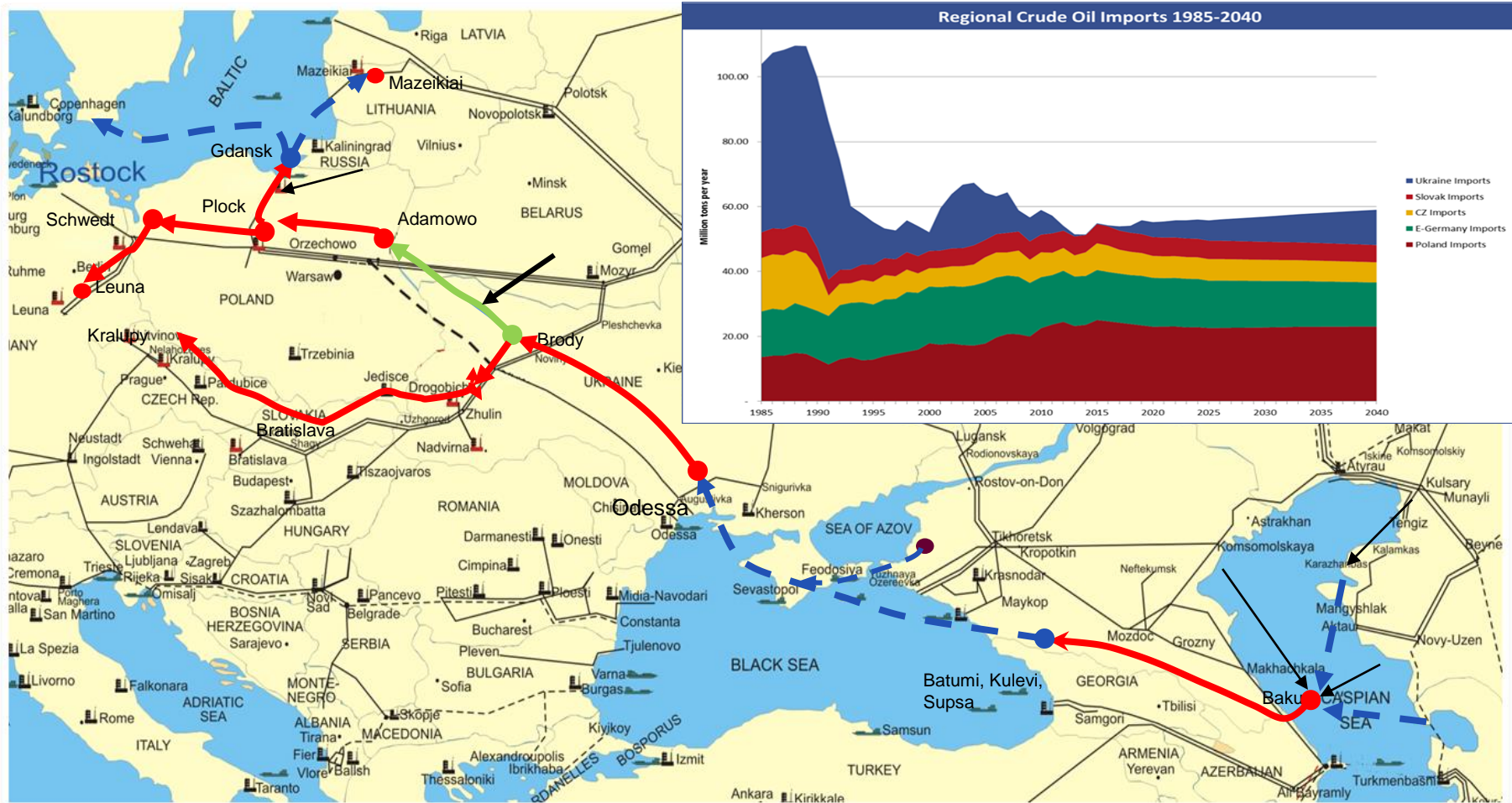


Transportation of Caspian Oil and Gas Across the Black Sea and Beyond EAOTC and AGRI Projects

**NATO ARW
December 5, 2016**

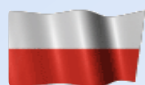
GOGC Presentation

Euro-Asian Oil Transportation Corridor Project (EAOTC)



