, the storage customer has to use the undiscounted gas-account:

- The storage customer has booked exit capacity with GTS (BEATE rules do not apply in NL) and undiscounted entry capacity with the respective TSO in D, e.g. GASCADE
- The storage customer nominates exit from the GTS system and the corresponding injection towards the SSO
 - ⇒ the injected gas-volumes will be allocated to the undiscounted gas-account
- The storage customer nominates withdrawal towards the SSO and the corresponding entry to the GASCADE system
 - ⇒ the withdrawn gas-volumes will be allocated to the undiscounted gas-account

Scenario 4b: Cross-border usage D → NL



* BEATE rules do not apply in NL

** a Transfer-Charge is payable only for the Transfer Nomination out of the discounted gas-account GASCADE

Scenario 4b: Cross-border usage D⇔NL

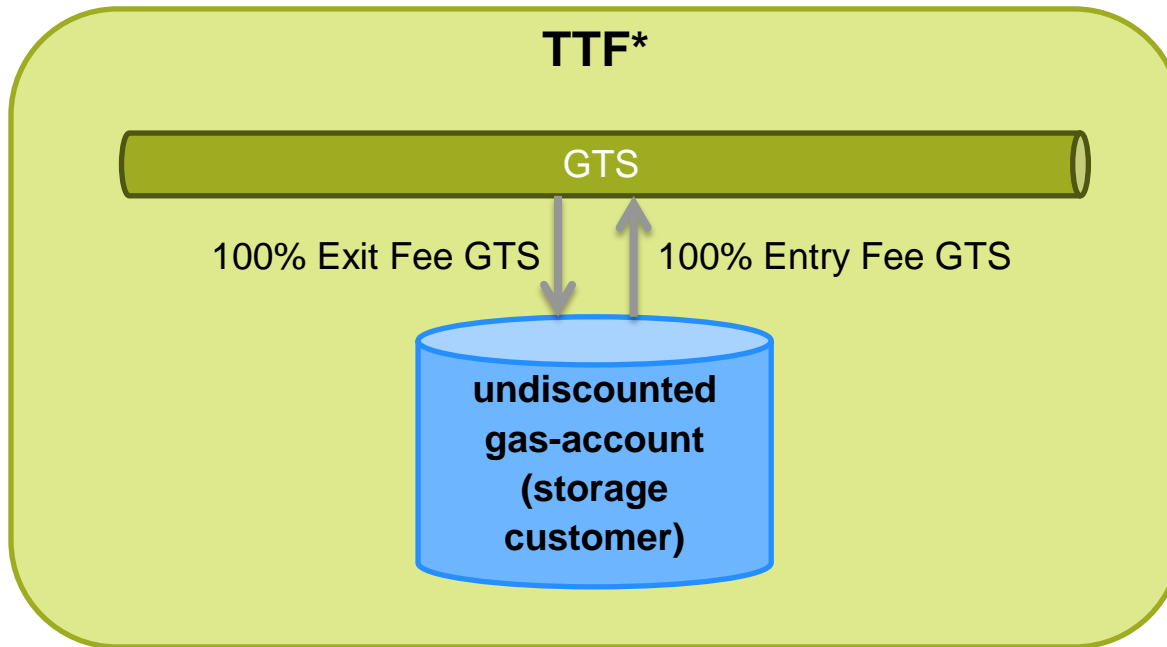
For the cross-border usage from D to NL, the storage customer has the option to use the undiscounted gas-account (like scenario 4a) or the discounted gas-accounts.

If the storage customer uses the discounted gas-accounts:

- The storage customer has booked discounted exit capacity with the respective TSO in D, e.g. GASCADE and entry capacity with GTS (BEATE rules do not apply in NL)
- The storage customer nominates exit from the GASCADE system and the corresponding injection towards the SSO ⇔ the injected gas-volumes will be allocated to the discounted gas-account GASCADE
- The storage customer nominates withdrawal towards the SSO and the corresponding entry into the GTS system ⇔ the withdrawn gas-volumes will be allocated to the discounted gas-account GTS
 - ➔ if there are no or not enough gas-volumes in the discounted gas-account GTS, the storage customer has to nominate a Transfer from another discounted gas-account into the discounted gas-account GTS prior to the withdrawal or at least simultaneously

! For the Transfer of gas-volumes only a Trans-Out Fee for the discounted gas-account of the German TSO is payable (see calculation on page 26) **!**

