Association
of Gas Producers
of Ukraine

FAITH, HARD WORK AND LIBERALIZATION. UKRAINE’S PERCEPTION AS A BIG EUROPEAN MARKET PLAYER

October 2022

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WE KEEP FIGHTING BACK, AS THE WAR KEEPS KNOCKING ON OUR HOUSES. UNLIKE RUSSIA – WE DO IT GOOD

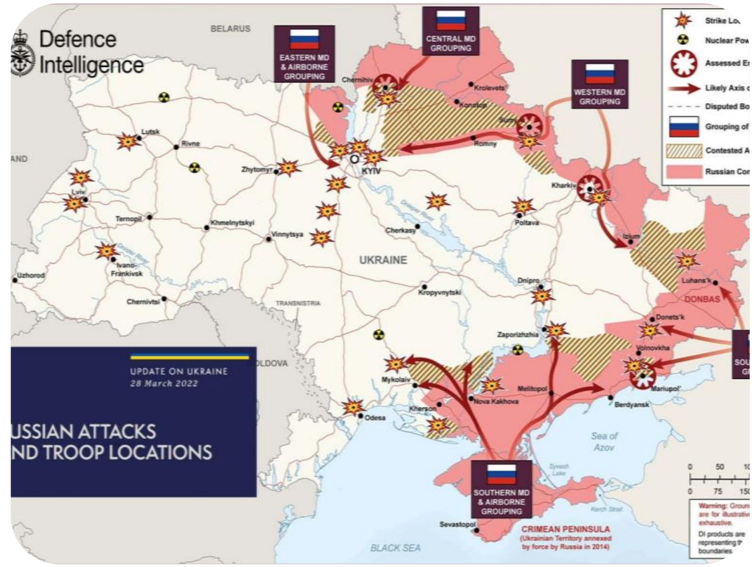
- Even though at the beginning of the war **russia attacked us from all available directions** at once, we survived and have never stopped to work

- No doubt, it naturally affected hydrocarbons production, as **continuous airstrikes forced producers to maintain activity** at facilities where it remains **physically possible**

- But the situation changed, **Ukraine successfully counter-attacks** and liberates previously occupied territories

- As **russia actively retreating**, it leaves behind a great amount of weapon inventory, which made it the leading supplier of military goods to Ukraine

- Advancing makes it possible to **enhance production**, as part of the fossil fuel fields are now **back to home**



March (Peak)

September

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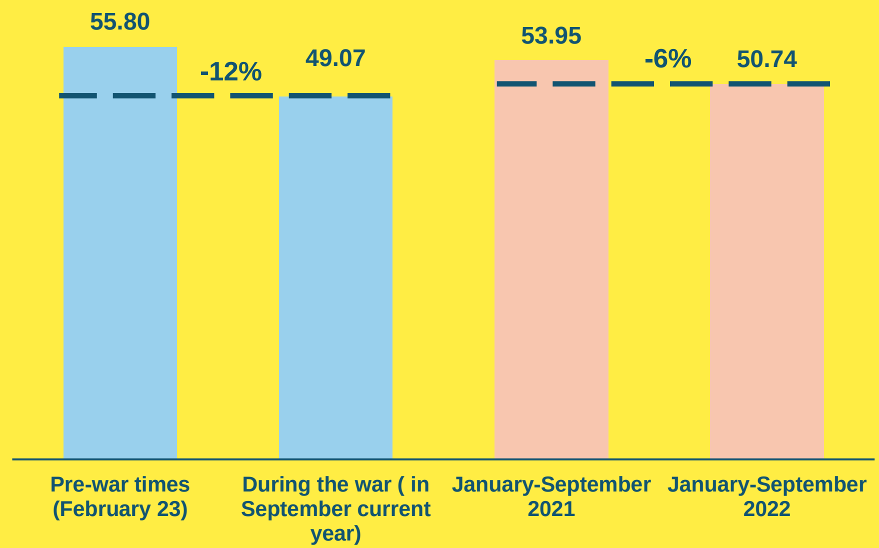
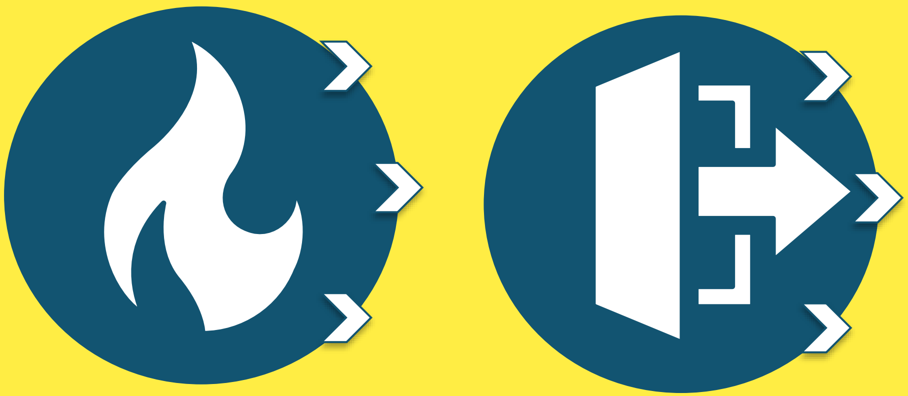
THE IMPACT OF THE WAR ON THE PRODUCTION INDUSTRY IS HEAVY, BUT WE CAN LIVE WITH IT AND OVERCOME

