

POSSIBILITY OF TRANSPORTING CO₂ VIA PIPELINES IN THE CCS BALTIC CONSORTIUM PROJECT

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Amber Grid

Lithuanian gas transmission system operator



> 2.3 thou km
of pipelines

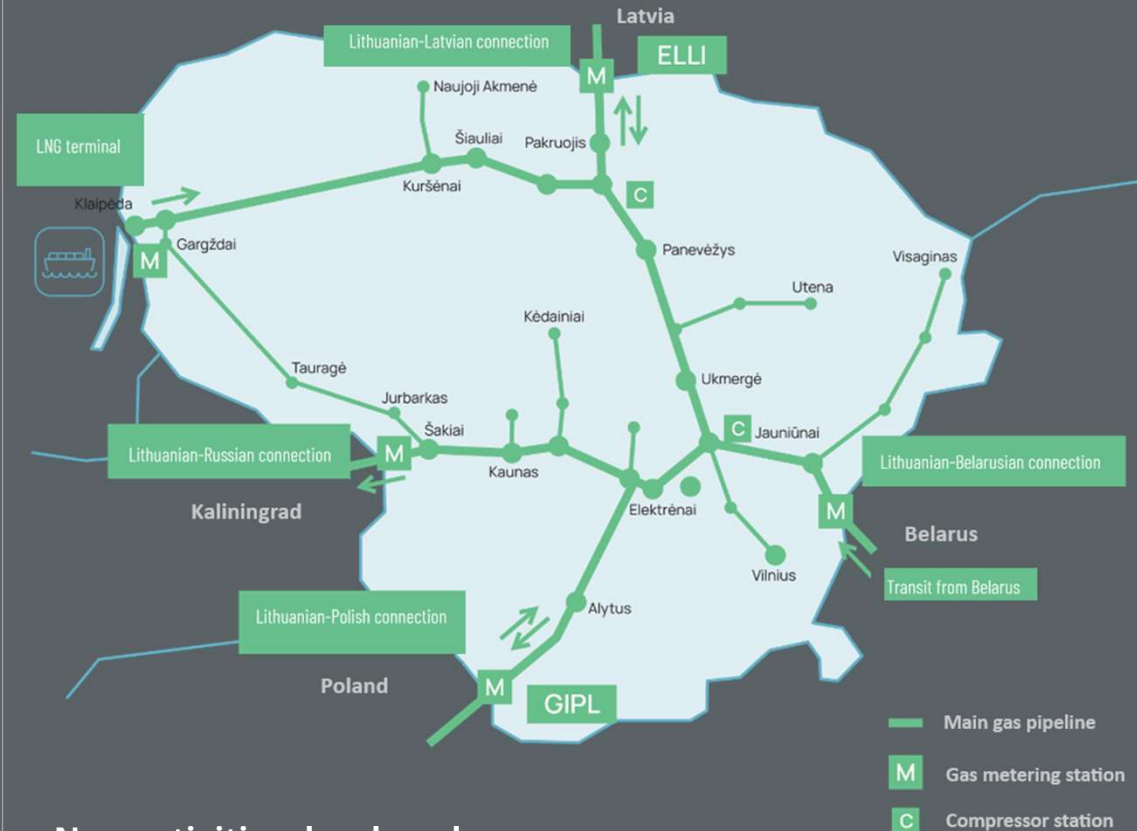


64 gas distribution stations
4 gas metering stations
2 gas compressor stations



310 km of newly build and
reconstructed pipelines
in the last 10 years

Lithuanian gas transmission network



New activities developed:

- Registry of guarantees of origin for renewable gases
- Connection of biomethane facilities
- Blending of hydrogen into gas network
- Hydrogen transportation network
- CO₂ transportation (to be analyzed)



PARTNERSHIP WITH CCS BALTIC CONSORTIUM

Evaluating the feasibility of
transporting CO₂ via pipelines

- In August 2023, Amber Grid was asked by the Ministry of Energy to evaluate the potential and feasibility of capturing biogenic CO₂ in Lithuania
- During analysis we engaged in discussion with LT members of CCS Consortium (Akmenes Cementas and KN Energies) on CCS prospects, including the feasibility of transporting CO₂ via a pipeline
- Preliminary assessment of routing, other parameters and project plan was conducted, with commissioning dates in early 2030s

CCS BALTIC CONSORTIUM

Possibility of CO₂ transport via pipelines

CO₂ pipeline being of cross-border nature increases the chances of co-financing from CEF

INFRASTRUCTURE

217 km pipeline (based on preliminary routing):

- 157 km (DN 600) from Akmenes cementas to KN Energies
- 60 km (DN 400) from Akmenes cementas to SCHWENK Latvija (51 km in Latvia territory)

Development of compressing capacities in inlet points needed.
Commissioning: early 2030s

