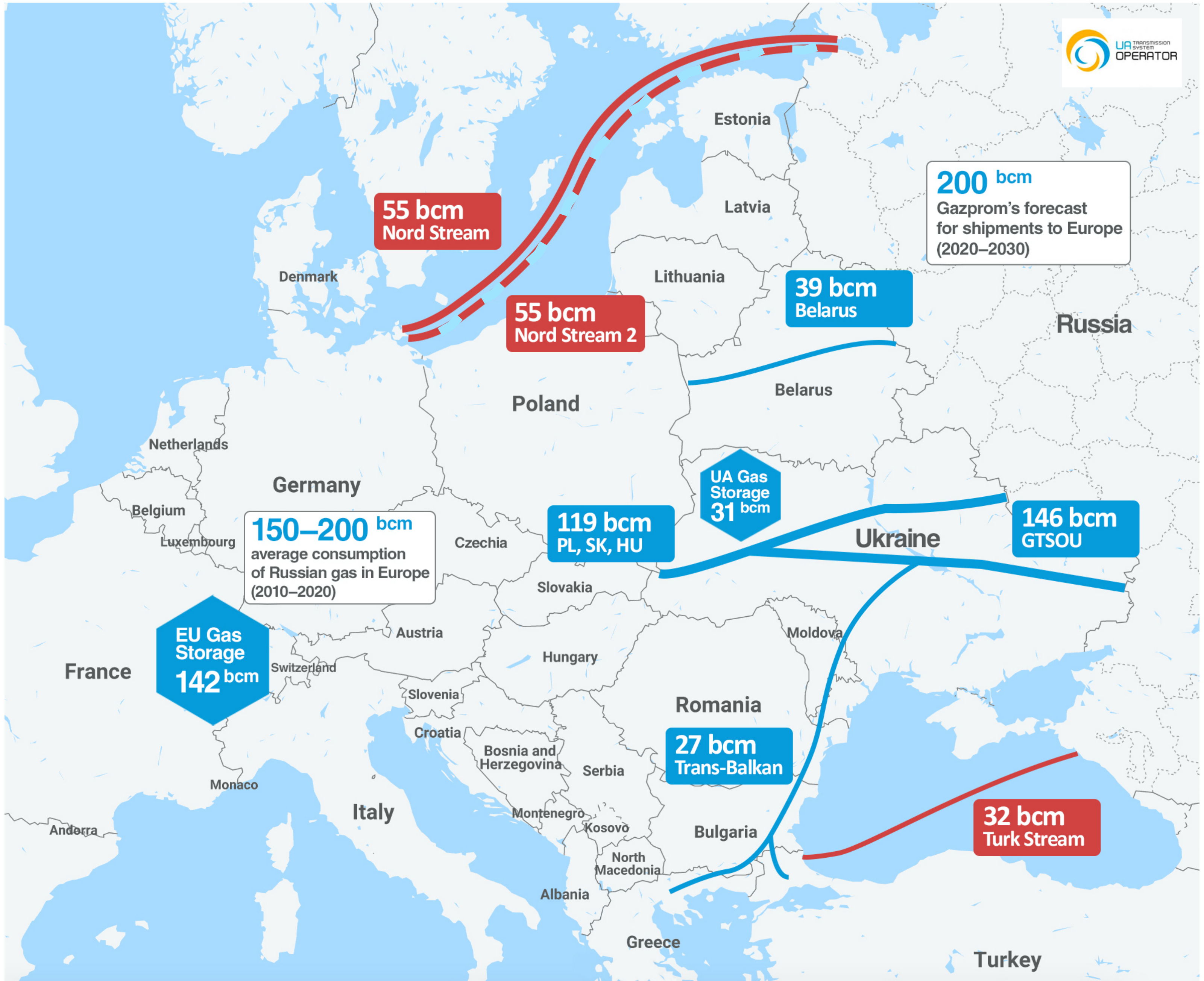
UA TRANSMISSION SYSTEM OPERATOR

The first year of independent Gas TSO of Ukraine

Sergiy Makogon

Transit through Ukraine is the key to supply competition