



Third-Party Access to Gas Storage – Case Study Session

Case study by ENERGY AND WATER REGULATORY COMMISSION, REPUBLIC OF BULGARIA

VICTORIA JERMANOVA, Chief Expert in Natural gas Division



Basic information about Underground Gas Storage Chiren



- Bulgartransgaz EAD is the owner and operator of Chiren UGS
- Exploitation wells: 24
- Compressor stations: 1
- Storage capacity: $\approx 5\,813\,500$ MWh
- Withdrawal capacity: 5285 MWh/d \div 40377 MWh/d ($0.5 \div 3.82$ mcm/d at 10.57 MWh/1000m³)
- Injection capacity: 5285 MWh/d \div 33824 MWh/d ($0.5 \div 3.2$ mcm/d at 10.57 MWh/1000m³)
- Maximum withdrawal capacity in case of emergency: up to 49679 MWh/d (4.7 mcm/d at 10.57 MWh/1000m³) in case of full gas storage facility and for a time period of maximum 30 days

Key access principles



- **Equal treatment of gas storage users**



- **Transparency and non-discrimination** in securing access to the gas storage



- The available capacity for commercial storage, withdrawal and injection by months shall be announced by Bulgartransgaz EAD after the capacities necessary for injection, storage and withdrawal of natural gas for reserve have been determined.
- TSO needs, security of supply, obligation for storage reserve.

Storage and Security of Supply Obligations



Pursuant to the Emergency Action Plan approved by the Minister of Energy of the Republic of Bulgaria, the natural gas companies are obliged each year to nominate the necessary quantities for storage under the Plan.

The quantities shall be nominated to the **Competent Authority under Regulation (EU) 2017/1938 of the European Parliament and of the Council of 25 October 2017 on measures to ensure security of gas supply**, and within the same term they shall submit to Bulgartransgaz EAD an application for booking of yearly capacity products to cover injection, withdrawal and storage of the respective natural gas quantities.

Third-Party Access Rules (1)



TYPES OF CAPACITY PRODUCTS:

1. Integrated capacity products:

- Integrated yearly product;
- Integrated six-month product.

2. Non-integrated capacity products:

- a) Firm storage capacity:
 - Monthly product;
- b) Firm capacity for injection or withdrawal:
 - Monthly product;

- Preliminary daily product;
- Day-ahead product;
- c) Interruptible capacity for injection or withdrawal (virtual injection/withdrawal):
 - Monthly product;
 - Day-ahead product
- d) Interruptible non-integrated withdrawal/injection capacity (in physical withdrawal/injection mode)
 - Day-ahead product.

Third-Party Access Rules (2)



ALLOCATION OF INTEGRATED YEARLY CAPACITY PRODUCT

The Operator allocates the available storage capacity for the next gas year for storage (**starting April 15**) in line with the determined and announced integrated yearly product units to the potential customers who had submitted valid applications.

If the sum of the integrated yearly product units of storage capacity nominated in the procedure by all participants is more than the announced integrated yearly capacity units, **the allocation shall be made** whereas **units nominated by each potential customer shall be reduced proportionately to the share of their nomination** against the sum of all nominations.

In case the total nominated yearly storage products do not exceed these determined to be allocated, it will be considered that all applications can be satisfied.

Third-Party Access Rules (3)



MONTHLY NON-INTEGRATED CAPACITY PRODUCT

In case of remaining available capacity after applying the integrated capacity procedures, Bulgartransgaz EAD shall announce in due time such available capacity on its website as a **monthly non-integrated** storage, injection or withdrawal **capacity product**.

If the total nominated storage capacity for the month does not exceed the available one, the Operator shall allocate the capacity according to the submitted applications.

If the total nominated storage capacity for the month exceeds the available one, the Operator shall allocate the available monthly storage capacity on a **pro-rata basis**.

Third-Party Access Rules (4)



Bulgartransgaz EAD shall announce on its website the following storage information:

1. available capacity;
2. booked (contracted) capacity;
3. scheduled maintenance program for the respective year;
4. the services provided, together with the technical information needed by the gas storage users to gain effective access;
5. gas quantity in the gas storage;
6. the entry and exit flows.



Pricing Scheme (1)



UGS Chiren is subject to price regulation under the **Energy Act, Ordinance N°2** on the regulation of Natural gas prices and **Instructions** for pricing for access and storage of natural gas in storage facilities.

The method of price regulation is "**Rate of return on capital**" (costs plus).

Elements of revenue setting methodology:

*Regulatory asset base RAB;
Rate of return RR;
Operative costs (fixed + variable) OC;*

$$\text{Allowed revenue} = \text{OC} + \text{RAB} * \text{RR}$$

Allowed revenue allocation

- storage for TSO needs – 7,4%
- security of supply obligation – 18,6 %
- trade storage -> capacity and commodity tariffs- 74%

Pricing Scheme (2)



Capacity tariffs

Integrated capacity products

- yearly;
- six-month.

Non-integrated capacity products:

- storage;
- injection;
- withdrawal.

Commodity tariff

Applies only for the injected natural gas quantities, based on variable technological costs.



THANK YOU FOR YOUR ATTENTION!

VICTORIA JERMANOVA

Chief expert at Energy and Water Regulatory Commission

Natural Gas Division

e-mail: vjermanova@dker.bg