

# UGV

THE LARGEST  
GAS PRODUCTION COMPANY  
IN CENTRAL  
AND EASTERN EUROPE

Opportunities for cooperation

# UGV is the largest oil & gas company in Ukraine and biggest tax payer in the country



## Vertically integrated company

- Part of Naftogaz Group
- Full operational cycle from exploration to distribution



## Production of 15.5 bcm - 74% of total Ukrainian gas production

- ~500 thsd t of oil and condensate (20% of the market)



## 265.4 bcm of 2P reserves<sup>1</sup>

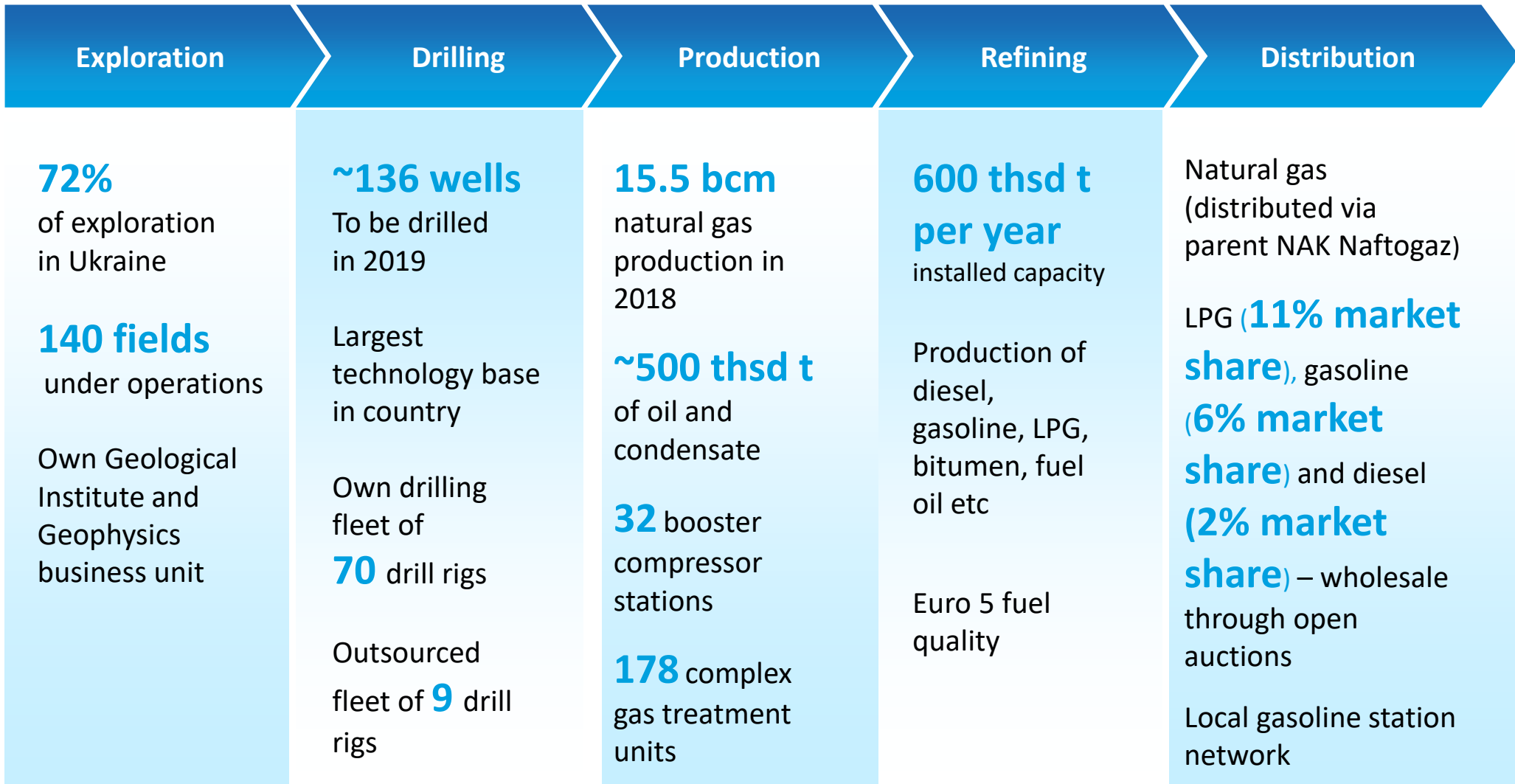
140 production fields



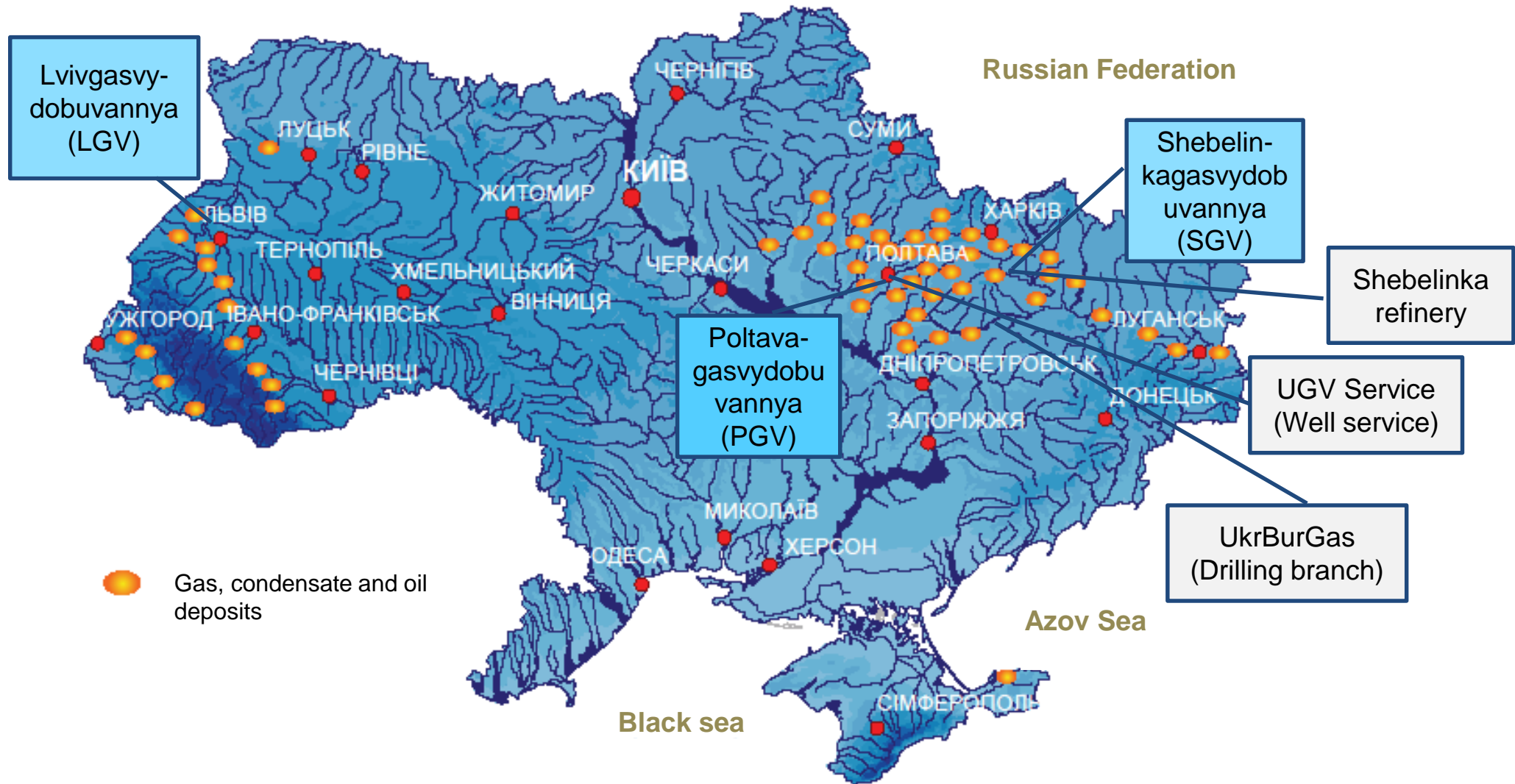
## ~№1 Taxpayer in Ukraine

- 41bn UAH in taxes in 2018

