



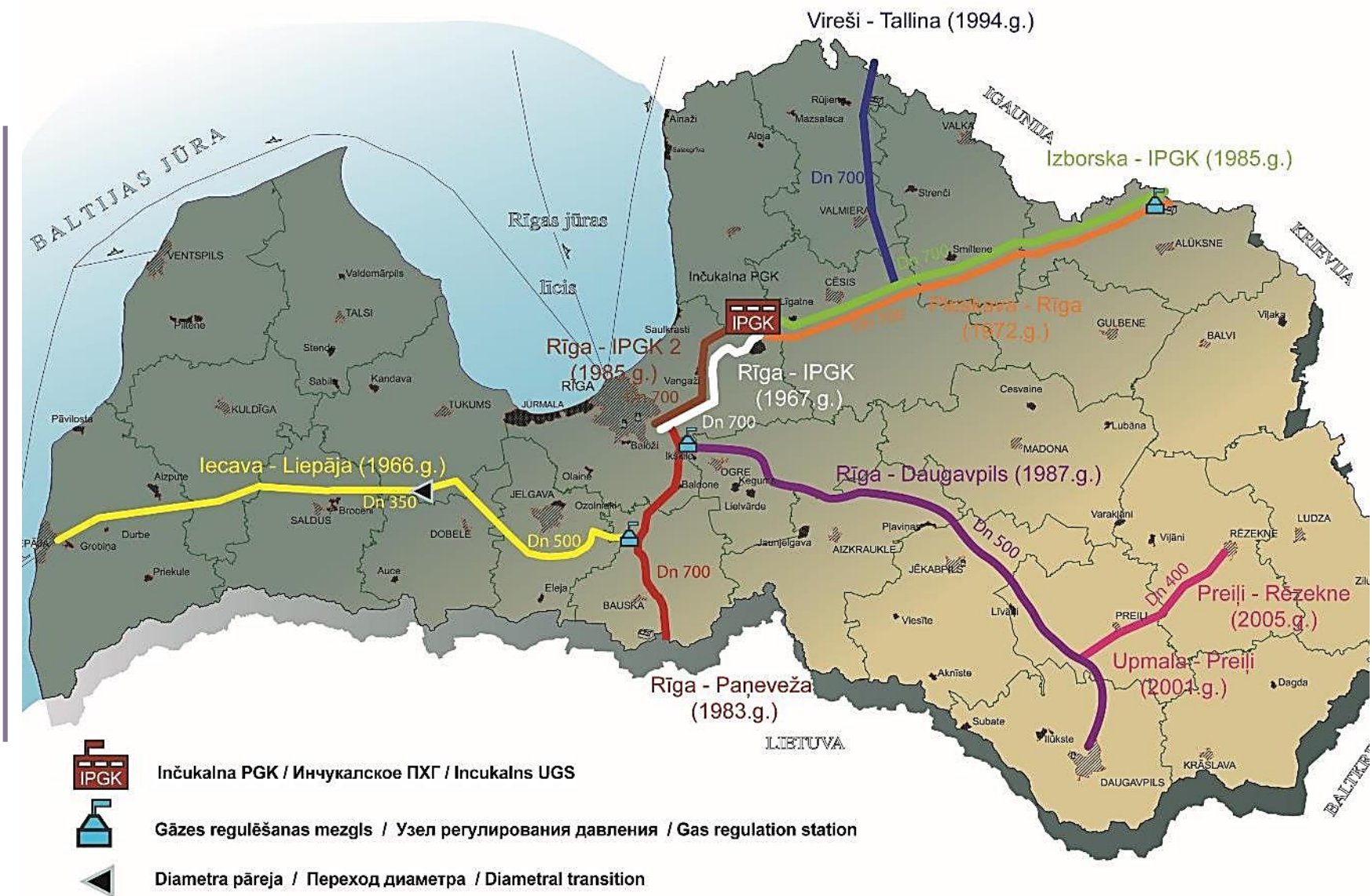
JSC «Conexus Baltic Grid»