Scenario 5: Usage of storage service in NL



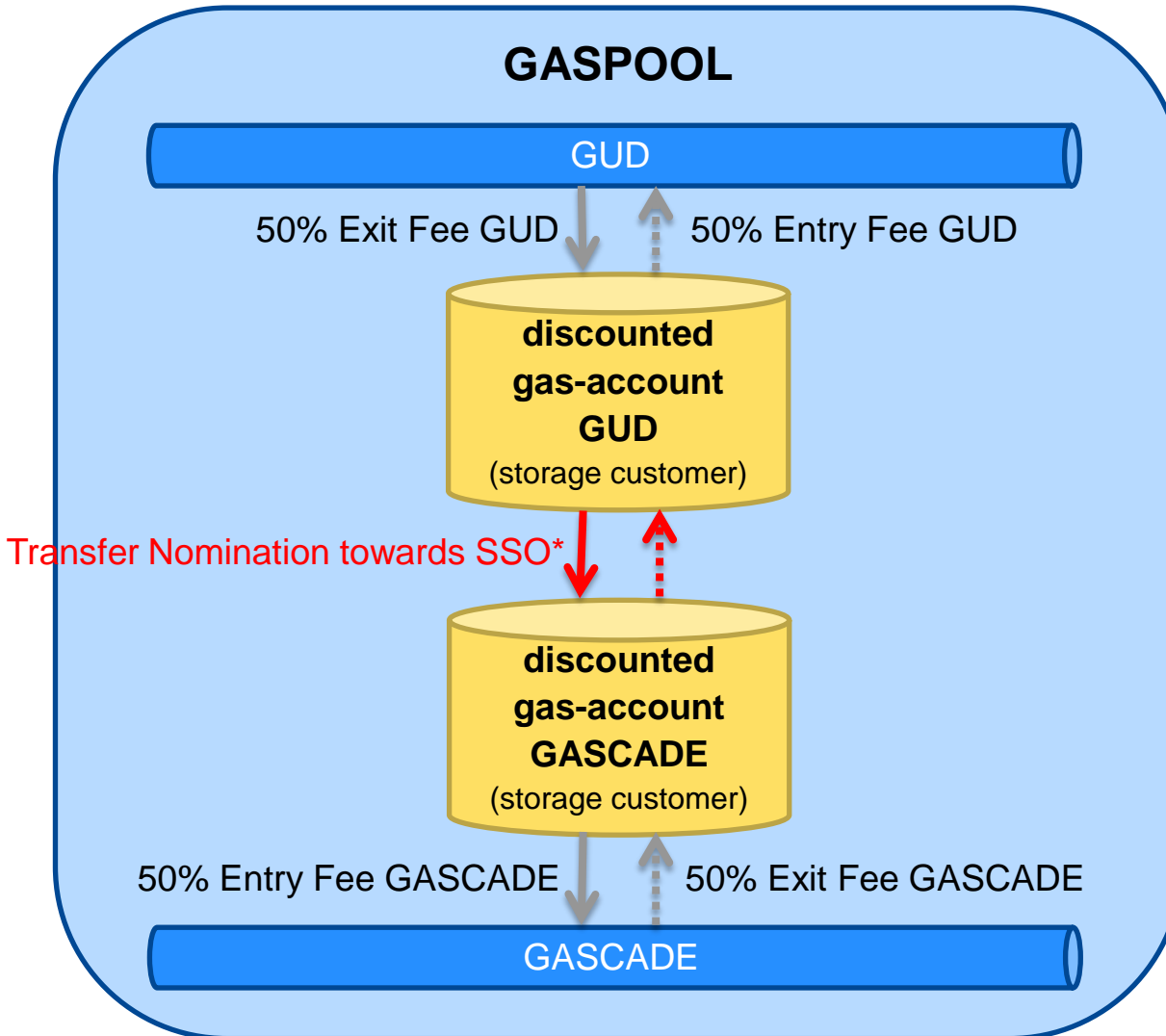
* BEATE rules do not apply in NL

Scenario 5: Usage of storage service in NL

The storage customer uses the storage service only in NL:

- The storage customer has booked exit and entry capacity with GTS
- The storage customer nominates exit from and entry into the GTS system and the corresponding injection and withdrawal towards the SSO
 - ⇒ all injected and withdrawn gas-volumes will be allocated to the undiscounted gas-account

Scenario 6: Single-market area usage: use of discounted gas-accounts



this example applies only to the GASPOOL market area

* no Transfer-Charge applies to the storage customer, as the Transfer Nomination is made between two discounted gas-accounts in the same market area