# UGV has strong presence across all segments of the value chain

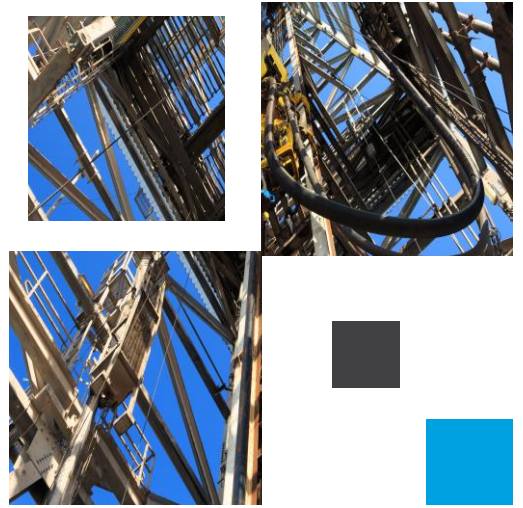


# UGV has operations across all Ukraine's oil & gas regions with significant reserves


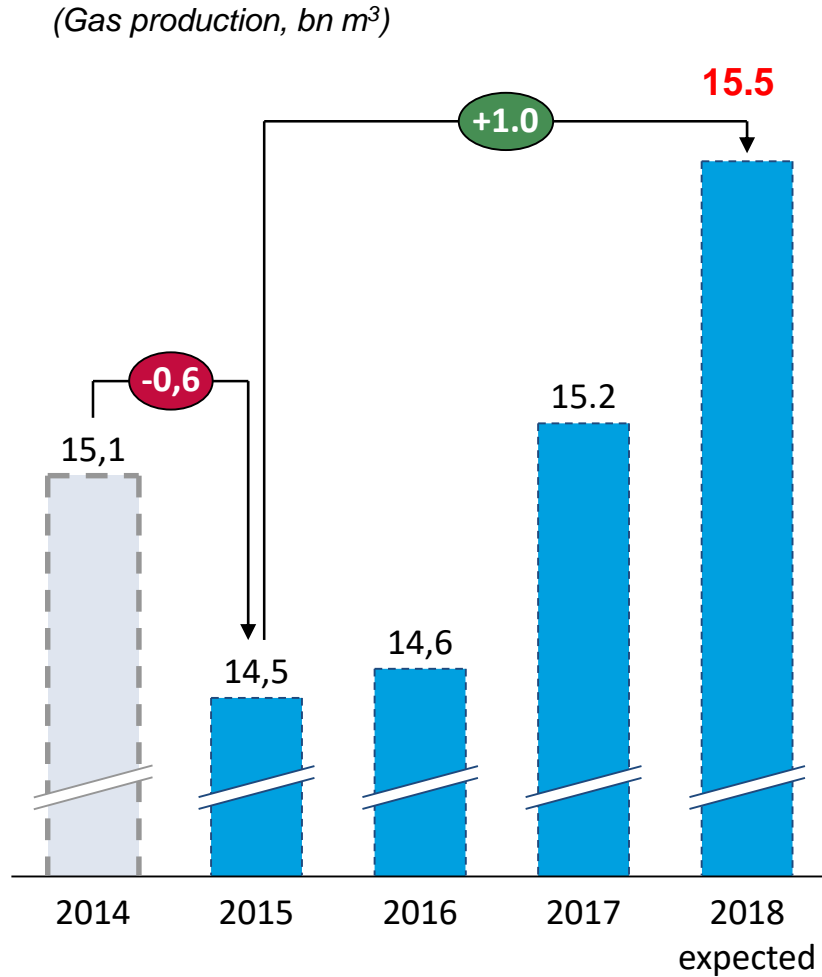


# Over the last 3 years UGV has ensured increase in gas production and reached the new level of efficiency

- **25-year record** of production – 15.5 bln m<sup>3</sup> in 2018
- **9-year record** of daily production – 43.9 mln m<sup>3</sup> in 2018
- **970 mln m<sup>3</sup> (+6.7%)** of annual increase since 2015
- Decrease of base production compensated since 2015 – **5.35 bln m<sup>3</sup>**
- Resource base increased by **38.6 bln m<sup>3</sup>** since 2015
- Volume of 3D seismic surveys increased by **3.6 times** since 2015
- **+20 new** drilling rigs in 2018-2019.
- **15 rigs** of international drilling companies have been contracted
- **Multiservice agreements** with all leading oilfield service companies in the world



# Over the last 3 years UGV laid a solid foundation for future increase in gas production



**Decrease of production has been stopped and increase achieved**  
**≈ +970 mln m<sup>3</sup> (+6.7%)**  
of annual increase from the beginning of UGV transformation

The volume of gas supplied for the needs of population was increased by **1 bln m<sup>3</sup>** per year (in 2018 as compared to 2015)