INVESTMENT PROJECTS

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Investments department

GAS PIPELINES

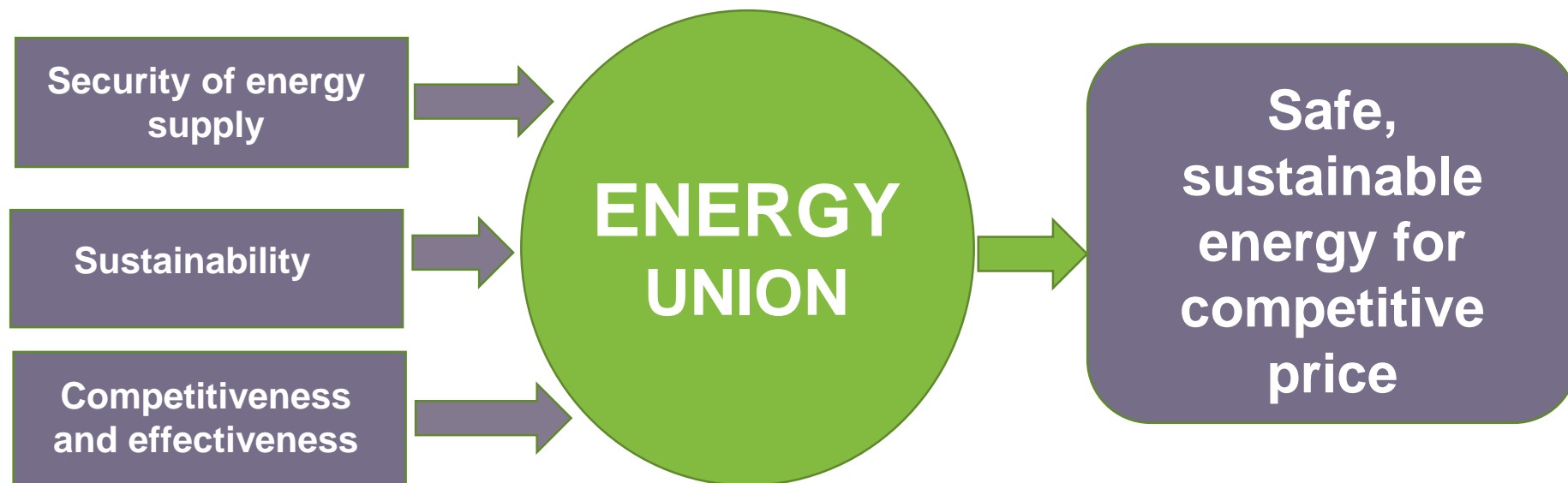
- Gas transmission pipelines total length 1188 km



STRATEGY

CONEXUS INVESTMENTS AND DEVELOPMENT

- JSC «Conexus Baltic Grid» assets management policy
- National economic and climate plan 2030
- Conexus investments program 2030