in Europe's gas markets



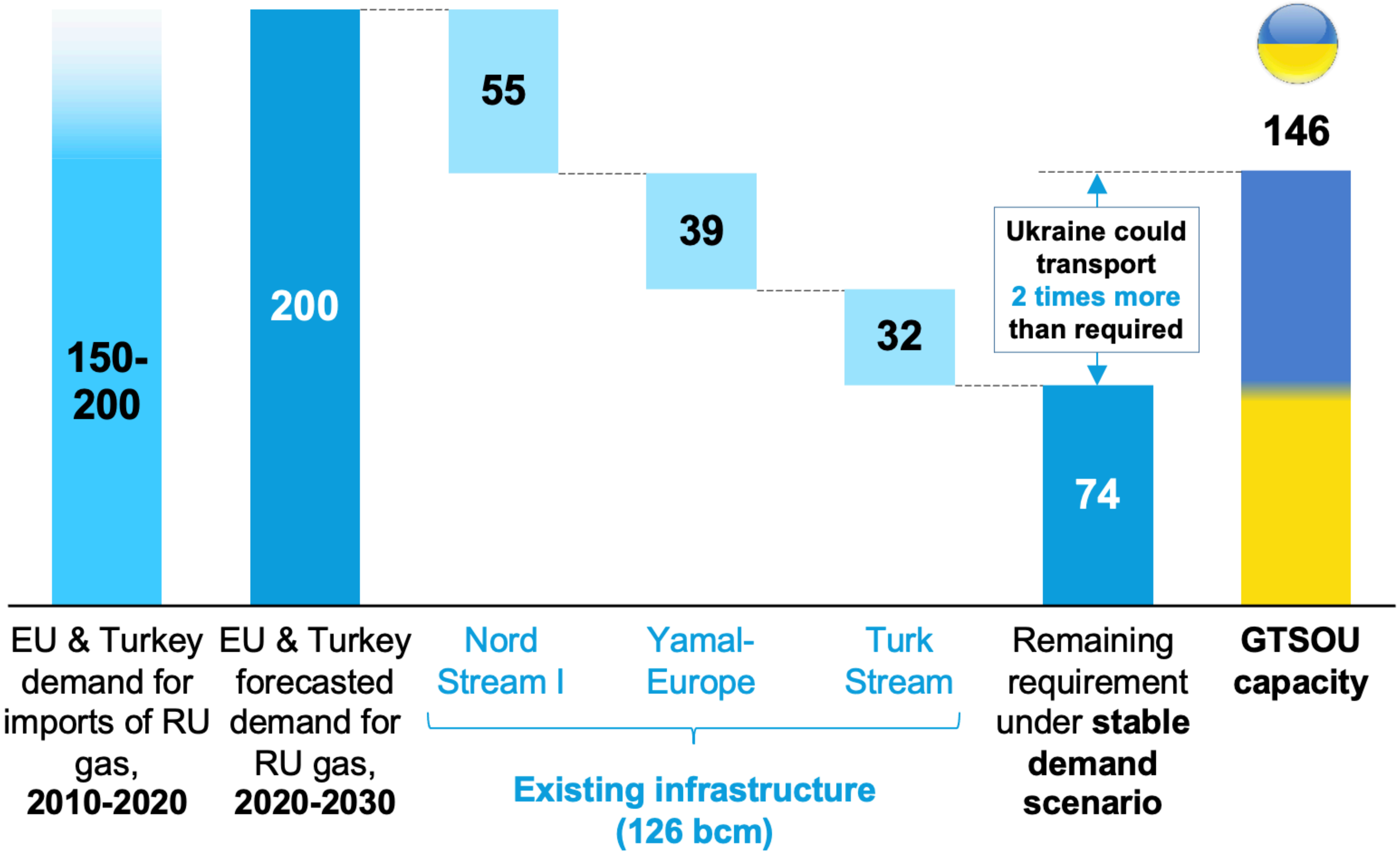
East-West **transit capacity** of 270 bcma already **exceeds** the most optimistic **volume forecasts** of 200 bcma.