■ 25-year record  
of gas production  
in Ukraine

**15.5** bn m<sup>3</sup>

**+970** mln m<sup>3</sup>

**(2015 to 2018)**



# Cumulative production increase

including the natural decline

# 5.35

bn m<sup>3</sup>

**(2015 to 2018)**

(Compensation of natural decline – 4,38 bn m<sup>3</sup>,  
net increase - 970 mln m<sup>3</sup>)



**Maximum daily  
production reached  
IN 9 YEARS**

**43.9** mln m<sup>3</sup>

**(2015 to 2018)**





**From 0 to 300 HF** in 2.5 years!  
**2.7 bn m<sup>3</sup>** of extra production



**From 4 to 1400+**  
**Coiled Tubing operations**  
**650 mln m<sup>3</sup>**  
**additional gas production**  
**in 2016-2018**



**500+** performed  
workover operations  
**750 mln m<sup>3</sup>**  
additional gas  
production in 2016-2018





**Commercial drilling speed  
increased**

**by 123%**

**(2015 to 2018)**





**Drilling meterage increased**

**by 81%**

**(2015 to 2018)**



# Drilling fleet modernization: 20 new rigs by July 2019

OLD UGV DRILLING FLEET



BEFORE



NEW UGV DRILLING FLEET



AFTER

# 15 rigs

of international drilling companies  
contracted  
for outsourcing of drilling services