- Natural gas production **decreased, but not as drastically** as would be expected during the war
- Instead, **the main cut** is on the side of the industry – **the main consumer** of the resource of the private gas producers (approximately -50%)
- Having banned export, volatility on European market and the war, altogether it **led to the slight production downturn**

Ukraine's daily natural gas production comparison, daily avg. million cm





- But as we used to think, here in Ukraine, **the crisis pops out in tandem with the opportunities**
- We understand, that war will end one day, and **Ukraine will rise like Phoenix**, and so will the economy and natural gas industry
- We foresee ourselves **a big market player, a great supplier of the resource to Europe and the energy independent country**

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UKRAINE HAS CHANGED ITS TAXATION BASE, ELIMINATING RISKS FROM THE TURBULENT EUROPEAN MARKET, NOW ORIENTING ON THE DOMESTIC SECTOR

- Previously determined goal requires favourable conditions. As it is, it became clear, that using TTF benchmark is now more harmful than stable. Ukraine has implemented a new taxation base, which now forms out of internal natural gas prices.

- Thus, the valid Law No. 7732 envisages:

Protection for consumers

Taxation base:

NAFTOGAZ	EXCHANGE	PRICE AGENCIES
The weighted average price of natural gas according to **contracts of sale with Naftogaz**	The weighted average price of natural gas based on the results of trading on **electronic commodity exchanges**	Arithmetic average price between UA VTP indices in **Argus European Natural Gas** and **ICIS European Spot Gas Market** reports

THE HIGHEST AMONG THE THREE

Development of gas market

For natural gas produced since August 1, 2022

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ALSO, WE CONSIDER IT TRULY ATTAINABLE TO BECOME A NEW LARGE SUPPLIER OF THE RESOURCE TO OUR PARTNERS IN THE FUTURE

Biomethane

In next 10 years the total capacity of biomethane is 8 bcm of natural gas equivalent. At the end of this year, Ukraine plans to launch the first biomethane plant and export biomethane to Europe

Hydrogen

The EU hydrogen strategy foresees that by 2030 Ukraine will have 10 GW of capacity for the production of so-called "Green hydrogen". 100 GW of hydrogen production total potential in Ukraine in the hydrogen economy

Natural gas projects

Implementation of new investment gas projects will allow to produce 40 bcm of natural gas in the next 10 years

Carbon capture storages

Ukraine has suitable geological conditions for the creation of CCS with many depleted oil and gas fields

Gas Transmission System

The Ukrainian gas transportation system can transport biomethane, and in the future, gas with a portion of hydrogen with the possibility of transporting to Europe more than 100 bcm of natural gas

Underground gas storage facilities

We can offer underground gas storage facilities with a total capacity of 31 bcm

In a result, Ukraine will be able to export the energy resources equivalent to about 30 bcm of natural gas already in 10 years perspective