Nord Stream 2, if not stopped now, **will undermine supply competition**

Trans-Balkan pipeline is running effectively **empty** but it allows bi-directional flow and must be revitalized to strengthen supply competition

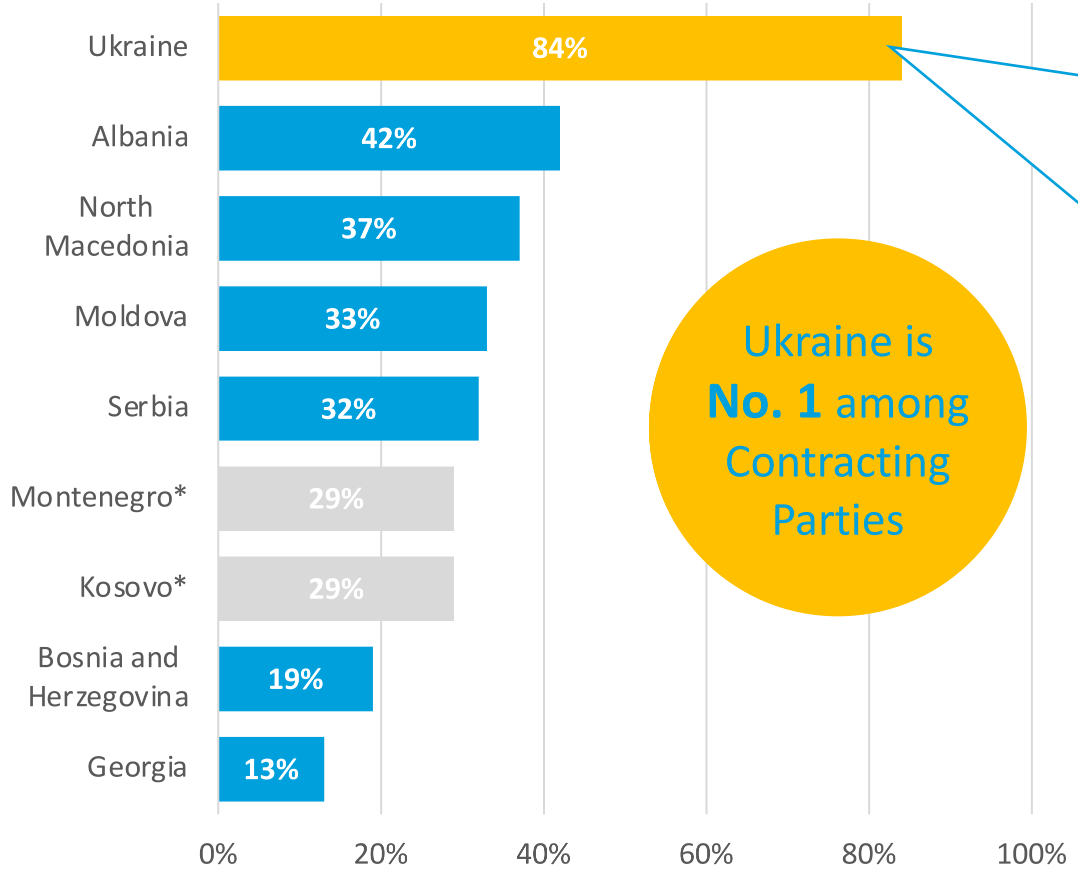
The spare capacity in the **GTSOU's** massive transit network with multiple redundancies is what **guarantees security of gas supply** in Europe, but must not be taken for granted

GTSOU capacity vs EU & Turkey demand for Russian gas, bcma



Energy Community recognized Ukraine's progress in implementing the EU gas market regulations

Implementation of the acquis by ECS Contracting Parties: Implementation Ratio Gas (%)



*Due to the lack of a gas market, implementation of the gas acquis is not taken into account by Energy Community in the overall implementation scores of these countries

Over the past few years, Ukraine made **significant progress** in the implementation of EU gas market legislation. Energy Community recognized the **highest level of implementation** in the gas sector among Contracting Parties and agreed that it is **almost completed**

Gas implementation in Ukraine – detailed (%)