8 outsourced drilling rigs commissioned, additional  
7 rigs are being installed



# RESOURCE BASE INCREASED

BY

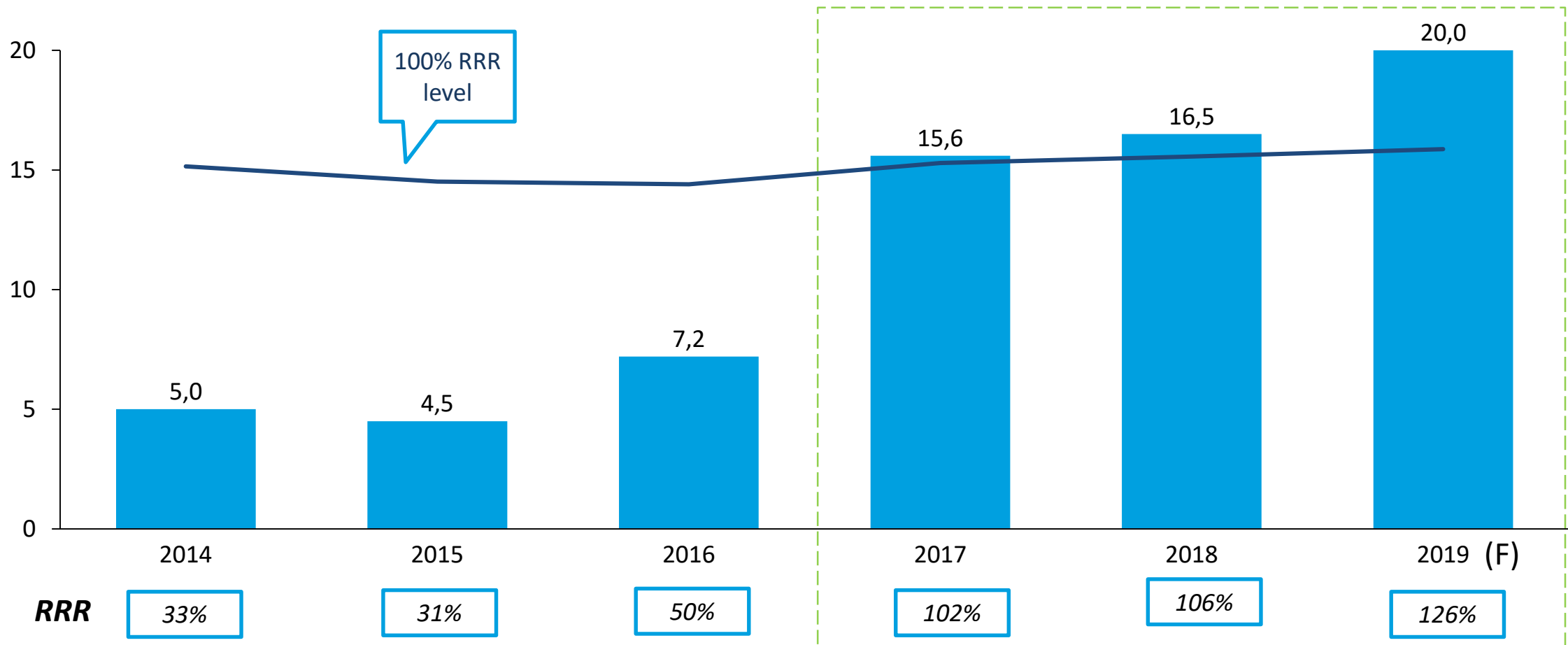
**38.6** bln m<sup>3</sup>

**(2015 to 2018)**



# Since 2017 UGV has kept its RRR up to industry benchmark of “100% or above”

*Proved reserves added, MMcm p.a.*



## 8 new fields discovered in 2016-2018:

- ✓ *Pryshtokove*
- ✓ *Klenove*
- ✓ *Riabukhinske*
- ✓ *Ternivske*
- ✓ *Nurivske*
- ✓ *Buhaivske*
- ✓ *Gersevanivske*
- ✓ *Olyvyinivske*



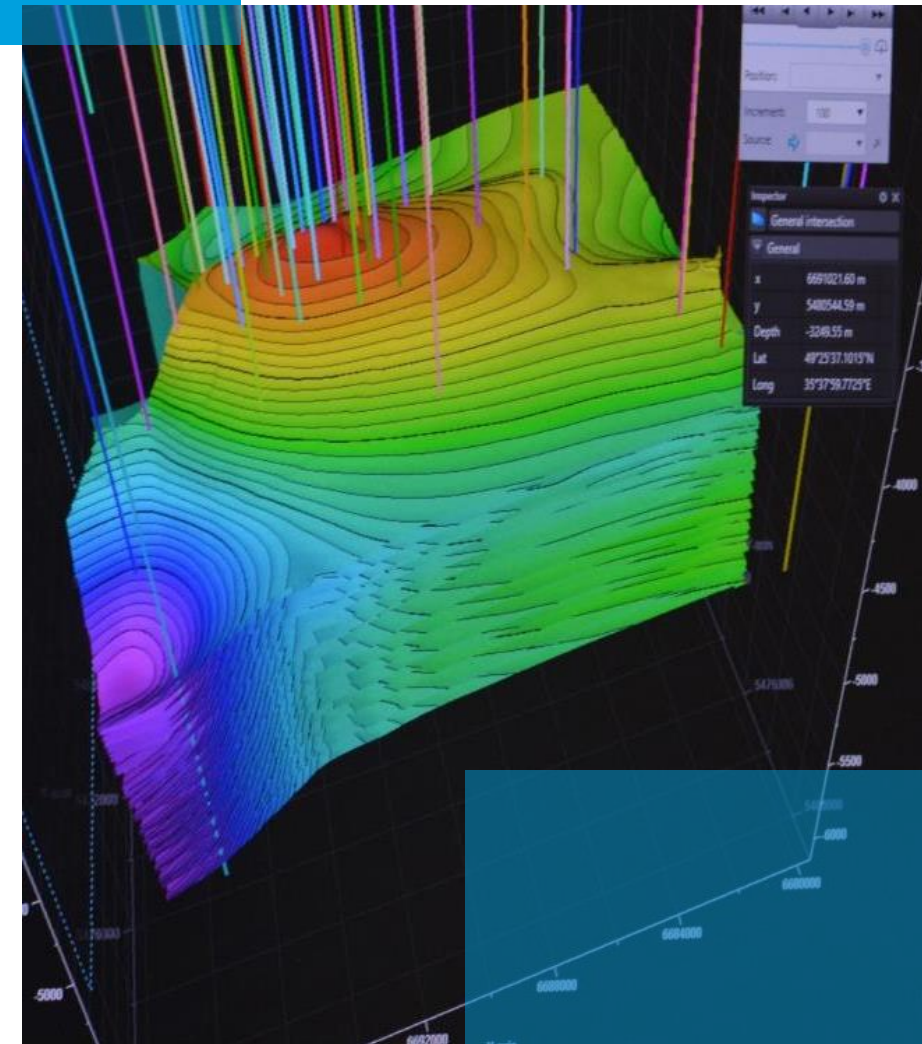
# Laying the foundation for expansion of future resource base

