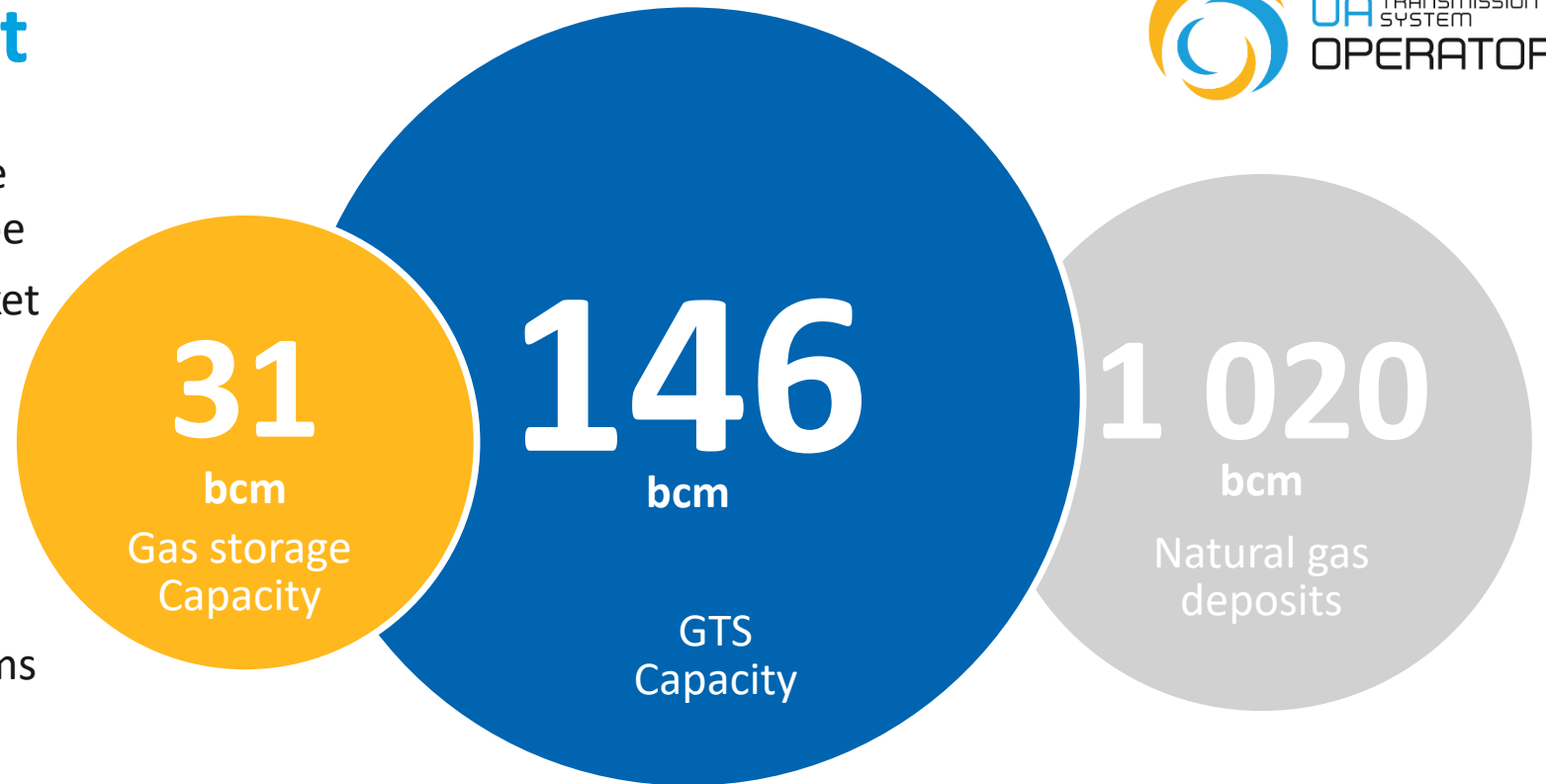




# Market update for the South Eastern European gas market – the case of Ukraine

# Ukrainian gas market

- Extensive internal gas market: the 2-nd largest gas reserves in Europe
- Compliance with the EU gas market regulations
- Certified TSO and SSO according to European rules
- Reliability: implementation of obligations towards the EU customers despite the war in terms of gas transit and re-export