	Gas indicators	Transposition Assessment	Implementation Status
TSO related	**Unbundling**	✓	90%
TSO related	**Access to the system**	✓	97%
	Wholesale market	~	40%
	Retail market	✓	81%
TSO related	**Interconnectivity**	✓	98%

Implementation level, %

Source: Energy Community Annual Implementation Report 2020

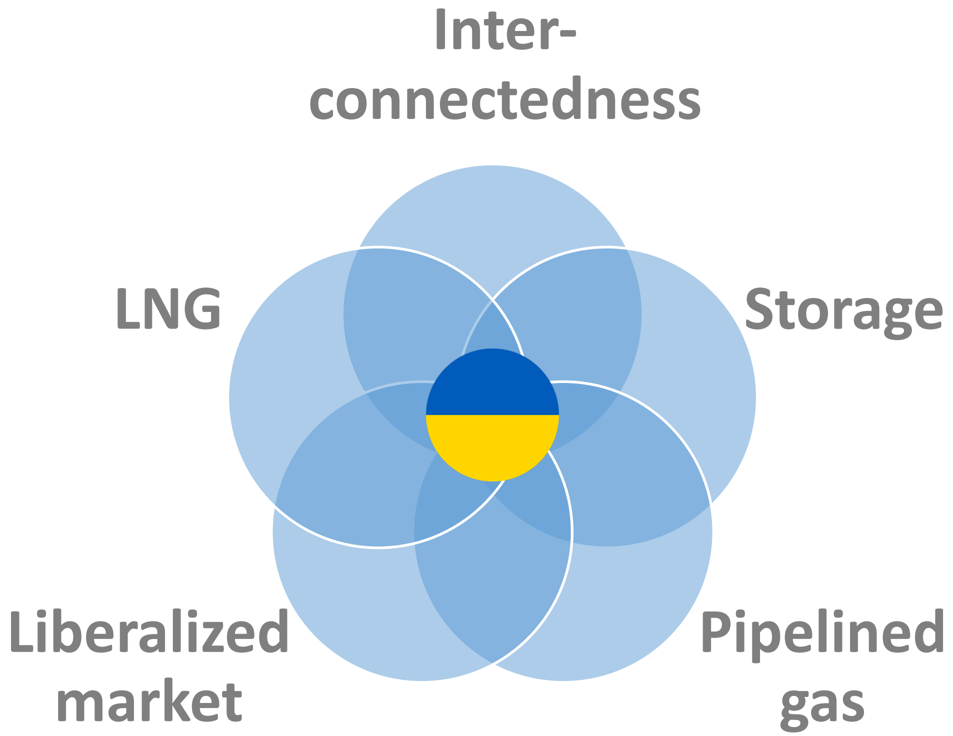
Gas Hubs Benchmarking

European Federation of Energy traders (EFET) **increased UA position** in its research Gas Hubs Benchmarking Study, also due to results **achieved by the Gas TSO of Ukraine**

(number of points)

Gas hub country	2018	2019	2020
Czechia	14	14,5	16
Hungary	11,5	12,5	13,5
Slovakia	9,5	10	10,5
Greece	8,5	10	10,5
Turkey	6	9,5	10,5
Poland	9,5	9,5	10
Ireland	-	-	9,5
Ukraine	**3,5**	**7**	**9**
Finland	-	-	9
Estonia	-	-	8,5
Lithuania	-	-	8,5
Croatia	-	7,5	8
Latvia	-	-	8
Bulgaria	4,5	5	7,5
Slovenia	-	6	6,5
Romania	3	4,5	6,5
Portugal	4,5	5,5	5,5

