TRADING HUB EUROPE keep in balance

Implementation of the Gas Storage Act by THE

- Further development of SSBO Stage I: Design of "Strategic Filling Instruments" (SBI)
- Here: Implementation of a filling product according to § 35c Para. 1 EnWG

Disclaimer:

This is a convenience translation. In case of doubt please refer to the German version. This presentation slides are provided for informational purposes only and are based on the discussion status as of January 21, 2025. Changes or updates to the content are subject to modification.

RADING UB UROPE

TRADING

Stage I Gas Storage Act

- Design of products according to § 35c Para. 1 EnWG

- Based on the Gas Storage Act (§§ 35a ff. EnWG) that came into force at the time, THE, in coordination with the Federal Ministry for Economic Affairs and Climate Action (BMWK) and the Federal Network Agency (BNetzA), designed the previous SSBO product ("Strategic Storage-Based Options") in 2022 as a "hybrid product," consisting of a storage commitment on the one hand and a call option with a holding obligation on the other
- The amended § 35c Para. 1 EnWG, effective 01.04.2024, now provides for the contracting of "strategic filling instruments" (SBI) instead of the previous "strategic gas options"
 - Thus, the call option is no longer an essential component of the product
- Since then, THE, in coordination with BMWK and BNetzA, has been working on a new product for Stage I, designed as a pure filling product ("storage commitment")
- The current discussion status of the new product is summarized on the following pages

Please note:

The implementation of the updated product concept by THE is generally carried out in fulfillment of legal obligations in accordance with §§ 35a ff. EnWG. The decision on whether a tender will actually be conducted is a separate process carried out in close coordination with BMWK and BNetzA in accordance with § 35c Para. 1 EnWG.

General information on product design– Pure filling product with consistent focus on the storage phase

- Supplier's contractual obligation upon award: 100% of the contracted volume must be filled by 01.11.
 - "Nationwide product" → in principle, all storages covered by the Gas Storage Act are eligible; the supplier does not have to specify in advance which storages they will use within the approved storages for the tender.
- Beyond the requirement for 01.11., there are no contractual restrictions on filling
 - No filling schedules are defined \rightarrow when the supplier performs the filling is up to them
 - Storage level requirements as of 01.10./01.02. are not part of the contract.
- Ownership of the gas remains with the supplier throughout the service period; THE has no access
 → no call option
- Fulfillment of the contract is determined by a storage level corresponding to the award as of 01.11.
 - Quantities already in storage at the start of the service period ("existing quantities") are (secondarily) creditable
 - Participation is also possible if the storage capacity required to fulfill the contract has not yet been booked at the time of the tender
 Supplier's risk
- In case of a contract breach, a penalty and potentially compensation for damages (if THE's actual damage exceeds the penalty) will be imposed.

Pricing and Billing: Overview

- Dynamic, spread-based ex-post subsidy for gas storage filling
- The focus of the product concept = incentive through subsidies for new storage injections
 - The supplier defines their personal minimum spread for economic storage filling via a bid price specified in the tender in EUR/MWh
 - The bid price is compared daily during the service period with the actual summer-winter spread
 - simplified through a defined reference spread
 - The supplier receives a subsidy if gas is effectively newly injected on a given day, and the reference spread on that day falls below the bid price
 - To cap costs, subsidies are only granted up to a defined spread floor, i.e., on days when the reference spread falls below the defined spread floor, it is capped at that level
 - Should market prices significantly improve during the service period and exceed a certain threshold, this will reduce the subsidy
- In addition to new storage injections, existing quantities are subsidized separately based on an average price
- As the subsidy amount is determined only at the end of the service period based on the pricing logic above, the subsidy is settled and paid out once, after 01.11.



- Reference Spread and Subsidy-Relevant Price (1)

- Basic Pricing Logic for Subsidy = Reference Spread minus Bid Price
 - Pricing applies from the start of the service period until 01.11.
 - A subsidy is only granted if the result is negative
- Reference Spread = Futures price for the following Q1 minus the current spot price
 - The basis is the EEX prices for the THE market area → EEX THE Natural Gas Futures Q1 und EEX Gas Spot THE Day Ahead/Weekend
 - Logic: Settlement prices published for day D are applied to storage movements on day D+1
 - Days without a price but with storage movements → fallback to the last trading day.