## Key indicators of the Ukrainian gas market in 2022\*



Transit



Consumption



Production



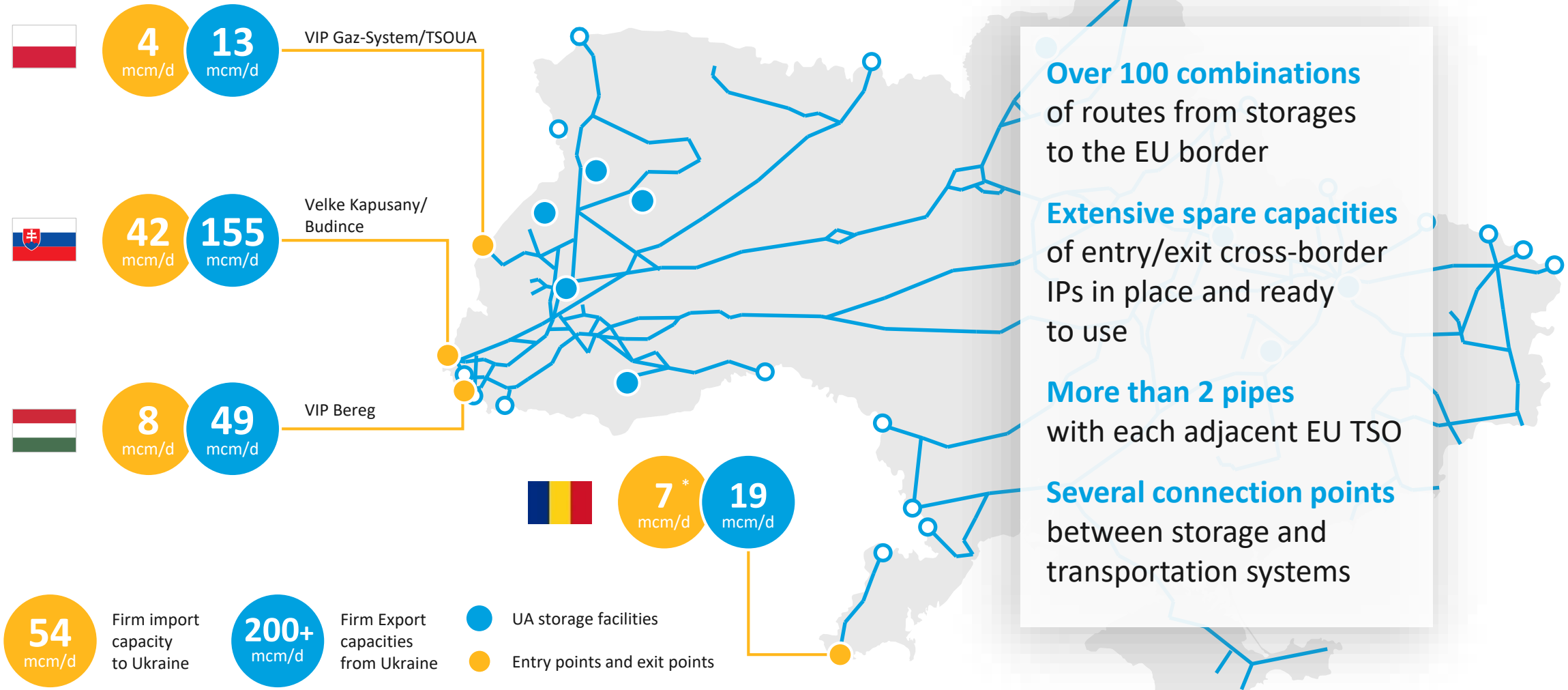
Import



Export & re-export

\* Data source: GTSOU calculations

# Technical possibilities for gas re-export



**Over 100 combinations** of routes from storages to the EU border

**Extensive spare capacities** of entry/exit cross-border IPs in place and ready to use

**More than 2 pipes** with each adjacent EU TSO

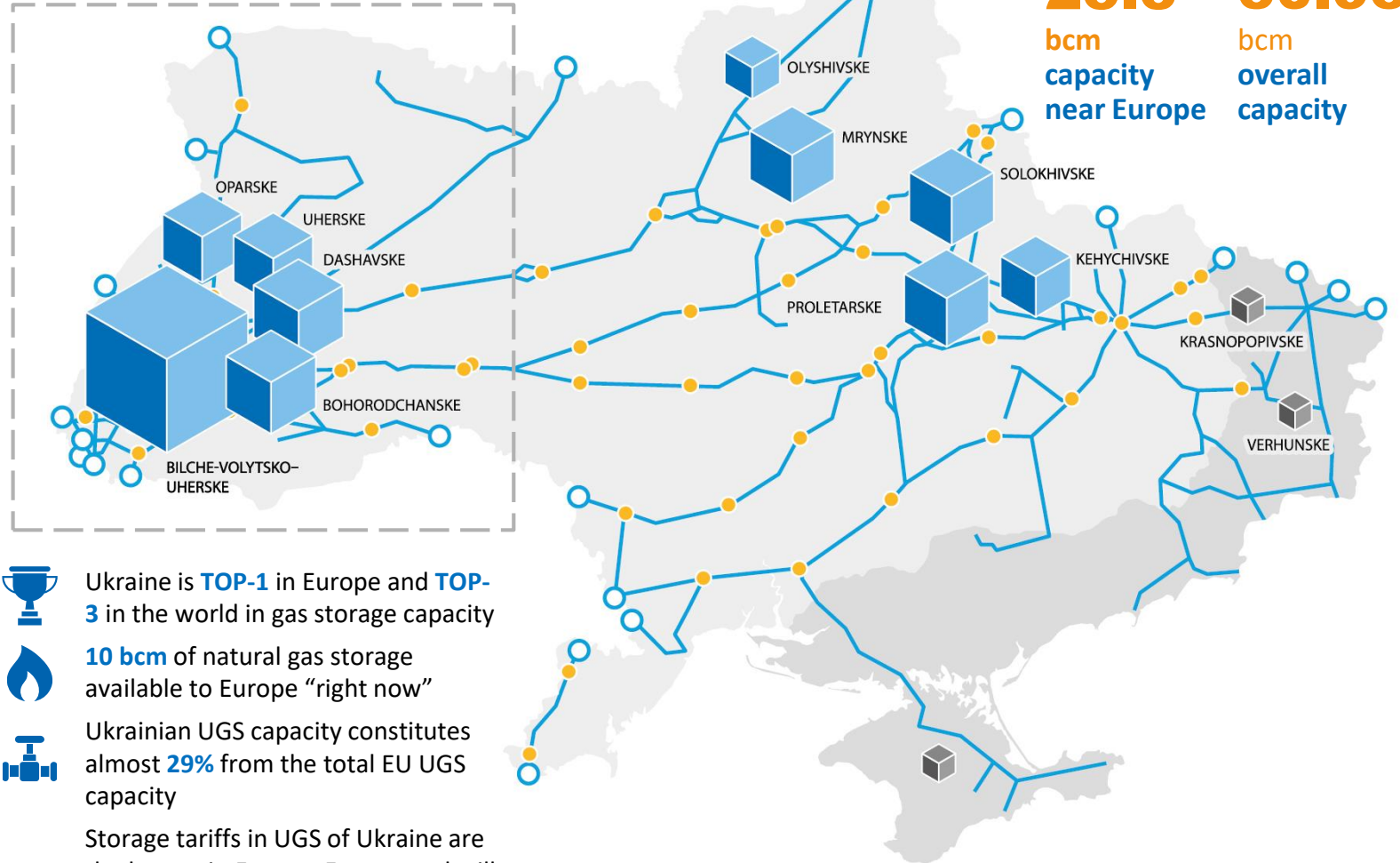
**Several connection points** between storage and transportation systems