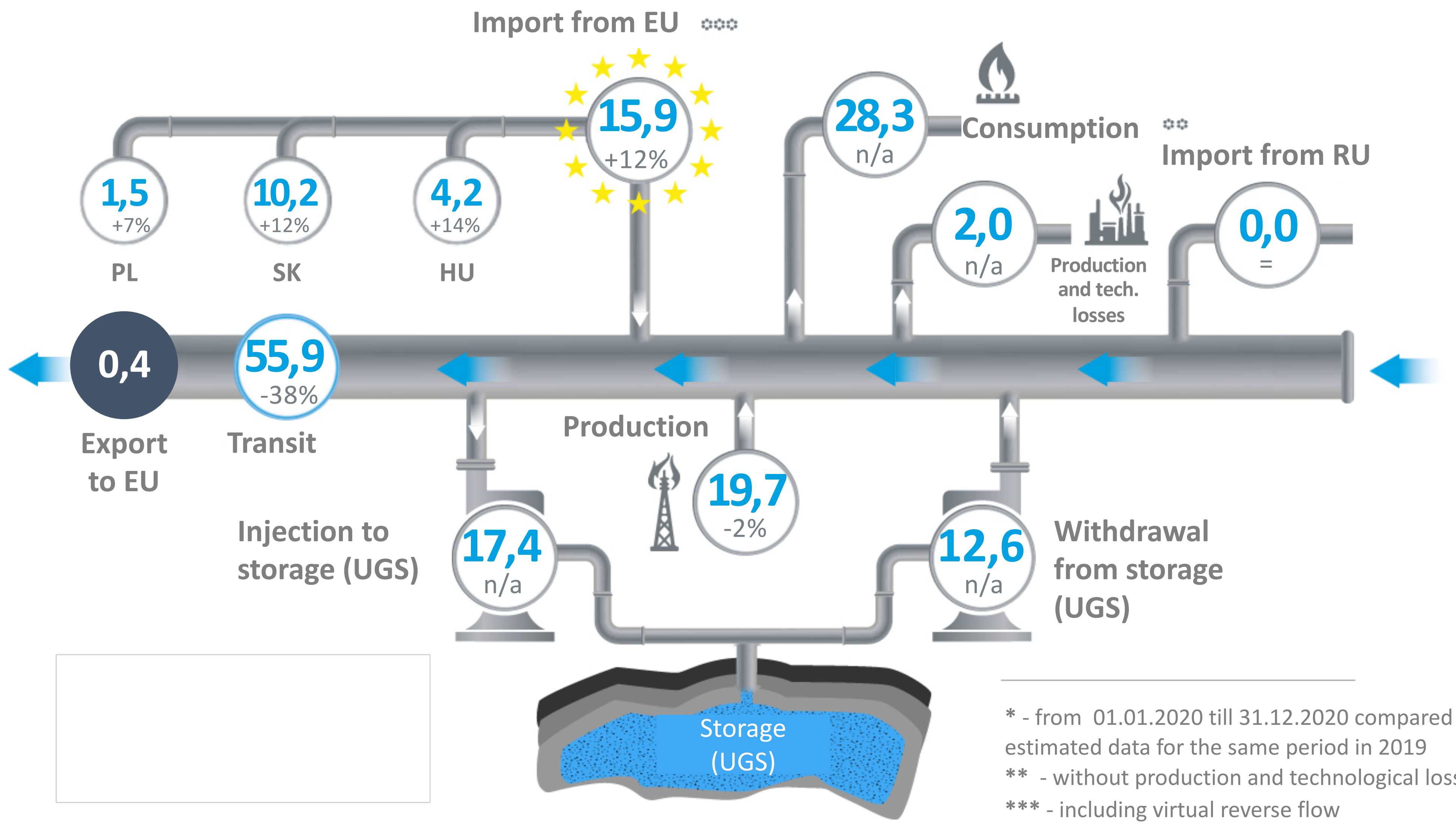
Source: EFET Gas Hubs Benchmarking Study



Ukraine is uniquely positioned to integrate new/planned LNG terminals in Poland, Greece, Croatia, etc. with pipeline gas and massive storage to become a significant hub in Eastern/Central Europe