	Relevant futures	Relevant spot	Calculated
	price	price	reference spread
10.06.	50 EUR/MWh	49 EUR/MWh	+ 1 EUR/MWh
11.06.	43 EUR/MWh	45 EUR/MWh	- 2 EUR/MWh
12.06.	47 EUR/MWh	52 EUR/MWh	- 5 EUR/MWh
13.06.	46 EUR/MWh	38 EUR/MWh	+ 8 EUR/MWh
14.06.	83 EUR/MWh	40 EUR/MWh	+ 43 EUR/MWh
15.06.	49 EUR/MWh	38 EUR/MWh	+ 11 EUR/MWh
16.06.	42 EUR/MWh	45 EUR/MWh	- 3 EUR/MWh
[]	[]	[]	[]

	Calculated reference spread	Bid price of the supplier	Calculated price
10.06.	+ 1 EUR/MWh	+ 2 EUR/MWh	- 1 EUR/MWh
11.06.	- 2 EUR/MWh	+ 2 EUR/MWh	- 4 EUR/MWh
12.06.	- 5 EUR/MWh	+ 2 EUR/MWh	- 7 EUR/MWh
13.06.	+ 8 EUR/MWh	+ 2 EUR/MWh	0 EUR/MWh
14.06.	+ 43 EUR/MWh	+ 2 EUR/MWh	0 EUR/MWh
15.06.	+ 11 EUR/MWh	+ 2 EUR/MWh	0 EUR/MWh
16.06.	- 3 EUR/MWh	+ 2 EUR/MWh	- 5 EUR/MWh
[]	[]	[]	[]



5

- Reference Spread and Subsidy-Relevant Price (2)

 Subsidies are effectively only granted up to the predefined spread floor

- On days when the reference spread falls below the defined spread floor, it is capped at that level

• The spread floor is published with the tender.

	Calculated reference spread	Spread-Floor	Applied reference spread
10.06.	1 EUR/MWh	-3 EUR/MWh	+ 1 EUR/MWh
11.06.	-2 EUR/MWh	-3 EUR/MWh	- 2 EUR/MWh
12.06.	-5 EUR/MWh	-3 EUR/MWh	- 3 EUR/MWh
13.06.	8 EUR/MWh	-3 EUR/MWh	+ 8 EUR/MWh
14.06.	43 EUR/MWh	-3 EUR/MWh	+ 43 EUR/MWh
15.06.	11 EUR/MWh	-3 EUR/MWh	+ 11 EUR/MWh
16.06.	-3 EUR/MWh	-3 EUR/MWh	- 3 EUR/MWh
[]	[]	[]	[]

	Applied reference	Bid price of the	Subsidy-relevant
	spread	supplier	price
10.06.	+ 1 EUR/MWh	+ 2 EUR/MWh	- 1 EUR/MWh
11.06.	- 2 EUR/MWh	+ 2 EUR/MWh	- 4 EUR/MWh
12.06.	- 3 EUR/MWh	+ 2 EUR/MWh	- 5 EUR/MWh
13.06.	+ 8 EUR/MWh	+ 2 EUR/MWh	0 EUR/MWh
14.06.	+ 43 EUR/MWh	+ 2 EUR/MWh	0 EUR/MWh
15.06.	+ 11 EUR/MWh	+ 2 EUR/MWh	0 EUR/MWh
16.06.	- 3 EUR/MWh	+ 2 EUR/MWh	- 5 EUR/MWh
[[]	۱ []	[]	[]

TRADING

EUROPE

HUB

All numerical examples, including specified product parameters, are purely fictional and serve solely to illustrate the intended functionality of the product.

6

Subsidy Determination – Subsidy-Relevant Injections

- Subsidy is only granted for days with effective new injections, up to the awarded volume
 - Days without injection (i.e., days without storage movements or days with withdrawals) are not considered
 - Likewise, injections that merely refill previous withdrawals are not eligible
 - Once the supplier withdraws, new injections are not subsidized until the last storage level before the withdrawal is reached again.
- Quantity basis = balance of daily storage movements across all storage facilities used (i.e., booked) by the supplier, provided they are eligible for the product
 - The storage facility list will be published on the THE website
- Actual storage movements must be submitted monthly on a daily basis via Excel template to THE
 - for the previous month
 - for the first month including the initial storage level