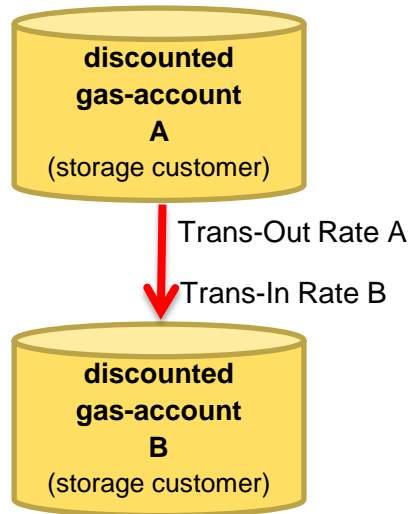
Scenario 6: Single-market area usage: use of discounted gas-accounts

The storage customer uses the storage service „single-market“, but with different TSOs (e.g. GUD and GASCADE within GASPOOL market area):

- The storage customer has booked discounted GUD-exit and discounted GASCADE-entry capacity
- The storage customer nominates exit from the GUD system and the corresponding injection towards the SSO ⇒ the injected gas-volumes will be allocated to the discounted gas-account GUD
- The storage customer nominates withdrawal towards the SSO and the corresponding entry into the GASCADE system ⇒ the withdrawn gas-volumes will be allocated to the discounted gas-account GASCADE
 - ➔ if there are no or not enough gas-volumes in the discounted gas-account GASCADE, the storage customer has to nominate a Transfer from the discounted gas-account GUD into the discounted gas-account GASCADE prior to the withdrawal or at least simultaneously

! The Transfer of gas-volumes causes no Transfer-Charge, as GUD and GASCADE are within the same market area !

Calculation of the Transfer-Charge*



Transfer-Charge:

Trans-Out Fee A ¹⁾ x Trans-Out Rate A ²⁾

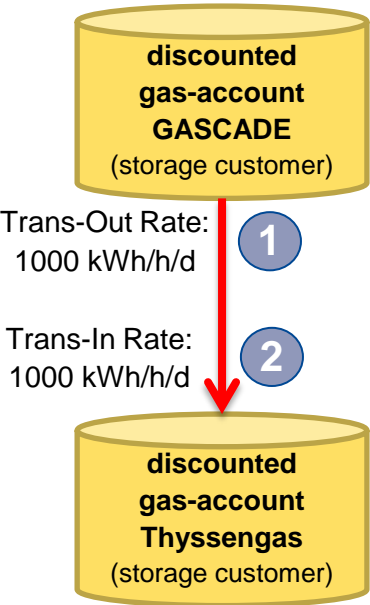
plus

Trans-In Fee B ³⁾ x Trans-In Rate B ⁴⁾

- 1) Delta between the maximum yearly exit fee and the minimum yearly exit fee at the storage connection point of the respective TSO A / number of days per year x 1.4
- 2) Maximum hourly Trans-Out Rate per gas day [Transfer Nomination/allocation in kW per gas day]
- 3) Delta between the maximum yearly entry fee and the minimum yearly entry fee at the storage connection point of the respective TSO B / number of days per year x 1.4
- 4) Maximum hourly Trans-In Rate per gas day [Transfer-Nomination/allocation in kW per gas day]

* The Transfer Charge will be invoiced by EWE and will be passed through to the respective TSO(s).

Calculation example of the Transfer-Charge for cross-market area usage GASPOOL ↔ NCG



1 Calculation of Trans-Out Fee for discounted gas-account GASCADE:

Max. yearly exit fee GASCADE at UGS Jemgum / 365 days	Min. yearly exit fee GASCADE at UGS Jemgum / 365 days	Delta (Max.-Min.)	Trans-Out Fee GASCADE (= Delta * 1,4)
0.0073* [€/kWh/h/d]	0.0033* [€/kWh/h/d]	0.0040* [€/kWh/h/d]	0.0056* [€/kWh/h/d]