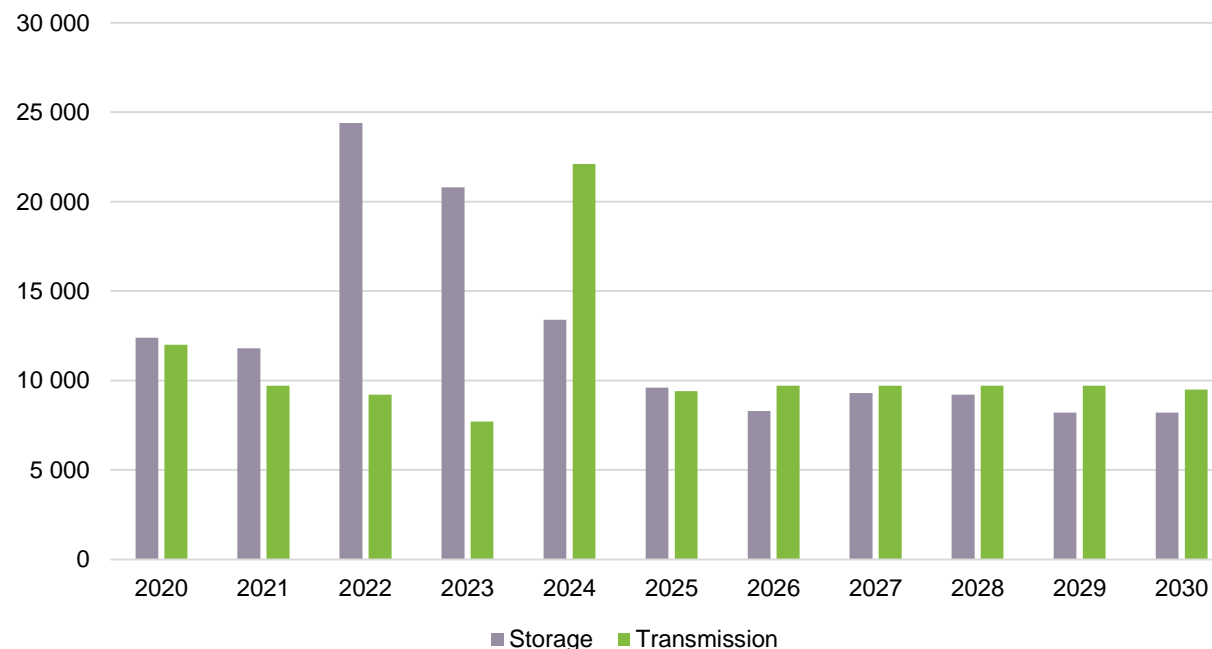
- I. Increasing role of gas as resource of energy and increasing of system efficiency
- II. Adoption of gas infrastructure to input energy from Renewables (Hydrogen, Bioenergy, Wind energy)
- III. Decrease the level of Hydrocarbon emissions in atmosphere from gas infrastructure
- IV. Improvement of interconnectivity between countries in Common Baltic market zone

INVESTMENTS

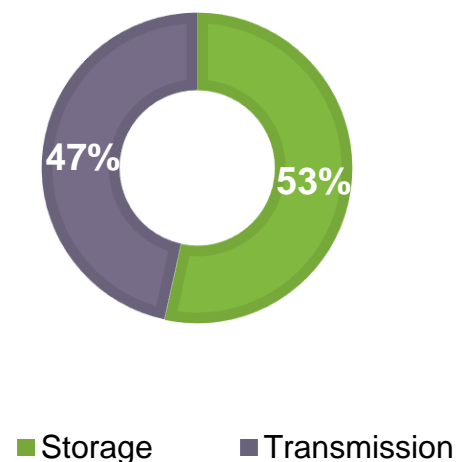
CONEXUS INVESTMENTS PROGRAM 2020-2030

- ~ **254 MEUR** - to secure gas infrastructure, improve interconnectivity and efficiency
- ~ **195 MEUR** – period depreciation costs
- ~ **59 MEUR** – must be excluded from regulated asset base

Investments to fixed assets
kEUR



Total investments to fixed assets
2020-2030



135 600 kEUR – storage

118 400 kEUR - transmission

PROJECTS

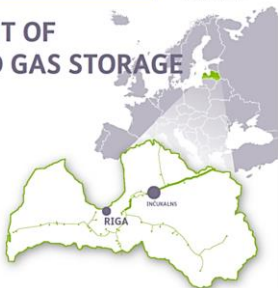
ENHANCEMENT OF INČUKALNS UGS



THE PROJECT ENHANCEMENT OF INČUKALNS UNDERGROUND GAS STORAGE

Implementation:
December, 2025
Total Project costs - 88 million €
Co-financing - 44 million €

88 000 000 €
44 000 000 €
Co-financing



NEW GCP AND WELLS

Rehabilitation of the existing Gas Collection Point No.3

33-35
Technological lines

Productivity of each line not less than
30 000 m³/h

3-5
New pipelines to connect wells with the new gas collection point

Pressure regulation range:
105 – 25 bar

Wells

Enhancement of
36 wells

Increase of overall wells productivity:
8,145 – 8,6 million m³/24h

GAS COMPRESSION UNITS

Installation of one additional unit at Gas Compressor station No.1

Dependency reduction of gas storage withdrawal capacity upon gas volume in the reservoir