		Storage movement of	Subsidy-relevant
		the day	injection quantity
	10.06.	0 MWh	0 MWh
_	11.06.	+ 50 MWh	50 MWh
	12.06.	- 70 MWh	0 MWh
	13.06.	+ 30 MWh	0 MWh
	14.06.	+ 120 MWh	80 MWh
	15.06.	+ 80 MWh	80 MWh
	16.06.	+ 90 MWh	90 MWh
	[]	[]	[]

	Subsidy-relevant	Subsidy-relevant	Subsidy for the
	injection quantity	price	day
10.06.	0 MWh	- 1 EUR/MWh	0 EUR
11.06.	50 MWh	- 4 EUR/MWh	- 200 EUR
12.06.	0 MWh	- 5 EUR/MWh	0 EUR
13.06.	0 MWh	0 EUR/MWh	0 EUR
14.06.	80 MWh	0 EUR/MWh	0 EUR
15.06.	80 MWh	0 EUR/MWh	0 EUR
16.06.	90 MWh	- 5 EUR/MWh	- 450 EUR
[]	[]	[]	[]

All numerical examples, including specified product parameters, are purely fictional and serve solely to illustrate the intended functionality of the product.



- Deductions for Particularly Positive Spreads

 If the reference spread exceeds a defined threshold, the previously accumulated subsidy is correspondingly reduced

8

- Logic: Only storage filling that is economically unviable (according to the product fiction) should be subsidized
- Functionality as follows:
 - Pricing logic is tied to the same mechanism as for the original subsidy determination
 - The mechanism only applies if
 - 1. the reference spread exceeds a defined (positive) threshold
 - A fixed value that applies uniformly to all suppliers
 - The threshold is published with the tender
 - 2. The supplier must have actually performed effective new injections on the respective day
 - The logic for quantity determination is identical to that used for the actual subsidy calculation
 - The amount exceeding the threshold is 100% deducted from the subsidy

	Subsidy- relevant storage injection quantity	Applied reference spread	Threshold for deduction	Price for deduction	Deduction for the day
10.06.	0 MWh	+ 1 EUR/MWh	+ 40 EUR/MWh	0 EUR/MWh	0 EUR
11.06.	50 MWh	- 2 EUR/MWh	+ 40 EUR/MWh	0 EUR/MWh	0 EUR
12.06.	0 MWh	- 3 EUR/MWh	+ 40 EUR/MWh	0 EUR/MWh	0 EUR
13.06.	0 MWh	+ 8 EUR/MWh	+ 40 EUR/MWh	0 EUR/MWh	0 EUR
14.06.	80 MWh	+ 43 EUR/MWh	+ 40 EUR/MWh	+ 3 EUR/MWh	+ 240 EUR
15.06.	80 MWh	+ 11 EUR/MWh	+ 40 EUR/MWh	0 EUR/MWh	0 EUR
16.06.	90 MWh	- 3 EUR/MWh	+ 40 EUR/MWh	0 EUR/MWh	0 EUR
[]	[]	[]	[]	[]	[]

All numerical examples, including specified product parameters, are purely fictional and serve solely to illustrate the intended functionality of the product.



- Subsidy Determination via Account Logic
- The subsidy effectively payable for new injections is determined via an account logic
- The account collects both the actual subsidies and the deductions for each day
- Once an accumulated subsidy is completely "used up" by deductions, the account remains at zero until a new subsidy accrues → It can therefore never have a positive balance
 - Only subsidies that have already been accrued can be consumed
 → no forward impact
 - There can also never be a payment from the supplier to THE (except in the case of contractual penalties)
- If the final result shows a negative balance of subsidies and deductions, the supplier will effectively receive this negative balance as a payout

	Subsidy for	Deduction for	Billing-relevant
	the day	the day	account balance
10.06.	0 EUR	0 EUR	0 EUR
11.06.	- 200 EUR	0 EUR	- 200 EUR
12.06.	0 EUR	0 EUR	- 200 EUR
13.06.	0 EUR	0 EUR	- 200 EUR
14.06.	0 EUR	+ 240 EUR	0 EUR
15.06.	0 EUR	0 EUR	0 EUR
16.06.	- 450 EUR	0 EUR	- 450 EUR
[]	[]	[]	[]

All numerical examples, including specified product parameters, are purely fictional and serve solely to illustrate the intended functionality of the product.