2 Calculation of Trans-In Fee for discounted gas-account TG:

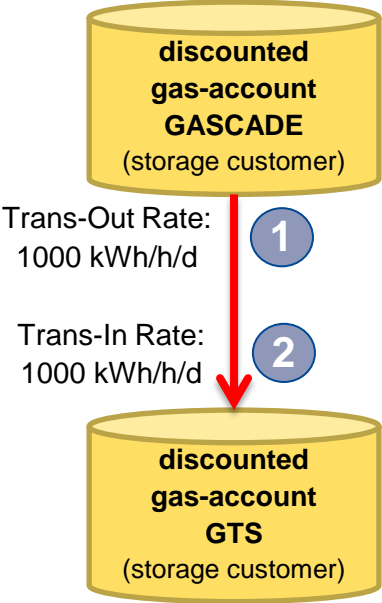
Max. yearly entry fee TG at UGS Jemgum / 365 days	Min. yearly entry fee TG at UGS Jemgum / 365 days	Delta (Max.-Min.)	Trans-In Fee TG (= Delta * 1,4)
0.0088* [€/kWh/h/d]	0.0039* [€/kWh/h/d]	0.0048* [€/kWh/h/d]	0.0068* [€/kWh/h/d]

* rounded (exact tariffs on pages 27-28)

Transfer-Charge (per gas day)

$$\begin{aligned}
 &= \text{Trans-Out Fee GASCADE} \quad \times \text{ maximum hourly Trans-Out Rate per gas day} \\
 &+ \text{Trans-In Fee TG} \quad \quad \quad \times \text{ maximum hourly Trans-In Rate per gas day} \\
 &= 0.0056^* \text{ €/kWh/h/d} \times 1000 \text{ kWh/h/d} + 0.0068^* \text{ €/kWh/h/d} \times 1000 \text{ kWh/h/d} = \mathbf{12.40 \text{ €}}
 \end{aligned}$$

Calculation example of the Transfer-Charge for cross-border usage D⇔NL



1 Calculation of Trans-Out Fee for discounted gas-account GASCADE:

Max. yearly exit fee GASCADE at UGS Jemgum / 365 days	Min. yearly exit fee GASCADE at UGS Jemgum / 365 days	Delta (Max.-Min.)	Trans-Out Fee GASCADE (= Delta * 1.4)
0.0073* [€/kWh/h/d]	0.0033* [€/kWh/h/d]	0.0040*	0.0056* [€/kWh/h/d]

2 Calculation of Trans-In Fee for discounted gas-account GTS:

no Trans-In Fee (BEATE rules do not apply in NL)

* rounded (exact tariffs on pages 27-28)

Transfer-Charge (per gas day)

= Trans-Out Fee GASCADE x maximum hourly Trans-Out Rate per gas day
 = 0.0056* €/kWh/h/d x 1000 kWh/h/d = **5.60 €**

Matrix – Exact Transfer-Charge CJ 2018

In accordance with the TSO's tariff-publications for CAL 2018 and the BEATE-provisions (data in €/[kWh/h]/d)

	Trans-In Fee [€/kWh/h]/d]	Trans-Out Fee [€/kWh/h]/d]
GASCADE	0,00556931506849315	0,00561150684931507
GUD	0,00862239	0,00862239
Thyssengas	0,0067506824	0,0055232856
GTS	0	0

	Transfer-Charge [€/kWh/h]/d]			
Trans In \ Trans Out	GASCADE	GUD	Thyssengas	GTS
GASCADE	-	0	0,0123621892493151	0,00561150684931507
GUD	0	-	0,0153730724	0,00862239
Thyssengas	0,0110926006684932	0,0141456756	-	0,0055232856
GTS	0,00556931506849315	0,00862239	0,0067506824	-

Matrix – Exact Transfer-Charge CJ 2018

In accordance with the TSO's tariff-publications for CAL 2018 and the BEATE-provisions (data in €/MWh*)

	Trans-In Fee [€/MWh*]	Trans-Out Fee [€/MWh*]
GASCADE	0,23	0,23
GUD	0,36	0,36
Thyssengas	0,28	0,23
GTS	0	0

	Transfer-Charge [€/MWh*]			
Trans In \ Trans Out	GASCADE	GUD	Thyssengas	GTS
GASCADE	-	0	0,52	0,23
GUD	0	-	0,64	0,36
Thyssengas	0,46	0,59	-	0,23
GTS	0,23	0,36	0,28	-

* assuming that 1 MWh of Gas will be transferred from one discounted gas-account to another discounted gas-account on a flat daily basis (24 equal values = 41,67 kWh/h per gas day)

- A Transfer of gas volumes between a discounted gas-account and an undiscounted gas-account is not possible.
- A Transfer of gas volumes between two storage customers is only possible between undiscounted gas-accounts or between discounted gas-accounts of the same TSO (e.g. a transfer from the discounted gas-account GAPOOL/GUD of customer A to the discounted gas-account GASPOOL/GUD of customer B).