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EVEN IN TIMES OF WAR, UKRAINE STILL UNDERTAKES TRANSPARENT E-AUCTIONS FOR PRODUCTION LICENSES

2021	2022
25 blocks have been sold for the last 3 years	**New 9 blocks** offered for the investors in the following e-auctions (another 32 blocks will put up e-auctions gradually)
4 062 sq. km the total area of previously sold 25 blocks	**385 sq. km** the total area of 9 blocks for e-auctions
x3.2 A coefficient of growth of the initial price on blocks (from \$18.2 mln to \$59.6 mln)	**\$9.3 mln** initial price on 9 blocks for transparent bidding on the electronic platform

All oil and gas blocks offered for auctions are located in non-occupied regions of Ukraine

AT THE SAME TIME, WE CARRY ON DEVELOPING FIELDS, PLANNING ON NEW PROJECTS TO REACH ENERGY INDEPENDENCE, HAVING ALL CHANCES TO FINALLY ACHIEVE IT

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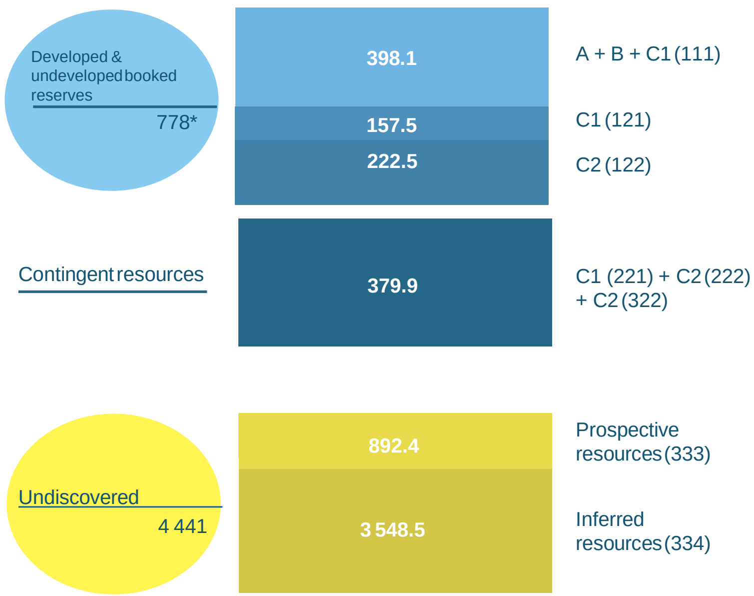
WHY UKRAINE IS A LONG-TERM PARTNER?



BECAUSE WE:

Are the European leader in the reserves-to-production ratio, second after Norway in proven natural gas reserves and fourth in terms of gas production

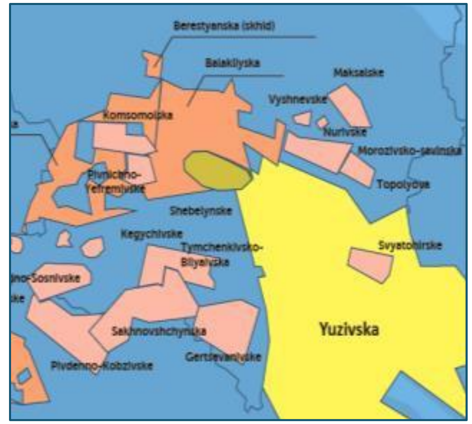
Operate more than 770 bcm of discovered proven reserves of natural gas and more than 4.4 trln of undiscovered ones

Have one of the largest GTS in Europe with an entry capacity of 281 bcm and exit capacity of 146 bcm, as well as the largest European complex of 12 UGSs with a total capacity of 31 bcm, which is more than a quarter of the total European volume and ranks 3rd after the USA and Russia in the world