9



Subsidy Determination - Consideration of Existing Quantities

- Existing quantity = Initial actual storage level of the supplier at the start of the service period
- Existing quantities can generally be credited but are only considered secondarily
 - The storage movement-based daily pricing system applies first for all new injections starting from the service period's commencement; Existing guantities are only considered for the fulfillment of the contract if new injections were not sufficient.
- The subsidy for existing quantities is based on THE's volume-weighted average costs in EUR/MWh for new injections, calculated across all suppliers
 - This means a uniform price for existing quantities applies to all suppliers

Bidder's award	350 MWh
Fulfilled by new injections	300 MWh
Remain	50 MWh
Initial actual storage level of the supplier	100 MWh
Eligible from that	50 MWh

Subsidy for New Injection Supplier 1	- 450 EUR
New Injection Volume Supplier 1	300 MWh
Subsidy for New Injection Supplier 2	- 320 EUR
New Injection Volume Supplier 2	500 MWh
Total Subsidies for New Injection	- 770 EUR
Total New Injection Volume	800 MWh
Average Price for New Injection	- 0,96 EUR/MWh

All numerical examples, including specified product

the intended functionality of the product.

Average Price for New Injection	- 0,96 EUR/MWh
Eligible Existing quantity	50 MWh
Subsidy for Eligible Existing Quantities	- 48,00 EUR



Subsidy Determination – Determination of Total Subsidy

- The total subsidy is composed as follows
 - The subsidy for the supplier's new injections during the service period, determined based on storage movements (= result of account logic), and
 - he separately determined subsidy for existing quantities, if they are creditable
- If the actual storage level as of 01.11. does not at least match the supplier's awarded amount, the subsidy will be reduced by:
 - If subsidized quantities were permanently withdrawn: subsidy reduction corresponding to the shortfall
 - calculated by price \rightarrow starting with the most highly subsidized quantities
 - Penalty
 - The detailed design is still under review

Final Account Balance	from New Injections	- 450,00 EUR
Subsidy for Existing Qu	antities	- 48,00 EUR
Total Subsidy to Provid	er	- 498,00 EUR



Tender – Simple Nationwide Tender

- The tender volume will be coordinated with BMWK and BNetzA in the event of a tender
- The tender is conducted nationwide without further zonal restrictions
 - Since it is a nationwide product, no specification of fulfillment storages is required at the time of bidding
- Bidders must indicate the offered quantity and bid price in EUR/MWh
 - Generally, multiple bids per supplier are allowed (technical restriction: 1,000 bids per supplier)
- Awards are made purely based on the bid price
 - from lowest to highest; the last bid may receive a partial award
- To cap costs, a price ceiling is defined for bids, meaning awards are only made up to this ceiling
 - Internal reservation price ightarrow the bid price ceiling is not communicated in advance

Next steps

- The preparation of terms and conditions as well as the IT implementation of tender functionalities is underway
 - This slide set is published on THE's website
 - tradinghub.eu >> Download >> Download center THE >> Papers, presentations and event documents
 - Feedback from market participants can be submitted until 28.01.2025 (end of business)
 - Please send all comments via email to <u>security-of-supply@tradinghub.eu</u>
- Should a tender be conducted, it would, as usual, be announced in advance on THE's website
 - The bidding period is currently planned to follow the previous product timeline, i.e., 10 business days
 - Suppliers prequalified for the 2022 SSBO product do not need to requalify



Your Contacts for Questions

Markus Sammut

T: +49 211 542000 320 E: markus.sammut@tradinghub.eu

Sina Ketschau

T: +49 211 542000 322 E: sina.ketschau@tradinghub.eu

Claus-Michael Scheyda

T: +49 211 542000 325 E: claus-michael.scheyda@tradinghub.eu

Thorsten Kreutzer

T: +49 211 542000 329 E: thorsten.kreutzer@tradinghub.eu







Trading Hub Europe GmbH

Hauptsitz: EUREF-Campus 1 40472 Düsseldorf

Standort Berlin: Anna-Louisa-Karsch-Straße 2 10178 Berlin

www.tradinghub.eu

Geschäftsführer

Torsten Frank, Dr. Sebastian Kemper

Amtsgericht Düsseldorf, HRB 93885

Copyright

The ideas and suggestions developed in this presentation are the intellectual property of Trading Hub Europe and are subject to the applicable copyright laws. The whole or excerpts duplication as well as passing on to third parties is not allowed without written permission of Trading Hub Europe GmbH.