\* Use of the Trans-Balkan route requires booking the capacities of MD GTS, the tariffs are not included in the calculations

Data source: GTSOU calculations

# UA storages: significant capacities and security

82% of overall capacity is near Europe



**25.3** bcm capacity near Europe  
**30.95** bcm overall capacity

Ukraine is **TOP-1** in Europe and **TOP-3** in the world in gas storage capacity

**10 bcm** of natural gas storage available to Europe "right now"

Ukrainian UGS capacity constitutes almost **29%** from the total EU UGS capacity

Storage tariffs in UGS of Ukraine are the lowest in Eastern Europe and still remain favorable together with transportation fees, reaching **4 EUR/MWh**

**Results of the 2022/2023 withdrawal season:**  
**5,570 mcm** – gas withdrawal volume from UGS during the withdrawal season  
**68.9 mcm** – gas withdrawal volume from UGS in a peak day



Most UGS of JSC Ukrtransgaz have 2 or more physical connections to the GTS, and some UGS – up to 5



Ukraine's UGS are located in dense rock at depths of 400 to 2,000 meters and are hidden by natural vegetation, which is a reliable natural protection



The SSO is classified as a critical infrastructure facility with an appropriate state protection



Alternative modes of gas withdrawal have been developed in case of infrastructure damage

**93%** Effectiveness of Ukrainian Air Defense\*  
*\* According to the Air Force of Ukraine*

# Commercial strategy: context and vectors of development

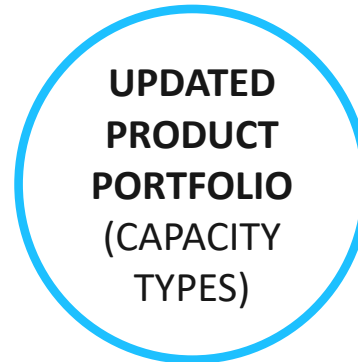
## CERTIFICATION OF UKRTRANSNAZ\*

- Strengthening a position in cooperation with non-resident commercial customers. Involvement of Ukrtransgaz in storage of commercial gas volumes of Europe.
- Constant enhancement of internal regulatory framework and no influence of 3<sup>rd</sup> parties.



### AMENDMENTS TO A NATIONAL ACTION PLAN:

- Discussion of the **amendments to a National Action Plan** that provide for an **impossibility of preventing the re-export** from Ukraine of natural gas stored in UGS customs warehouse;
- **Protection of interests** of EU and UA companies using customs warehouse.



### UPDATED PRODUCT PORTFOLIO AS PART OF AMENDMENTS TO THE STORAGE CODE:

- Expanding the **portfolio of storage products (capacity types)**;
- Greater flexibility in booking capacity;
- **Attractive conditions** for storage at the customs warehouse.



### PROJECT TO DEVELOP GUARANTEES TO COVER WAR RISKS:

- Working on an **initiative with the Energy Community (ECS)** to create **risk mitigation measures** for foreign customers;
- **Covering the war/political risks**;
- Ability to inject **significant volumes into UGS** under European/International guarantees.

\* Ukrtransgaz is a second SSO in Europe to meet the updated requirements established by EU Regulation No. 2022/1032 of 29.06.2022 on the security of gas supply. NEURC (National Regulator) made a final decision on certification on 7th April 2023.