Volume of 3D seismic surveys grew to

**2 894 km<sup>2</sup>** in 3 years

**3,6 times** INCREASE

**(2015 to 2018)**





# Multiservice agreements (MSA)

with four largest  
oilfield service  
companies (Big 4  
OFSC) concluded



**Schlumberger**



**HALLIBURTON**



**Weatherford®**





# Hydrocarbon Processing

New fuel brand

**Shebel**

launched in 2018

**Shebel** fuel

corresponds to

**Euro 5** standard.



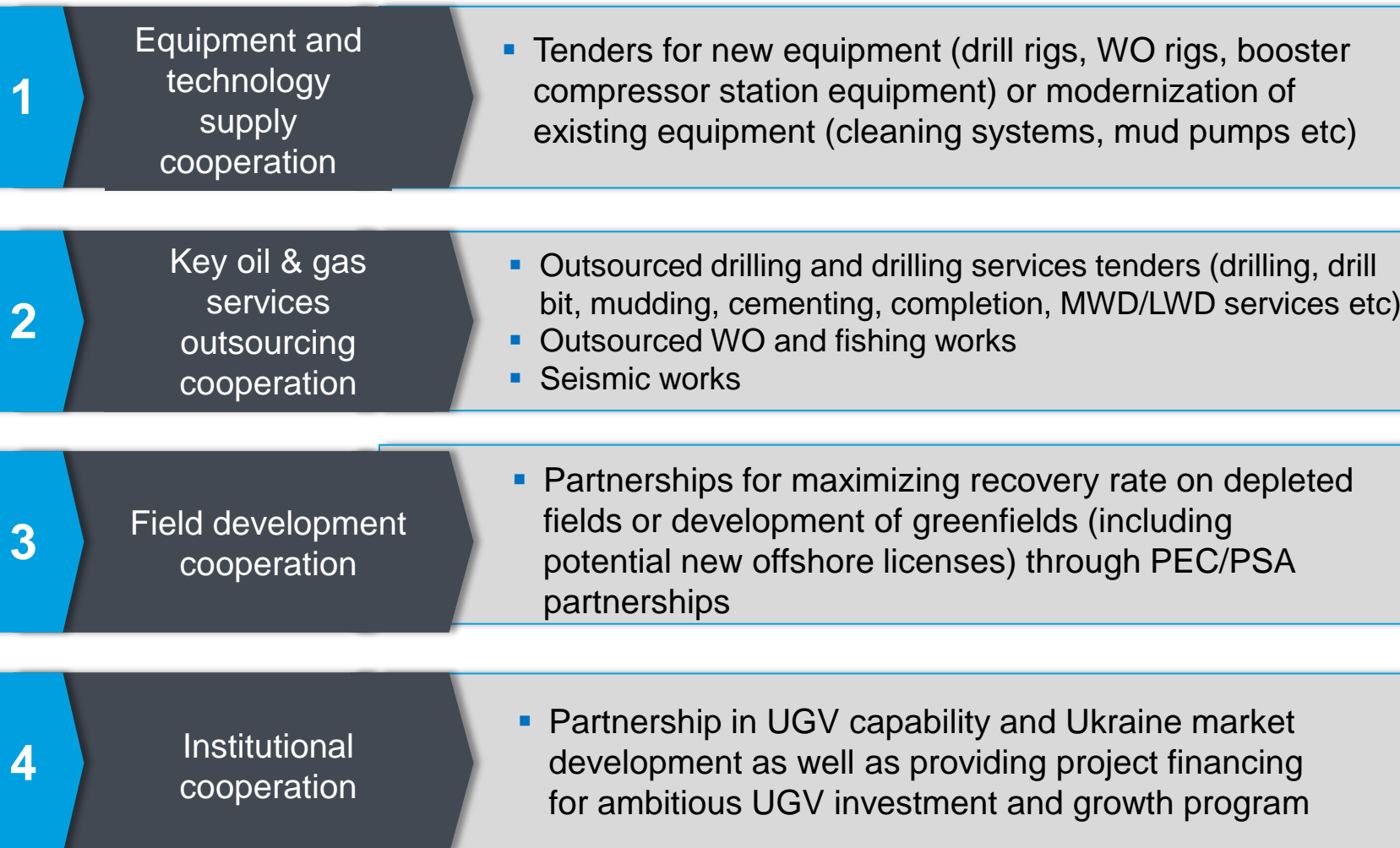


Procurement savings volume of UGV's funds at  
electronic procurement system **Prozorro**

- **14** bln UAH



# Cooperation opportunities with UGV currently include four key dimensions



# UGV's key tenders for services and equipment in 2019

## Drill rig outsourcing

- UGV has already procured 20 new drill rigs in 2017, which will arrive in 2019 (8 already in Ukraine), and has contracted 13 outsource rigs until 2020
- UGV will issue tenders for performance drilling contract for 4 wells and a bundle of drilling services

## Drilling services

- To support outsourced drilling UGV is planning to conduct tenders for key drilling services:  
Drill bits service (30 wells), Coring services (15 wells), Cementing service (25 wells), Drilling mud service (59 wells), Directional drilling service (20 wells), Drilling jar rent service (80 wells), Mud motor rent service (70 wells), Completion service (35 wells)

## WO rig and CT/ services outsourcing

- Tenders for 7 lots for workover rigs and 8 lots for Coil Tubing rigs to be announced in addition to 4 lots for Coil Tubing rolling contracts.
- WO service tenders will be conducted to cover needs for fishing operations and well completion.

