

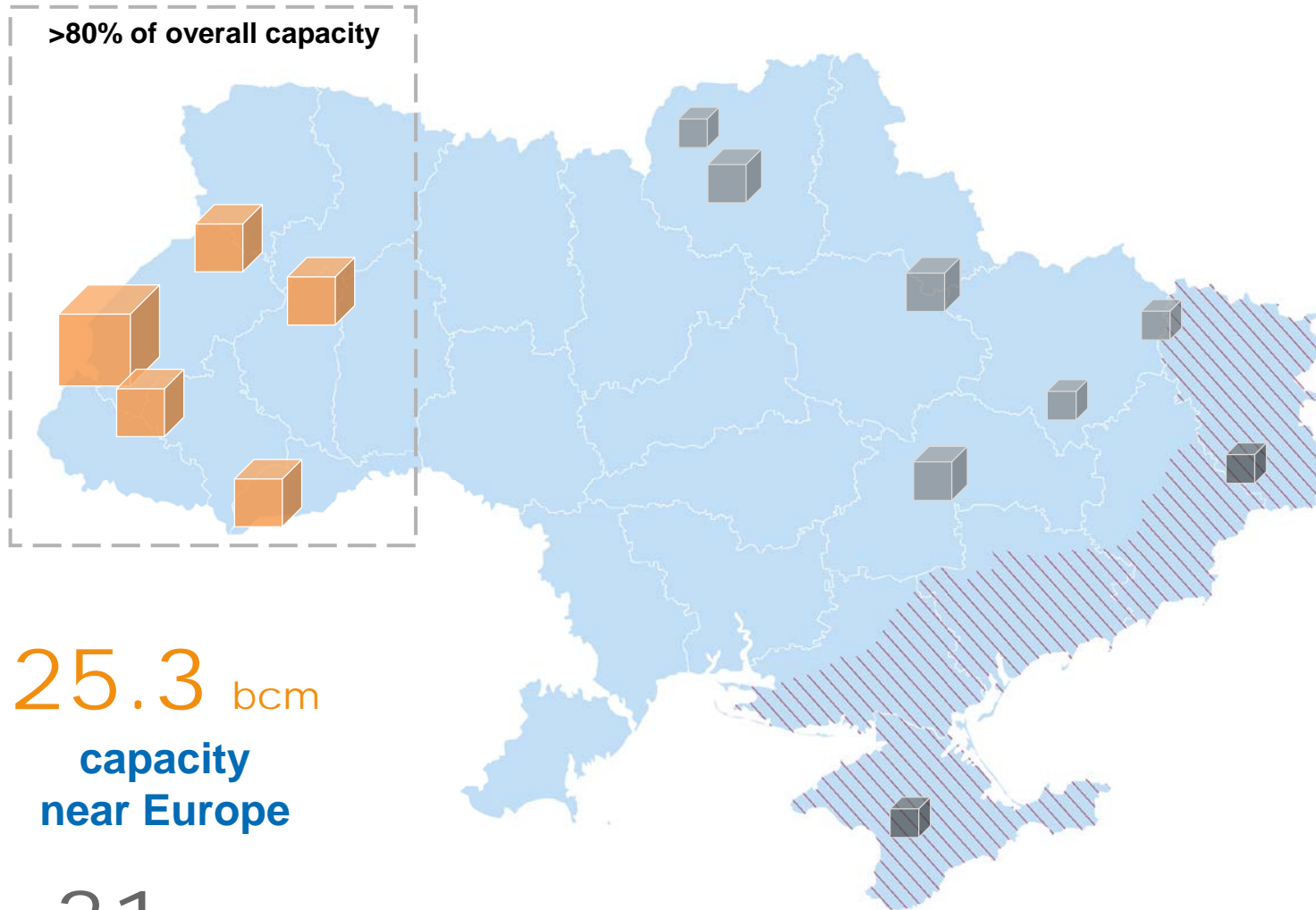
STORAGE SYSTEM OPERATOR OF UKRAINE – UKRTRANSGAZ

Roman Maliutin
Acting Director General
of Ukrtransgaz



**STORAGE SYSTEM
OPERATOR
OF UKRAINE**

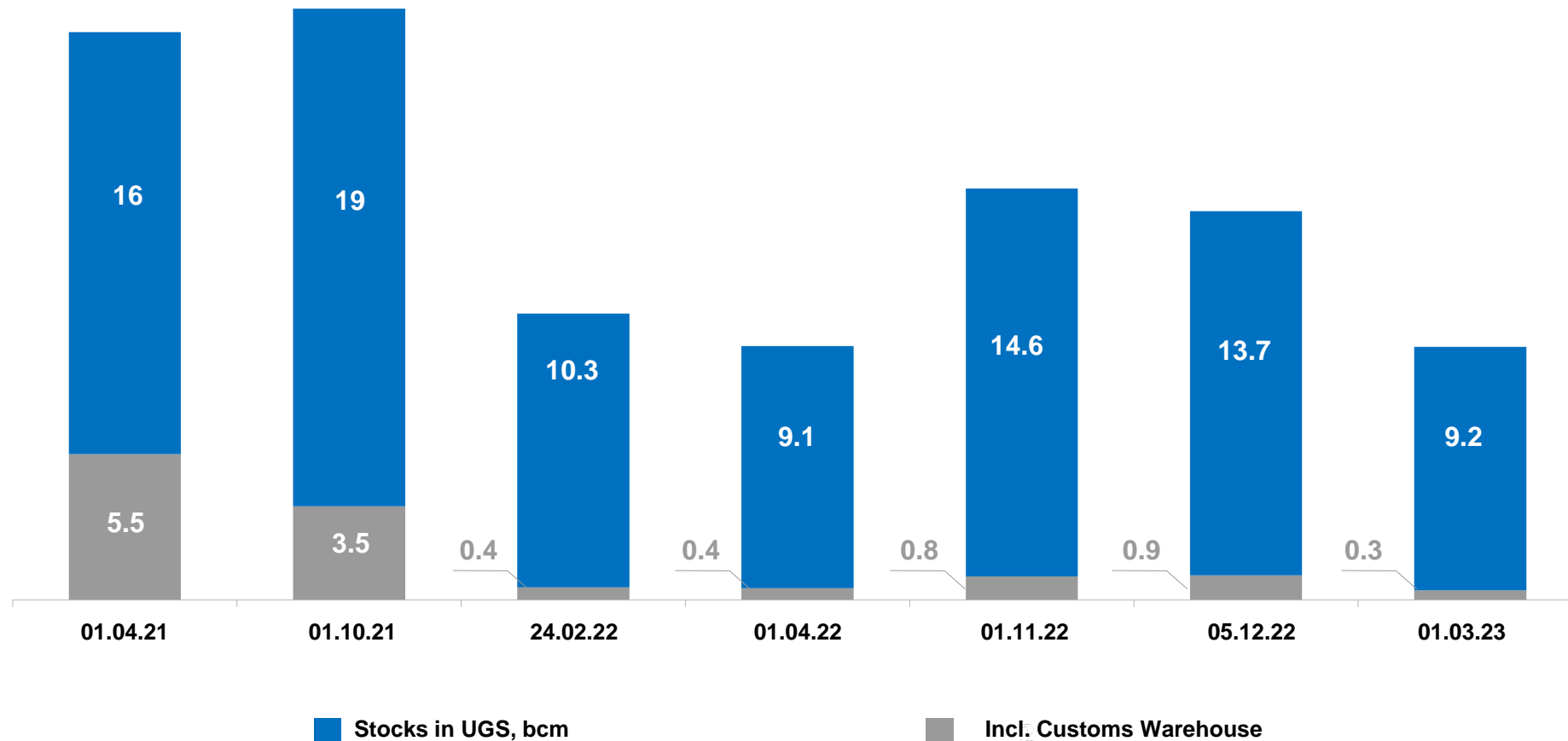
UGS OF UKRAINE: SIGNIFICANT CAPACITIES, ATTRACTIVE STORAGE TARRIFS



- Ukraine is **TOP-1** in Europe and **TOP-3** in the world in gas storage capacity.
- More than **80%** of capacity is located in close proximity to Europe.
- Ukrainian UGS capacity constitutes almost **29%** from the total EU UGS capacity.
- In the period of Oct-Nov 2022 non-residents injected **0,5 bcm** of gas into UGS of Ukraine. Maximum injection level was reached in 2021 – **10 bcm**.
- Natural gas storage tariffs in UGS of Ukraine are the lowest in Eastern Europe and still remain favorable together with transportation fees, reaching **4 EUR/MWh**.
- Non-residents' resource attraction allows:
 - **For Ukraine** – steadily get through a heating season without additional import costs.
 - **For non-residents** – a trading opportunity.