Gas transmission volumes for 2020*

January – December 2020, bcm



Key results

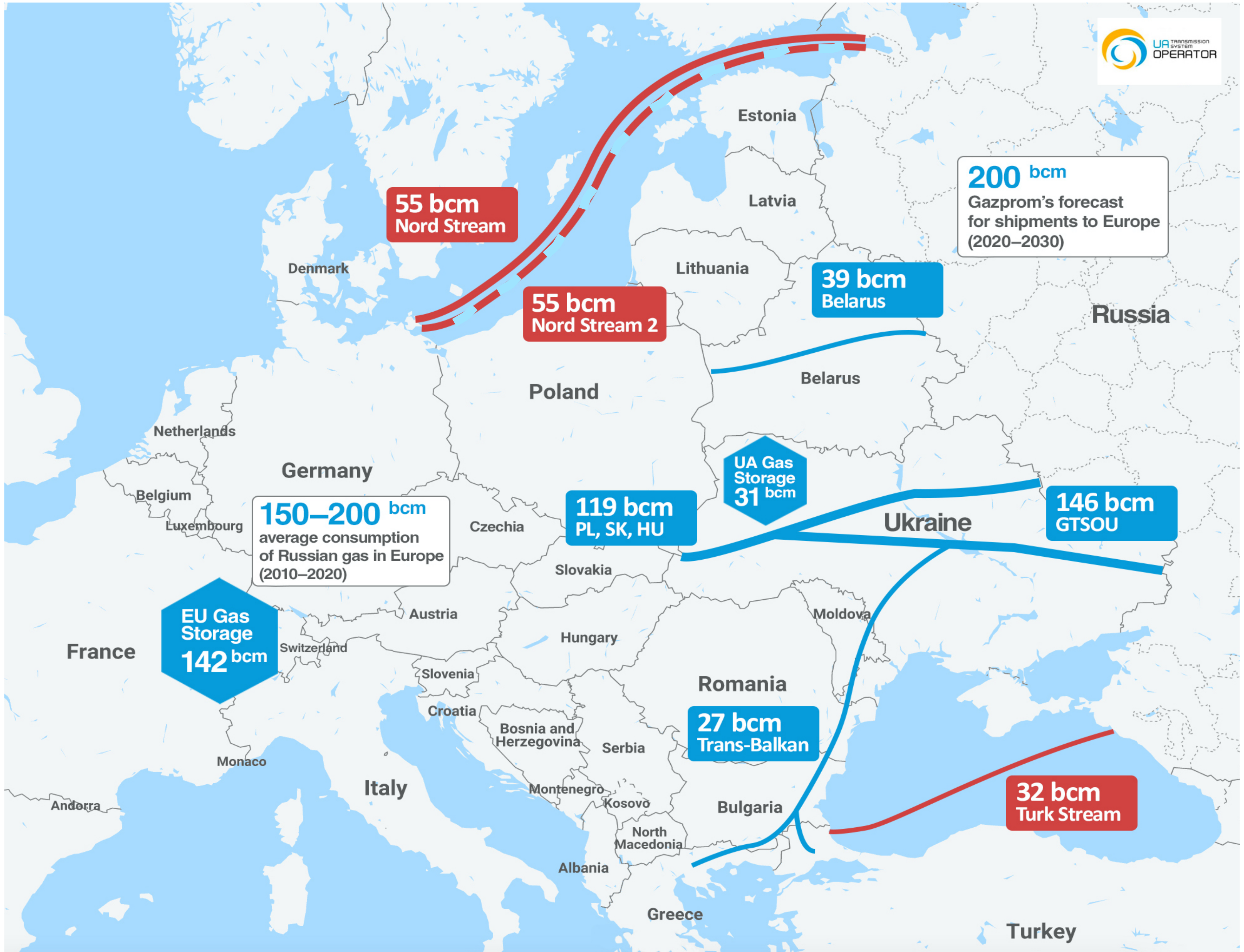
Transit:	**-38%**
Import:	**+12%**
Import (w/o shorthaul):	**-31%**
Export to EU:	**0,4 bcm**

* - from 01.01.2020 till 31.12.2020 compared to the estimated data for the same period in 2019

** - without production and technological losses

*** - including virtual reverse flow

3 concrete steps to strengthen
supply competition in Europe's gas markets



Open up transit opportunities to **new players** other than Gazprom

Bring **Central Asian** gas back to Europe

Give international traders an option to purchase gas at **either the Western or Eastern border** of Ukraine.

Thank you for your attention!