## Hydro fracking

- Tenders with 2 lots for 100 HF operations in total will be conducted to cover existing wells, drilled wells and wells after sidetracking

## Seismic works

- 2D seismic (1100 linear meters) and 3D seismic (4000 km<sup>2</sup>) work tenders to be issued throughout the year

UGV has brought new companies to the market

**BAKER  
HUGHES**  
a GE company



**Solar Turbines**  
*A Caterpillar Company*

**benTEC**



**宏华集团**  
HONGHUA GROUP



**Schlumberger**

**Weatherford®**

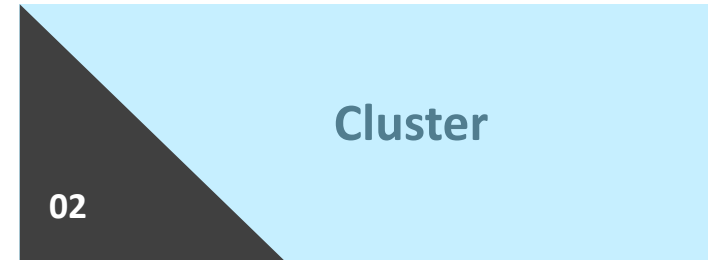
**tacrom**  
drilling s.r.l.

**HALLIBURTON**



INTEGRATED DRILLING & WELL SERVICES CO., Ltd.  
A MEMBER OF THE INA GROUP

# Overview of assets to be operated under PEC services contracts




- Number of fields: 10
- 6 Gas treatment units
- Total 148 wells (121 producing)

- Number of fields: 3
- 2 Gas treatment units
- Total 84 wells (63 producing)

Cluster	GAS Production, 2017 mcm	GAS Reserves 2017, mcm	Average depletion 2017, %	Well depletion range 2017, %	GAS Production Plan, 2018 mcm
01	181,4	7 350,0	51%	18-85%	186,3
02	100,0	7 495,0	59%	16-82%	117,3



# PEC CONTRACT PROPOSAL

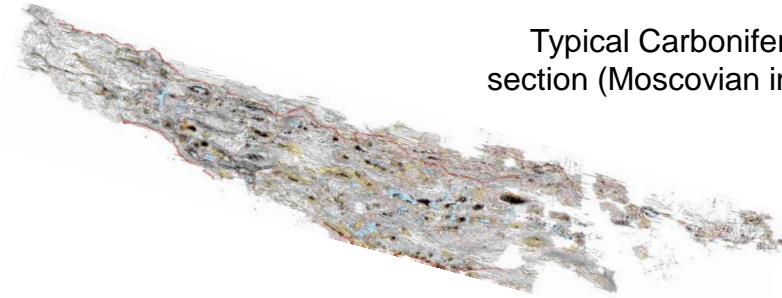
- Gas fields-candidates form two homogenous clusters are grouped in a way, that the effects from interventions are identifiable and measurable in terms of net pay for each of the clusters.
  - Expected interventions may include (but are not limited to) hydro fracking, drilling, sidetracking, fishing, coil tubing, improving ground infrastructure, etc.
  - UGV retains full ownership of licenses and operated assets.
- 



# Case study: Tight gas development

- The resources of unconventional gas in Ukraine are estimated in excess of **3.6 trillion m<sup>3</sup>**, and reserves of UGV's tight gas reservoirs – **over 150 billion m<sup>3</sup>**
- For the first time in the history of Ukraine, in 2018 UGV received **commercially meaningful volumes of gas** from tight gas deposits (~40 tcm / day from 1 well)
- Currently, pilot projects are in progress at Sviatogirske and East Poltava fields, a **3D seismic interpretation is conducted on the Sviatogirske field** (by Schlumberger)
- In case of success of pilot project, UGV will prove that existing **tight gas resources** of the company and Ukraine are **extractable**
- On the territory of Ukraine, none of the companies (including world leaders - Chevron and Shell) managed to get closer to the preliminary **results of UGV's pilot projects of tight gas development**
- This was made possible through involvement of **world-class tight gas development specialists and advanced technologies** by UGV