COOPERATION WITH NON-RESIDENTS CONTINUES

Ukrainian underground storages have continued to be in demand on the international gas market. Despite a full-scale invasion, foreign traders keep storing gas in the Customs Warehouse regime. Ukrtransgaz, as a Storage System Operator, once again confirmed its full reliability and fulfillment of all contractual obligations.



CERTIFICATION OF THE STORAGE SYSTEM OPERATOR ACCORDING TO THE EU REQUIREMENTS

Goal:

Confirmation of compliance of the SSO of Ukraine with new requirements established by EU Regulation No. 2022/1032 of 29.06.2022 on the security of gas supply.

Provides for the absence of property or corporate ties with russia or gazprom.

Reputational benefits:

Fulfillment by Ukraine of the international obligations on certification of the SSO. Strengthening a position of Ukrtransgaz in cooperation with non-resident commercial customers.

STAGES

COMPLETED: Draft Law No. 8158 registered in the Parliament on 28.10.2022

COMPLETED: Draft Law No. 8158 adopted by the Parliament

COMPLETED: NEURC adopted a certification procedure

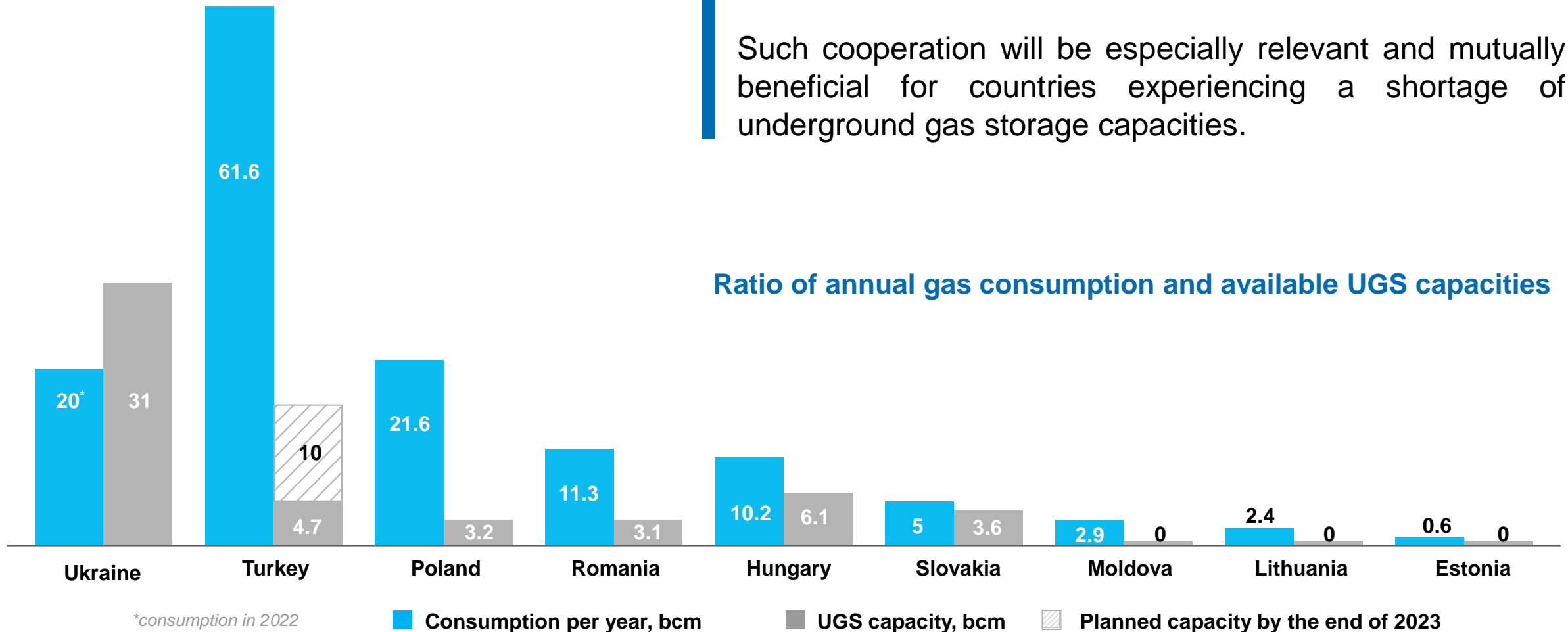
COMPLETED: Provision of necessary docs by the Operator to the Regulator. Preliminary decision by NEURC