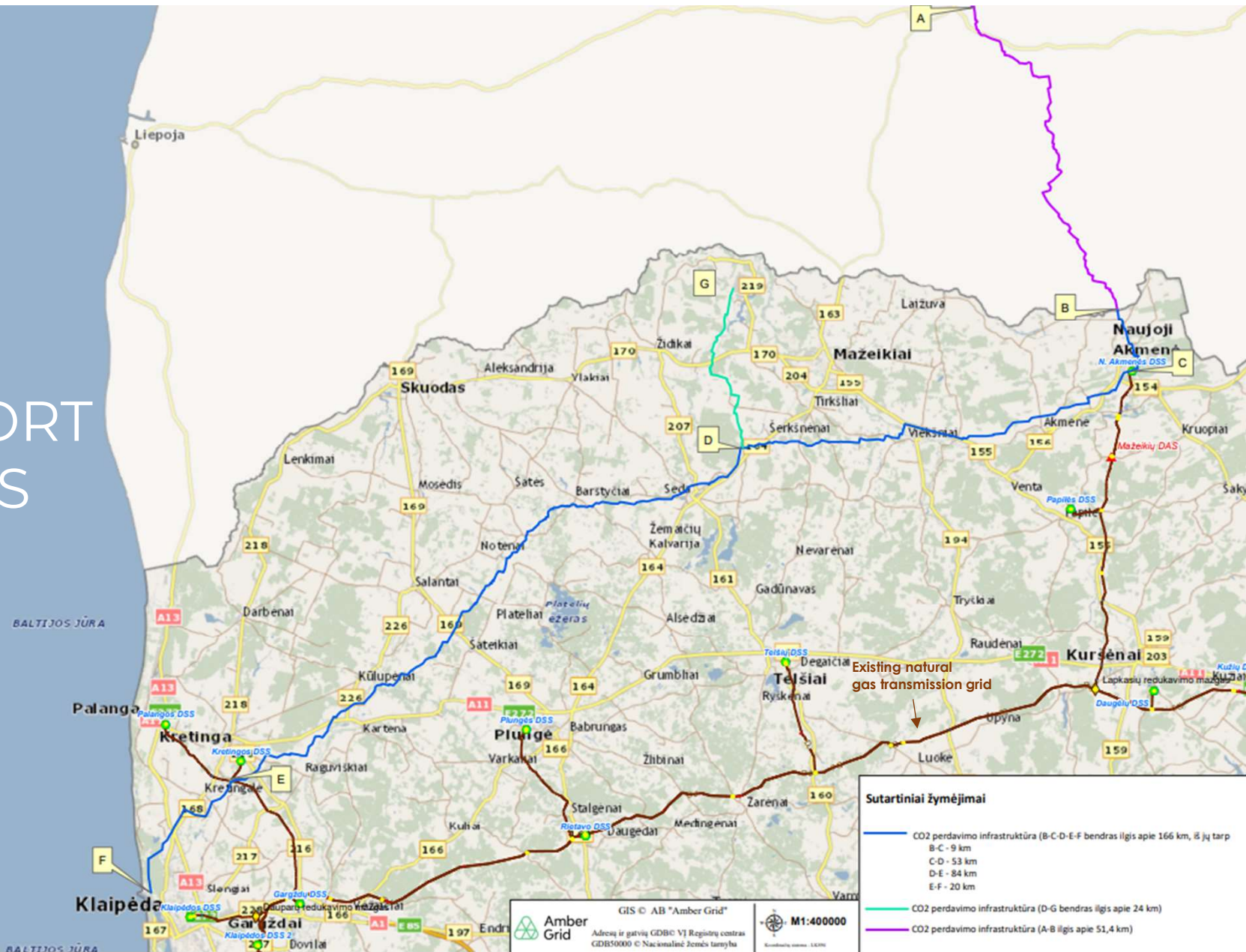
PRELIMINARY CAPEX

- ~220 m€ (pipeline)
- ~130 m€ (compressors)

Should be sought to be co-financed by EU funds.



CO₂ TRANSPORT VIA PIPELINES (PRELIMINARY ROUTING)



PRELIMINARY PROJECT PLAN

- Based on Amber grid experience and similar natural gas projects and the commissioning timing indicated by Akmenes Cementas and KN
- Should be updated in further stages of the project



2025

2026-2029

2030-2033?

Feasibility study (together with partners)

Legal analysis and active role in legislative process

Contractual arrangements on implementation of the project (after study results)

Update PCI status with new project set-up (2 year procedure)

Environmental impact assessment (1,5 year procedure)

Applications for EU support – preparatory works & construction phases (decision needed whether one or few)

Technical project and construction permits (2 year procedure)

Final investment decision

Pipeline delivery and construction phase started

LITHUANIA

POSSIBLE START OF SERVICE – EARLY 2030s (TBD)

CONSTRUCTION IN LITHUANIA:

- Between KN Energies and Akmenės cementas (157 km)
- Between Akmenės cementas and the border with Latvia (9 km)

LATVIA

POSSIBLE START OF SERVICE – EARLY 2030s (TBD)

CONSTRUCTION IN LATVIA:

- Between border with Latvia and SCHWENK Latvia (51 km)

AREAS FOR FURTHER COORDINATION – IN PARALLEL AND POST FEASIBILITY STUDY



TECHNICAL PARAMETERS

- Analysis to define in what form should be transportation – gaseous or dense/supercritical
- Agreeing on other technical parameters – capacity, pressures on inlet, outlet points, etc.



PROJECT MANAGEMENT & CONTRACTUAL ARRANGEMENTS

- Coordination of activities of latvian and lithuanian counterparties
- The set of contractual arrangements between project promoters



ACCESSING EU SUPPORT

- Obtaining status of PCI and national importance for the project / it's separate parts
- EU Co-financing from available instruments for CCS



LEGISLATION

- Active collaboration in legislative process, which will be developed in upcoming years on EU and national level
- Coordination of communication and actions with policy makers and other relevant stakeholders



KLAUSIMAI?

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