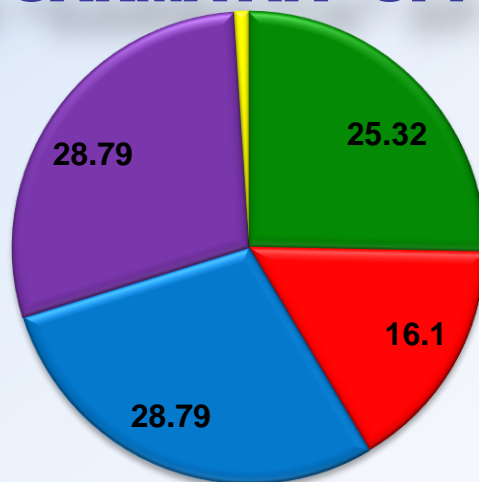
EAOTC Project

- Creates an alternative, independent and reliable transportation route for the crude oil from the Caspian Region to Europe;
- Offers to European customers 10 to 30 Mt of high quality Caspian oil per year;
- Increases energy security in the participating countries and EU, improves reliability of supply for its customers;
- Supports European Energy Solidarity and improves the economic ties between the EU and oil producing and transit countries of the Region - participants of the Project.



Shareholders

MPR "SARMATIA" SP. Z O.O.



Brody-Adamovo Section

INFRASTRUCTURE TO BE BUILD

Brody

Adamovo

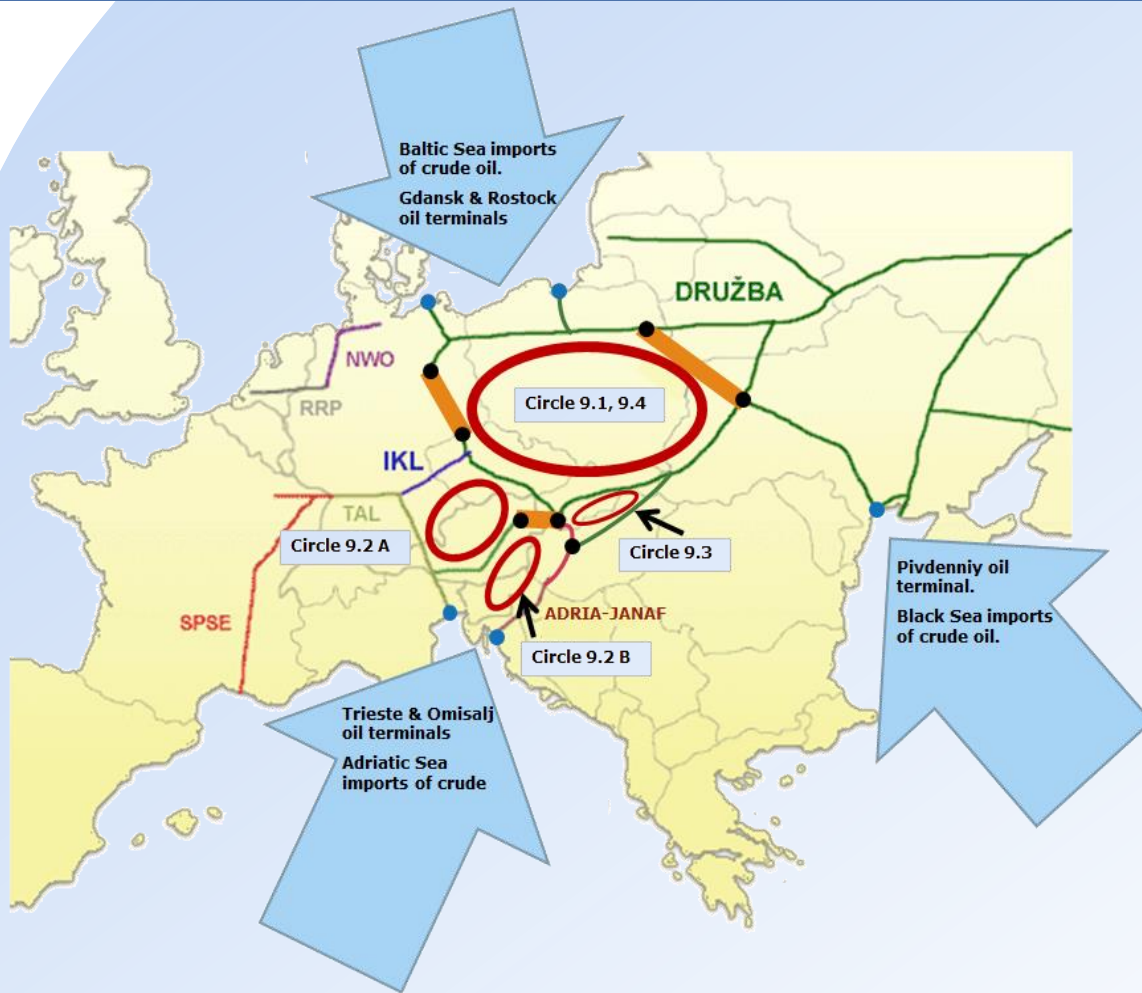
Description
Pipeline Section Brody - Border (Ukraine) 125,7 km
Pipeline Section Border - Adamovo (Poland) 270,6 km
Pump Station 1 (Brody, Ukraine) 2 in Poland
Capacity 10 MTA (up to 30 MTA) Estimated Cost 550-600 M\$