COMPLETED: NEURC's request for a conclusion to the Energy Community

NEURC's final decision on certification

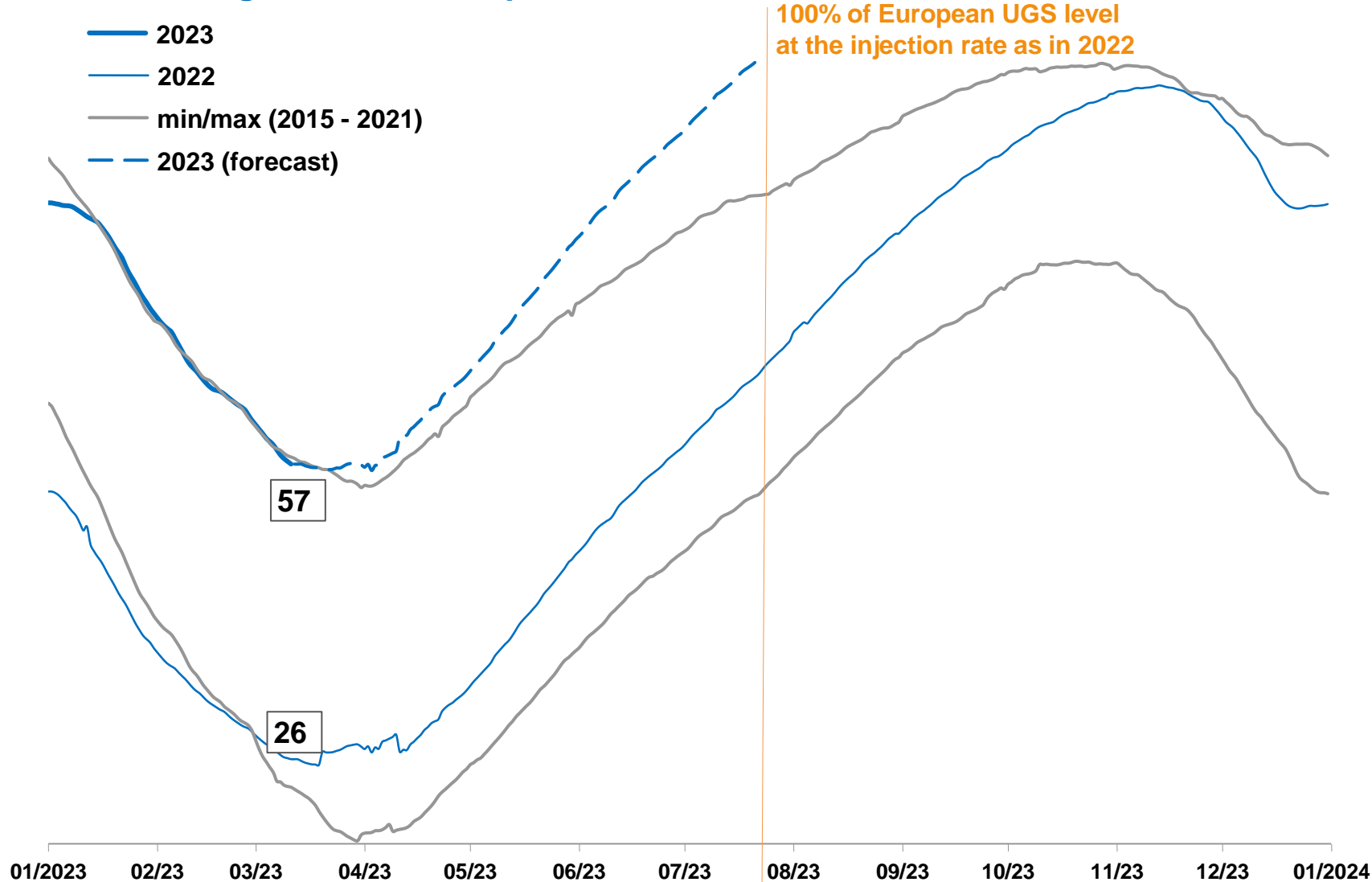
Ukraine is ready to offer its UGS for long-term storage of the EU countries' gas stocks (up to three years, without payment of taxes and customs duties).