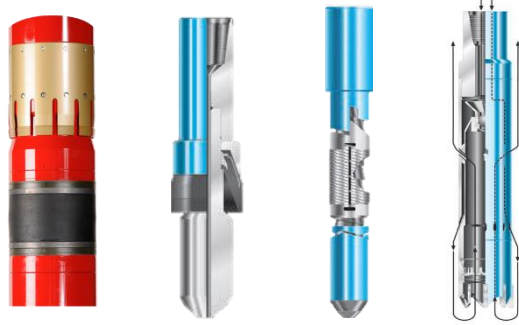
## Dipro-Donetsk basin (DDB)



Typical Carboniferous section (Moscovian interval)

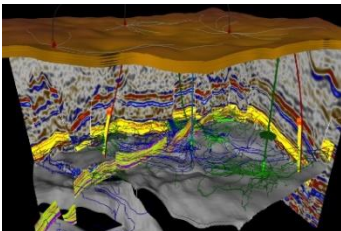
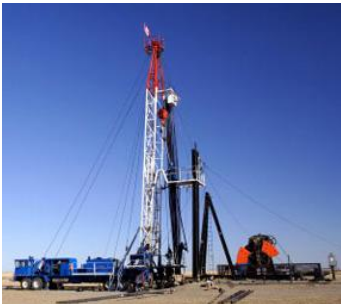
Parameter	Pinedale (USA)	Moscovian (Ukraine)
Pressure gradient, bar / 10 m	1.61 - 1.7	1.6 – 1.8
Net pay, m	>60 m	>60 m
Porosity (Phi), %	7 – 9%	4 – 7%
Permeability (K <sub>B</sub> ) range, mD	0.01 – 0.1	0.1 – 0.001
Brittleness, %	>60%	>60%
Resources, bcm	> 100 bcm	> 1 000 bcm
Depth range, km	2 – 5 km	4 – 6 km
Life cycle	Production	Appraisal

# Case study: cooperation with Weatherford



- Weatherford was the first company of the Big 4 with which UGV began cooperation – **\$20 mln Bundle Service contract** for Fishing tools & services was signed in 2017
- For now, 60% of the contract has already been fulfilled – thanks to Weatherford's services and equipment, UGV received **over 120 mln m3 of gas in 2018**
- In addition, in 2017-2018 Weatherford provided UGV the **engineering services** on well candidates selection and designing Work Over, Fishing and Artificial-lift programs
- In May 2018 the **Multi-Service Agreement (MSA)** was concluded, and since then Additional Agreements for 8 service lines have been signed
- The first purchases of goods and services through MSA have already been carried out in the following areas: **Well Completion and Liner Hanger systems, Artificial-lift systems (plunger-lift)**
- Currently working on preparation for cooperation in other areas

# Case study: cooperation with Schlumberger



- Schlumberger actively expanded its activity with UGV 2018 by reaching the strategic level of cooperation with UGV as evidenced by respective **Memorandum in October 2018**
- In March 2018, the **Multi-Service Agreement (MSA)** was concluded - since then Additional Agreements have been signed for 14 different service lines.
- Already contracted high-tech services in excess of **15 million USD** for works on complex wells in the following areas:
  - Cementing
  - Drill bit service per meter
  - Drilling mud service
  - Directional Drilling using Rotary Steerable System (RSS)
  - Tight gas fields 3D seismic interpretation
  - Wireline logging (open hole)
  - 3D modeling
- **\$92 mln 3-year Coiled Tubing services contract** was signed in October 2018 – includes 4 CT units, real-time engineering technology and access to advanced downhole equipment, which also allows to carry out the following operations:
  - Wellbore cleanout, salt and clay deposits removal
  - Water Shut-off with chemicals injection
  - Fracturing with coiled tubing
  - Acid- and other chemicals treatment
  - Hydraulic sandblast perforation

# UGV contacts for further information



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**Technological and service  
partnerships**



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**Production Enhancement  
Contract (PEC) Partnership**



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**UGV Procurement policy  
Procurement issues**

A photograph of a large industrial facility, likely a refinery or gas processing plant, at night. The scene is illuminated by bright lights, creating a blue and white color palette. The structure is complex, with many pipes, towers, and scaffolding.

**Thank you!**



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