THE SIGNIFICANCE OF THE PROJECT FOR EUROPE



- The project is mentioned in “Energy infrastructure priorities for 2020 and beyond” as a priority one for the North – South Corridor.
- The project is among the "Projects of Common Interest" for the Trans-European energy infrastructure (TEN-E) (number 9.1).
- The project is a Project of Common Interest for the Energy Community (PECI) among the other 35 projects.

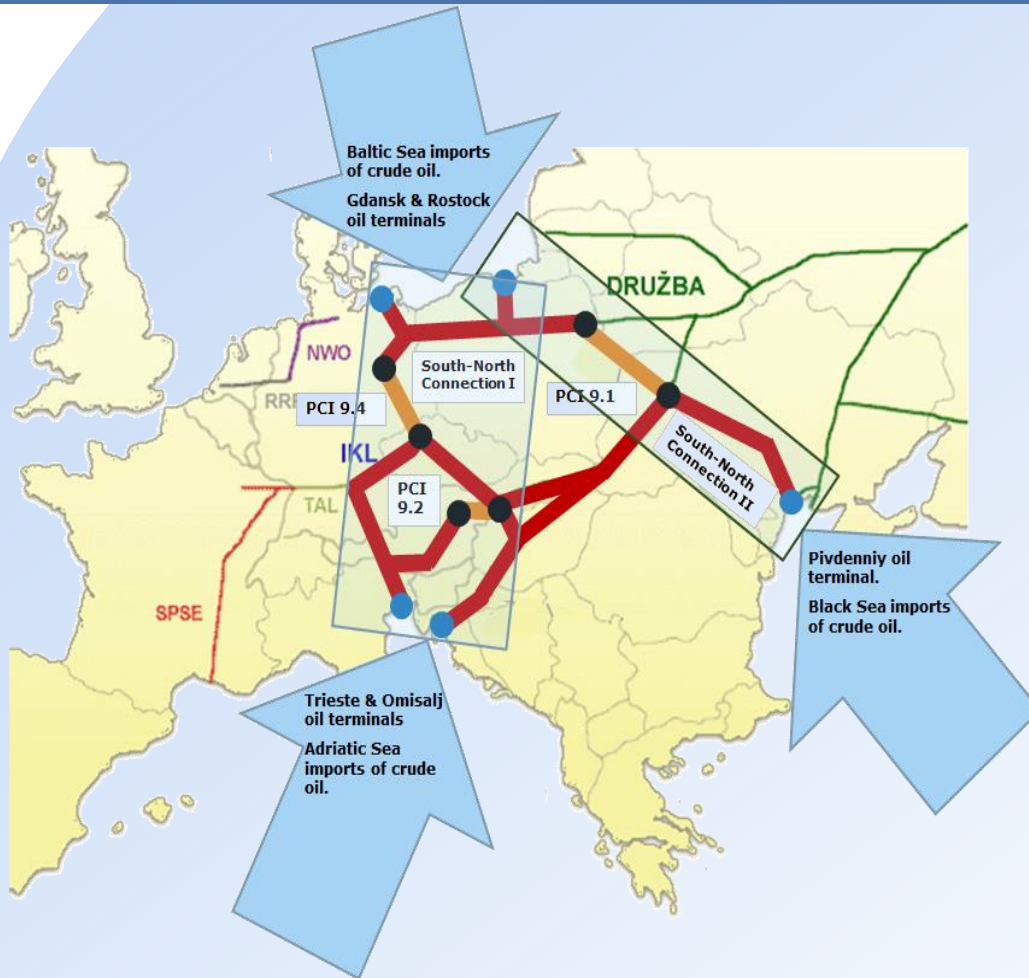
CRUDE OIL TRANSPORTATION RING



Combined with other PCI Litvinov-Spergau pipeline project EAOTC will create the crude oil transportation ring, contributing to flexibility and reliability of the European oil transportation system.

*Picture and data are from the "Assistance for the identification of projects of common interest in the field of oil infrastructure in the context of the TEN-e regulation" Interim Report, September 2015

SOUTH-NORTH PIPELINE CONNECTION



Combined with the Expansion of the Pomeranian Pipeline and EAOTC's Adamovo-Brody and Brody–Odessa pipelines would link the Black Sea and the Baltic Sea and create a South-North pipeline connection.