Such cooperation will be especially relevant and mutually beneficial for countries experiencing a shortage of underground gas storage capacities.



ADDITIONAL CAPACITIES FOR EUROPEANS PARTNERS

Gas storages level in Europe, %



- In 2023, gas storages in Europe are expected to reach maximum levels during July with similar injection rates as in 2022.
- At the same time, in neighboring countries such as Slovakia and the Czech Republic, gas storages are expected to reach 90% capacity in the first half of June, in Romania – in August, and in Poland – even in May.
- So, it is expected that in July, European countries will have to actively seek additional gas storage capacities to cover the deficit.

The date of 90% gas storages filling in 2023, (at the rate of 2022)



Poland

15 May



Slovakia

11 June



Romania

20 August



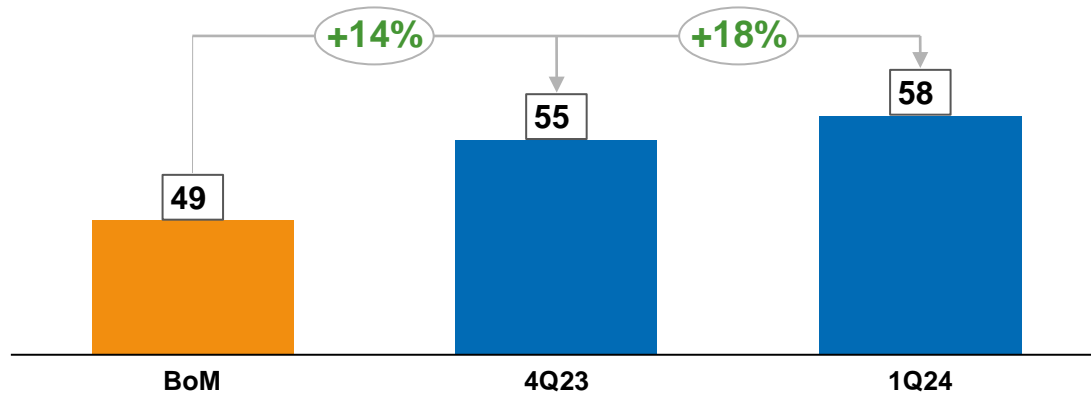
Czech Republic

1 June

• Source: AGSI

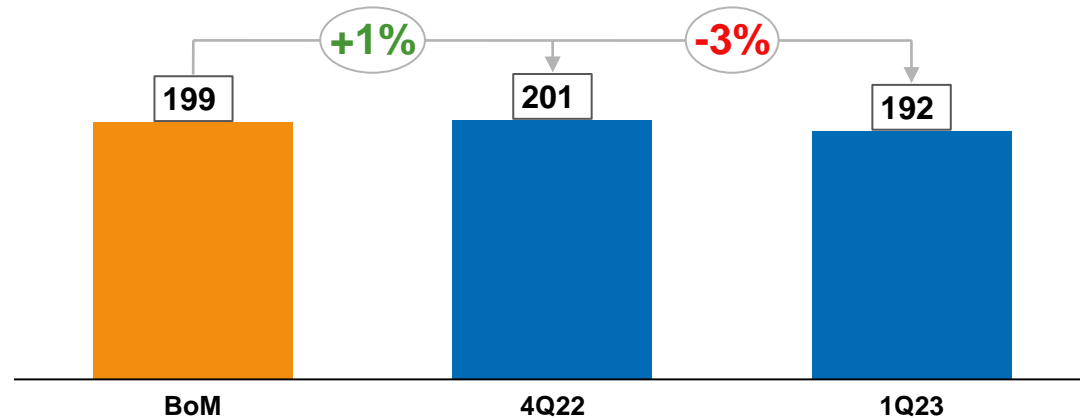
ATTRACTIVE SPREADS FOR INJECTION

Actual TTF quotes as of 14.03.2023, EUR/MWh



Spread is economically attractive

Actual TTF quotes as of beginning of August 2022, EUR/MWh



Spread is practically absent, significant volatility