Compression withdrawal productivity:
12-15 million m³/24h

Gas injection productivity:
4-6 million m³/24h

Upgrade of the existing gas compression units at Gas Compressor station No.2

Upgrading of the existing 5 gas compression units

5

Increase of productivity:
12 - 12,5 million m³/24h

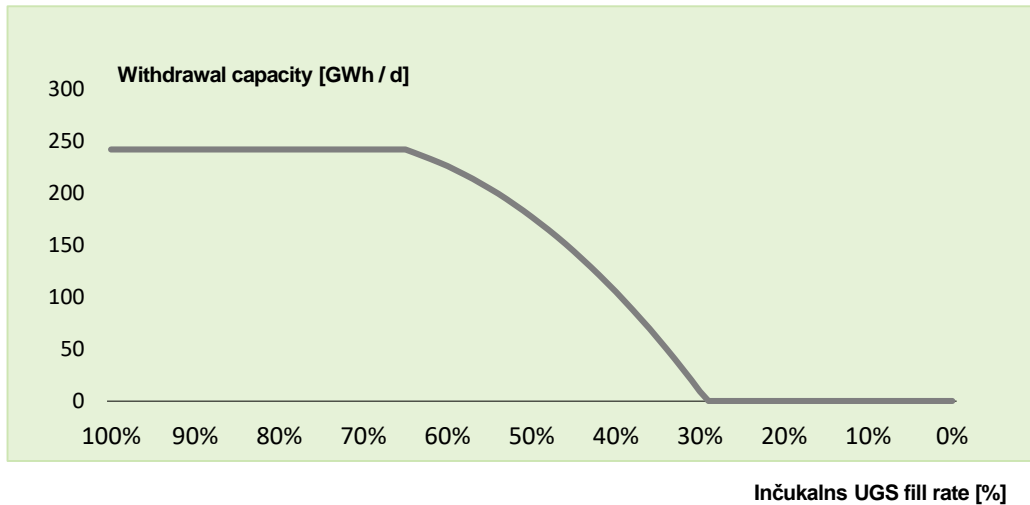
Decrease of environmental footprints of **NO_x CO₂ and CH₄ compounds** emissions

Decrease of **FUEL GAS CONSUMPTION**

Project background

- After all integration initiatives are in place, Baltic markets plan to set pressure in their systems to 50 – 55 bar
- Currently, at the end of extraction season from IUGS, the reservoir pressure drops to 33 bar (the pressure is highly dependent on IUGS fill rate)
- Without enhancement of storage assets it is impossible for IUGS to secure the regional gas supply due to the low reservoir / outlet pipe pressure.**

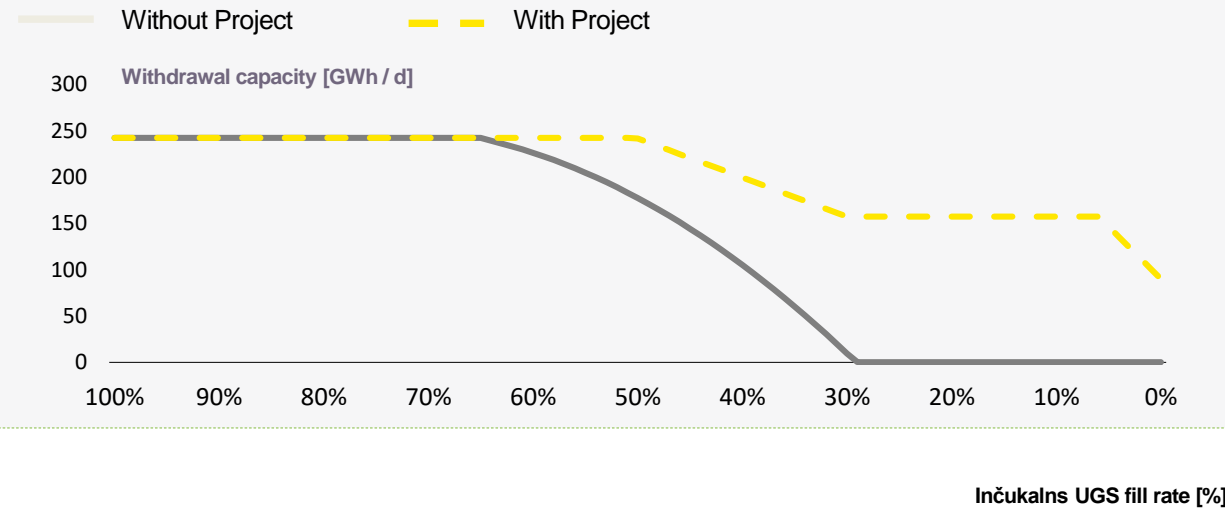
Current Inčukalns UGS withdrawal capacity curve depending on Inčukalns UGS fill rates @ 50 bar outlet pipe pressure:



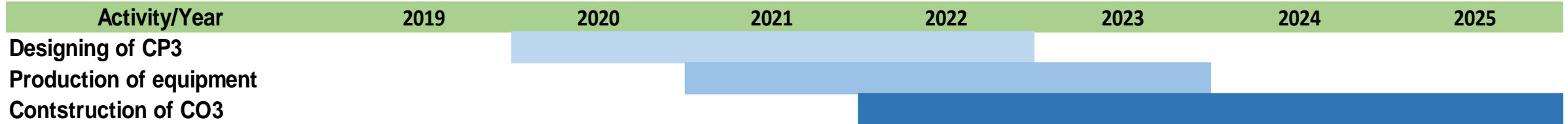
The aim of the Project is to increase the minimum level of reservoir pressure in order to enable gas withdrawal even at very low IUGS fill rates. The Project scope includes:

- Installation of additional gas compression unit
- Modernization of 36 wells
- Modernization / construction of UGS surface facilities

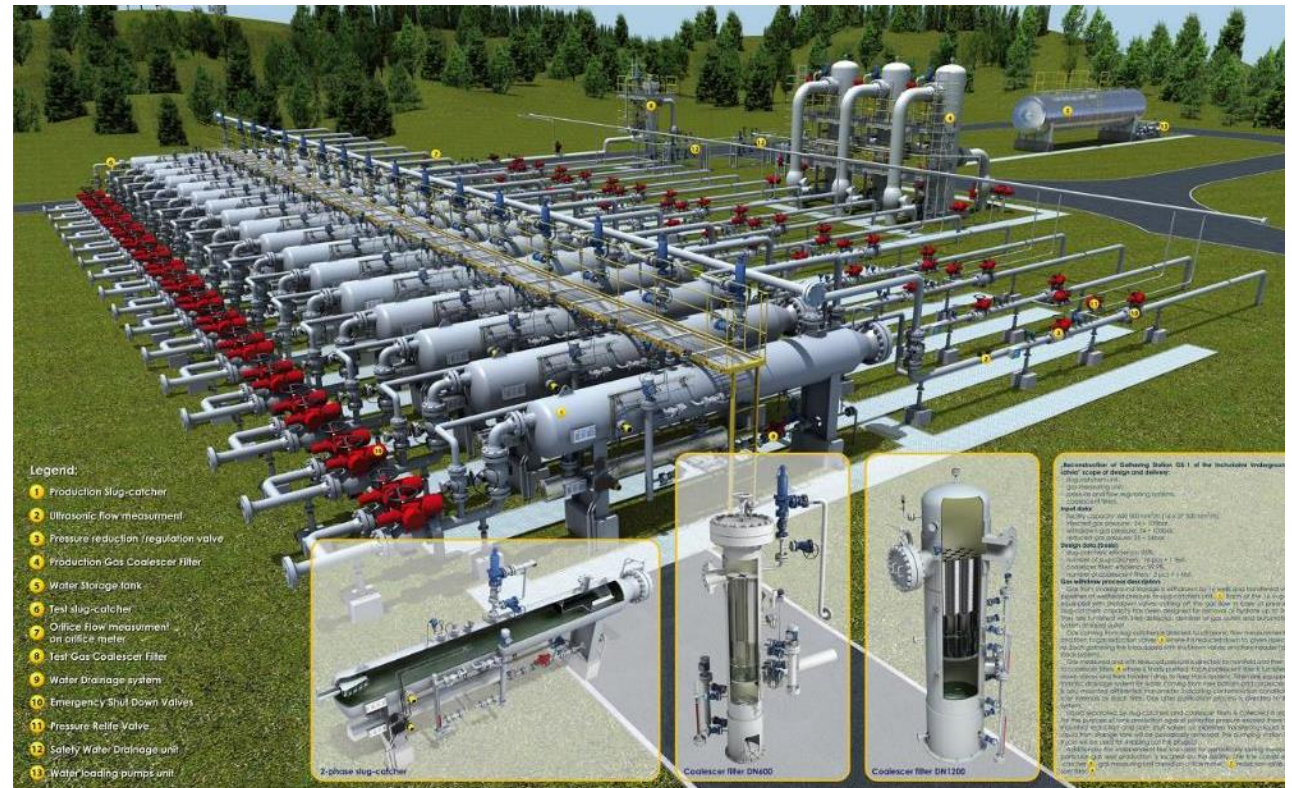
Inčukalns UGS withdrawal capacity curve without vs with the Project, depending on Inčukalns UGS fill rates @ 50 bar outlet pipe pressure:



Enhancement of Gas collection points No.3 32,3 MEUR

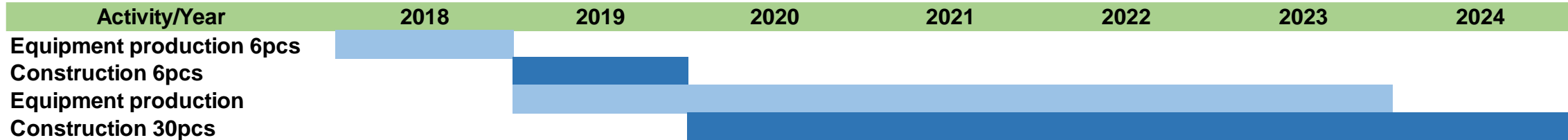


- ✔ Increasing productivity up to 10%
- ✔ Changing of old equipment
- ✔ Creation of SCADA system
- ✔ Creation of blow out system without CH4 emissions
- ✔ Creation of additional technological lines

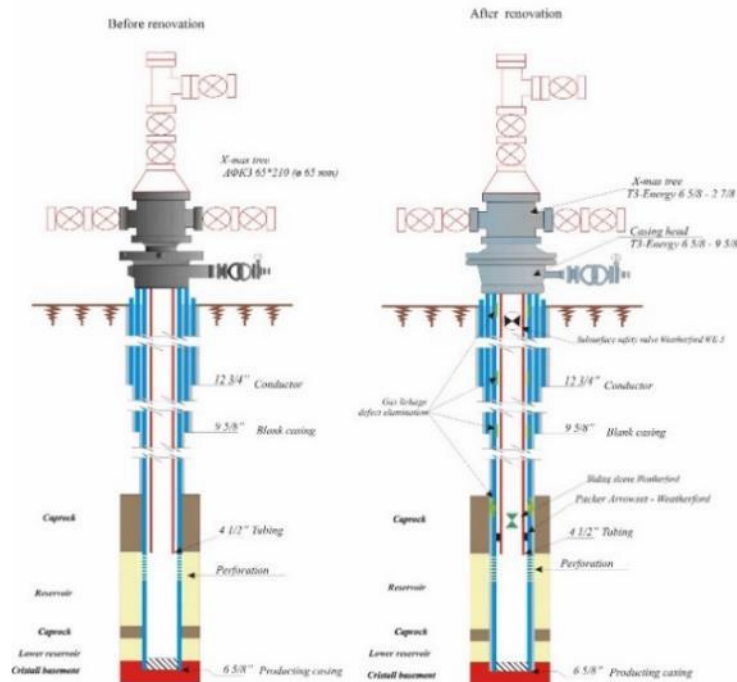


Modernization of wells

27.0 MEUR



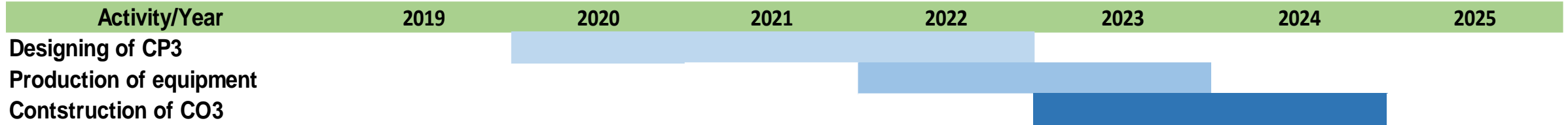
Typical scheme of well renovation



- Increasing production capacity each well for 5-10% (number approved by previous experience)
- Safety level and completion of 36 well drive according the EN1918:1
- Reduction of CH4 emissions during the operation
- Increase the life time of wells

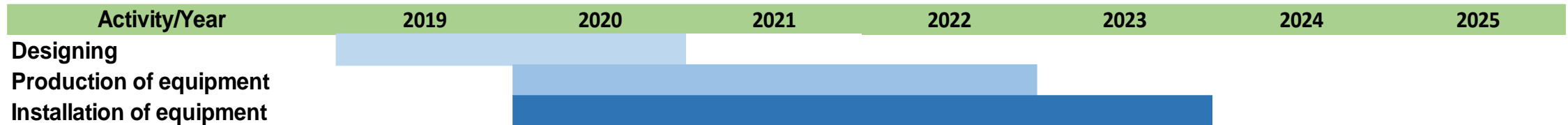
Compression withdrawal development

20 MEUR



- Injection productivity increasing up to 6 million m³/24h
- Compression extraction up to 15 million m³/24h
- Maximum extraction volume unbundling from volume of commodity
- Technological equipment will be installed at existing compressor station No.1 territory

Modernization of gas compression units 8,7 MEUR



- ✔ Reduction of emissions
 - Decreasing of 10% of CO2 emissions
 - Decreasing of Hydrocarbons emissions
 - Decreasing at least 50% of Nox emissions
 - Decreasing of 20% of consumption of oxygen
- ✔ Decreasing of fuel consumption 3-15%