This Connection would have a extreme impact on the security of supply of Eastern Europe since it potentially would be able mitigate a **Druzhba main pipeline** disruption and supply crude simultaneously to both Druzhba South and Druzhba North.

*Picture and data are from the “Assistance for the identification of projects of common interest in the field of oil infrastructure in the context of the TEN-e regulation” Interim Report, September 2015

BRODY – ADAMOVO REVERS EMERGENCY ROUTE



Reverse flow of crude oil could be organized in emergency cases from North Sea and the Baltic Sea ports to the consumers in Slovakia, Czech Republic, Hungary and Ukraine

Current Activities

Task 1

- Update of the Feasibility Study, including an update of market research and the analysis of the revers deliveries from North and Baltic seas to EEU refineries

Task 2

- Local Development Plans for the remaining local communities in Poland

Task 3

- Land acquisition.

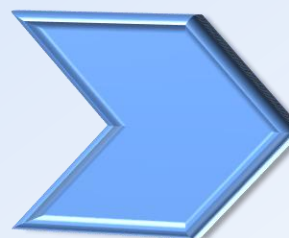
EXPECTATIONS



- Intergovernmental Agreement concerning the EAOTC Project support



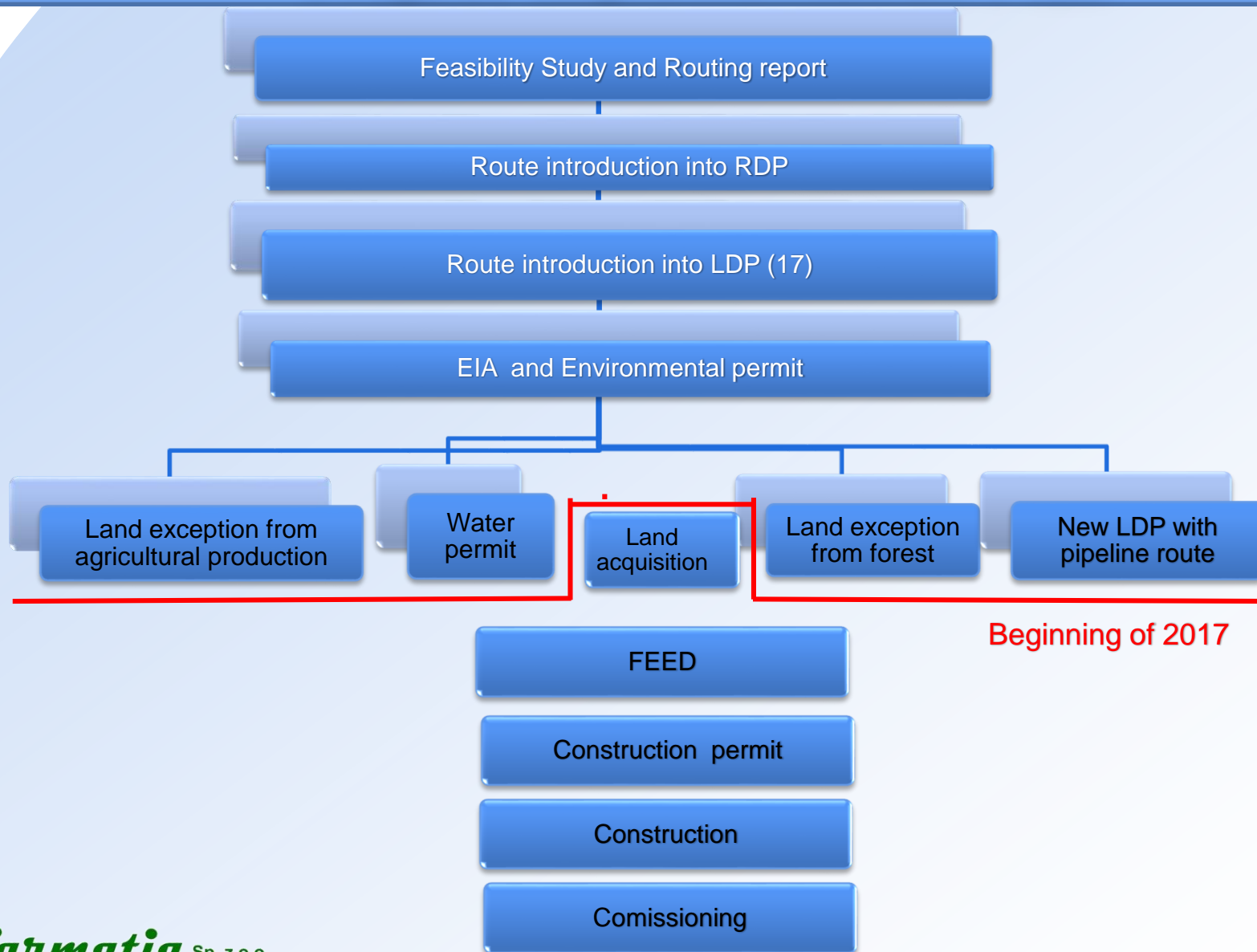
- Co-financing of the Project from European Funds