- It is important right now to encourage non-residents to inject natural gas into UGS while there is a favorable spread.
- Thus, as of mid-March, TTF forward values for a winter period are 14% and 18% higher than the current values of an index.
- Closer to a heating season start and considering the situation with a summer price peak of previous years in July-August, spreads may be unfavorable for injection.
- e.g., in the midst of preparations for 22/23 heating season quotes for August were only 1-3% lower than the forwards of late 2022 and early 2023.
- A situation with peak values and a flat spread are likely to occur in summer again.

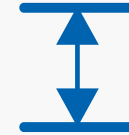
The cost-based approach includes two models: Cost Plus and RAB regulation. The two models differ by the margin calculation methodology:



COST PLUS

Margin = fixed amount

- Short-term tariff design
- No return on investment



RAB

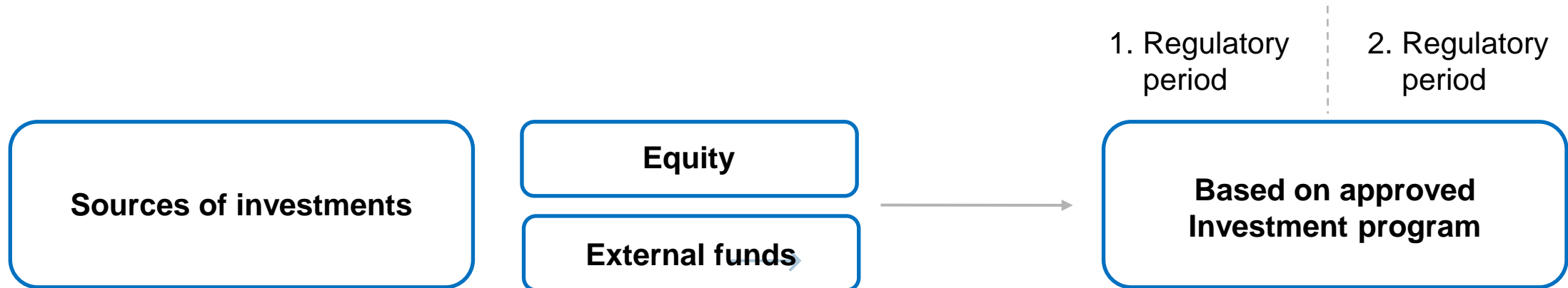
Margin = RAB x Rate of return

- Long-term tariff design
- Aimed at attracting capital

Financing of investment projects by external and internal sources

RAB regulation allows a company to attract investments and create value for itself by achieving superior performance relative to regulatory target.