- ✔ Increasing the stability of engine burning process
- ✔ Engine reliability improvement
 - Creation of vibration control system
 - System doesn't need everyday maintenance

PROJECTS

ENHANCEMENT OF LATVIA — LITHUANIA INTERCONNECTION



Project promoters:



CAPEX, OPEX, benefits

- Enhancing connection and eliminating bottleneck between Lithuania and Latvia
- Facilitating creation of the common gas market zone for Baltic Countries and Finland

TSO	CAPEX MEUR	OPEX MEUR/y
Conexus	5,1	0,4
Amber Grid	4,7	0,1

50% CAPEX covered by Innovation and Network Executive Agency

Technical details and relations to other projects

- Project provides for increasing of LV-LT interconnection capacity to 130,47 GWh/d in the direction LT->LV and 119,5 GWh/d in the direction LV -> LT
- LT: enhancement of capacity of Kiemėnai GMS and modification of piping for Panevėžys CS
- LV: enhancement of LV transmission pipeline system for increase of max pressure up to 50 bar
- LV: 17 sub-activities. Each with different achievements

Timeline

- Currently under the implementation 7 sub-activities
- Project is expected to be completed by the end of 2023

8.2.1-0001-LVLT-W-M-19

ENHANCEMENT LATVIA – LITHUANIA INTERCONNECTION

- No 1-7 concluded all necessary contracts
- No 9 – 13 designing phase
- No 14-17 will start 2021
- No 8 follow after 6 and 7 completion and will depend from diagnostic results