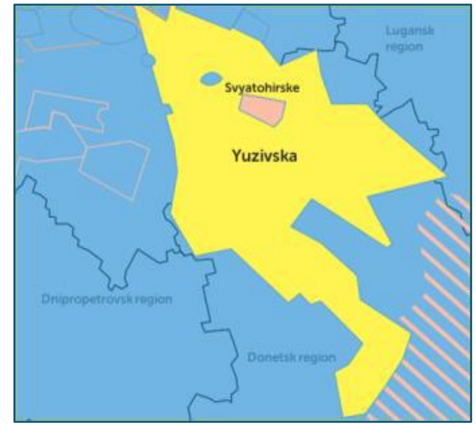
Demonstrate successful experience of reformation of the sector for the last 6 years, introducing transparent e-auctions, concluded and signed PSA tenders, PECs, overall liberalization of the market and incentives for business

Possess about 540 licences with an area of more than 94 thousand sq. km and 20 bcm of domestic gas production

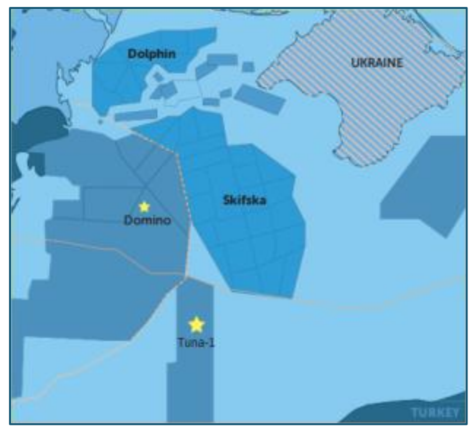
TIGHT GAS PROJECT



YUZIVSKA PROJECT



DOLPHIN PROJECT (BLACK SEA OFFSHORE)



PSA TENDERS

AND MORE: (PECs (brownfields), Carpathian projects, conventional greenfields, deep horizons, Oleska PSA, e-auctions etc.)!

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IT IS ENCOURAGED BY STRATEGIC PARTNERSHIP OPPORTUNITIES AMONG THE LARGE-SCALE PROJECTS IN E&P OF UKRAINE

Forecasted results

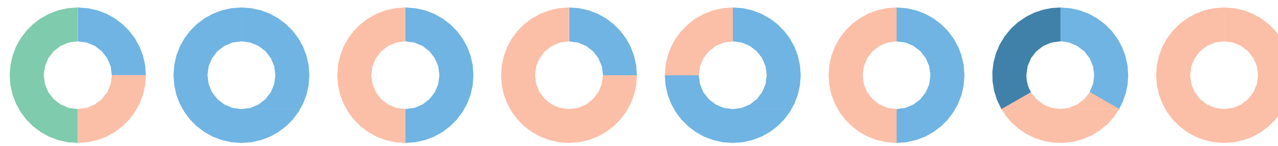
Overall project investment

$27 716 million

101 bcm

Production in case applying such investment

Opportunity	Brownfields	Conventional Greenfields	Tight gas	Deep Horizons	PSAs	Yuzivska	Dolphin (Black Sea)	Carpathians
Size of a Prize, EUR* bcm	80 2P reserves already	36	43	37	50	190	200	40
What Naftogaz seeks from partnership?	Production intensification from depleted fields		Track-record of commercialization of unconventional gas projects	Underbalanced, high temp, high pressure drilling technologies	Track-record of commercialization of unconventional gas projects	Track-record of commercialization of unconventional gas projects	Experience in deep water drilling and project commercialization	Know-how in development similar rocks
Entry ticket**, $ mln								TBD
Stage of farm-down	At production decline phase	At wild-cat greenfield stage	After gas discovery is made	3D After shooting 3D seismic	At wild-cat greenfield stage	After gas discovery is made	3D After shooting 3D seismic	At wild-cat greenfield stage
Possible way to farm-in***	PEC	PSA	PSA	RSC	PSA	PSA	PSA	PSA / JV



Capital Technologies & know-how Ops efficiency improvement Political support

Notes: * EUR – expected ultimate recovery; ** - Minimum size of a project in each bucket; Naftogaz will only consider partnerships with overall minimum investment commitment of $100+ mln; package deal with projects from different buckets is possible; *** - Production Enhancement Contract (PEC), Risk Service Contract (RSC), Production Sharing Agreement (PSA); Joint Venture (JV).

Source: Naftogaz Group.

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Thank you for your attention!