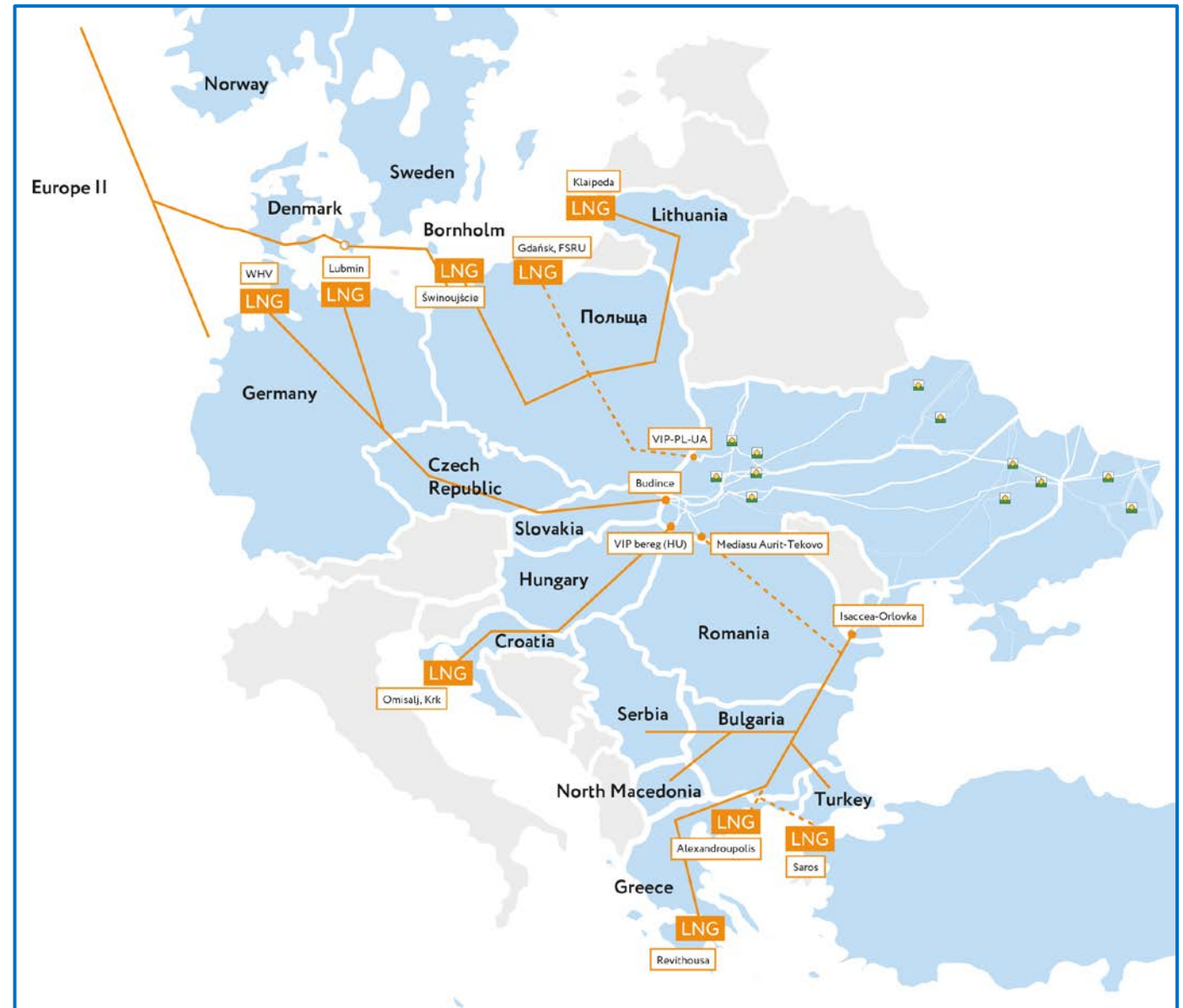
The key task is to introduce methodology, which will cover operating and investment expenses in a tariff and will provide stipulated level of profitability.



Long-term strategy is participation in development of the Eastern European gas hub, a key part of which will be Ukrainian UGS.

Key factors in building a hub:

- redesign of the European gas map
- diversification of gas supply routes
- new sources (replacement of pipeline gas with LNG)



The UGS cluster in the western regions of Ukraine has a firm potential for becoming a center of the future Eastern European gas hub.