No	Activity code	Activity name	Budget	Start	Completed
1	RE-0013-19	Rebuilding of Valves T5-T6 node	550 000	20.11.2018	01.06.2021
2	RE-0012-19	Rebuilding of branch pipeline to GRS «Valmiera 1»	440 000	20.11.2018	20.11.2020
3	RE-0016-19	Rebuilding of connection Vireši – Tallinn to Pskov-IUGS	330 000	20.11.2018	29.12.2020
4	RE-0015-19	Rebuilding of valve node 1 PL to GRS «Palsmane»	165 000	20.11.2018	20.11.2020
5	RE-0014-19	Rider rebuilding at valve Iz.427	110 000	20.11.2018	11.12.2020
6	7161 (operational)	Transmission system assessment	112 000	01.07.2019	30.06.2020
7	7161 (operational)	Complex of technical diagnostic works	310 000	01.07.2019	30.09.2021
8	RE-0023-20	Repairing of pipelines defects	878 000	01.07.2019	01.12.2023
9	RE-0012-20	Rebuilding of branch pipeline to GRS «Ezerciems»	389 400	18.11.2019	30.12.2022
10	RE-0010-20	Rebuilding pipelines segments at connection point to IUGS	341 000	18.11.2019	30.11.2022
11	RE-0011-20	Rebuilding pipelines segment at GRS «Rīga 1»	235 950	18.11.2019	30.11.2021
12	RE-0013-20	Rebuilding of branch pipeline to GRS «Krimulda»	222 750	18.11.2019	31.10.2022
13	RE-0009-20	Rebuilding Rīga-Paņeveža connection to Rīga – IUGS pipelines	146 300	18.11.2019	31.12.2021
14	RE-0031-20	Rebuilding of branch pipeline to GRS «Vangaži	337 700	22.03.2021	01.12.2023
15	RE-0030-20	Rebuilding of branch pipeline to GRS «Zaķumuiža»	336 600	22.03.2021	31.10.2023
16	RE-0028-20	Rebuilding of branch pipeline to GRS «Daugmale»	281 600	22.03.2021	01.11.2023
17	RE-0029-20	Rebuilding of branch pipeline to GRS «Baldone»	281 600	22.03.2021	13.10.2023
TOTAL :			5 467 900		

OTHERS

SCHEDULED PROJECTS

- Seven additional projects to develop system
- Two projects will start 2021

No.	Project name	Budget*	Start	Complete
1	Reconstruction of branch pipeline to GRS «Sloka»	3 100 000	13.11.2017	02.10.2020
2	Reconstruction of GRS «Brocēni»	810 000	11.04.2019	30.09.2020
3	Upgrading of Gas metering station at Inčukalns UGS	490 000	28.01.2019	01.12.2020
4	Construction of GRS «Rīga 3» summer technological line	225 000	01.04.2019	30.06.2020
5	Construction of new water treatment plant at Inčukalns UGS	430 000	18.09.2018	30.04.2021
6	Rehabilitation of 16,7km pipeline Izborsk-Incukalns UGS	4 350 000	01.09.2020	01.12.2022
7	Replacement of 2,15 km pipeline Valdaja-Pleskava-Rīga	2 670 000	01.07.2021	01.12.2023
TOTAL :		12 075 000		

2019

PICTURES FROM
PROJECTS
IMPLEMENTATION



GCP 2 (IUGS). Completed in August 2019. 27 technological lines. Gas stream purification, technological measurement, pressure reduction.



Branch pipeline to GRS «Sloka». Will be Completed 2020. 8 km; Dn 250 mm; Pn55 barg.



- I. Network of access points to the gas transmission system
- II. Low price
- III. Small and medium consumers
- IV. 1st client will be joint straight to transmission network 2020

<https://www.conexus.lv/uploads/filedir/Image/pielikuma-karte-01.jpg>

The background of the image is a blurred industrial setting. It features various pieces of machinery, including pipes, valves, and structural frames. The color palette is dominated by muted greys and blues, with prominent vertical streaks of bright red and yellow on the right side, suggesting safety railings or specific components of the equipment. The overall effect is one of a busy, complex industrial environment.

THANK YOU FOR YOUR ATTENTION