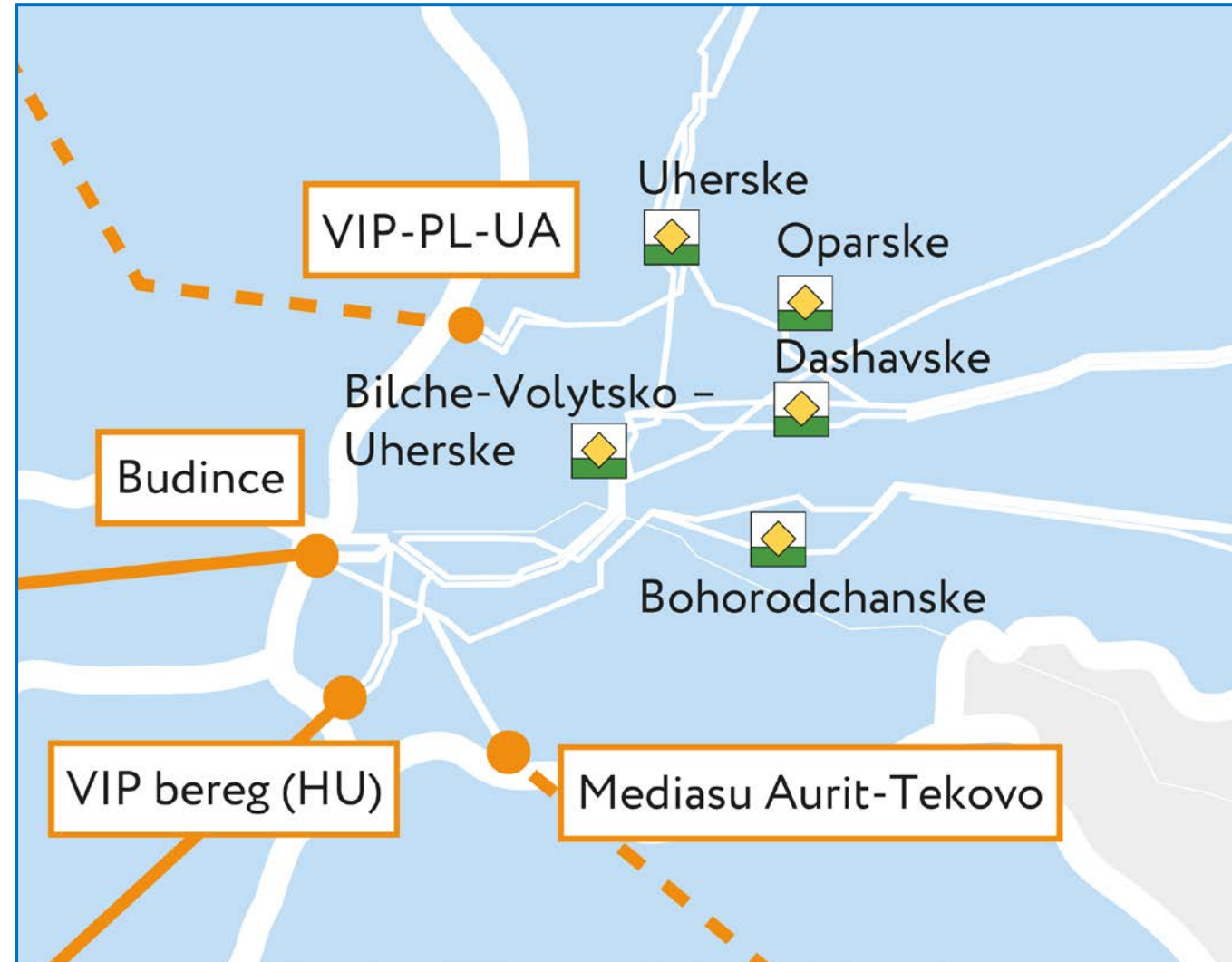
Among the advantages:

- favorable location and high level of security
- 25 bcm of working volume
- developed infrastructure
- high performance and flexibility of the system
- full system automation
- increased on-site security measures

Rated productivity of western UGS cluster

| Filling of storages | Withdrawal mcm/day | Injection mcm/day |
|---------------------|--------------------|-------------------|
| 100% | 209 | 156 |
| 50% | 136 | 171 |
| 30% | 92.9 | 187 |
| 10% | 41.3 | 203 |

Western Ukrainian UGS Cluster



MAIN RISKS



Currency risks



Infrastructure
damage



Forced political
decisions
(gas re-export bans)

SOLUTIONS



Political risk
insurance



International
institutions' support

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