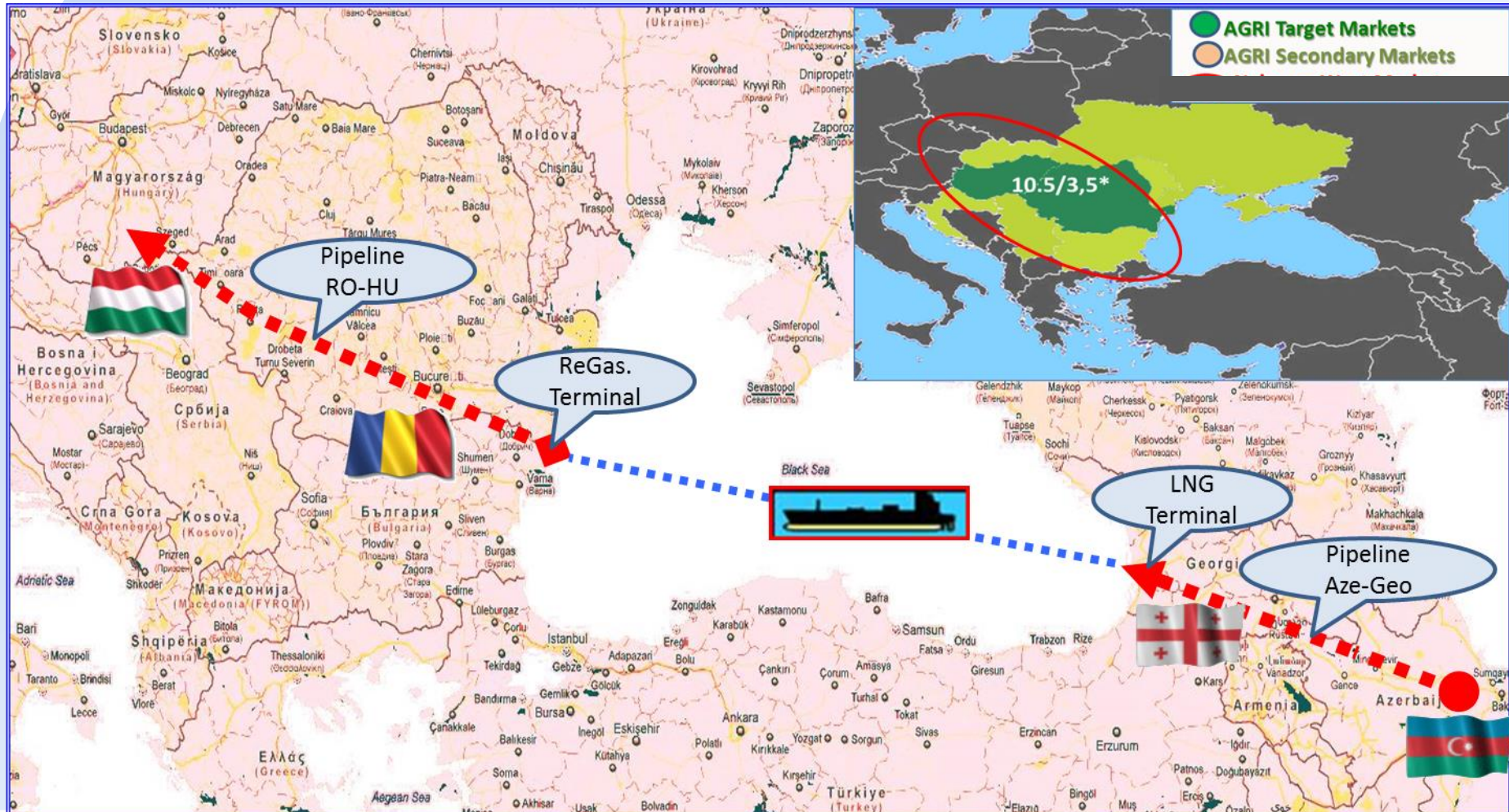
- Creation of favorable legal environment for the project implementation (adoption of the Law on transmission corridors in Poland)



What has been done & Project Implementation Plan



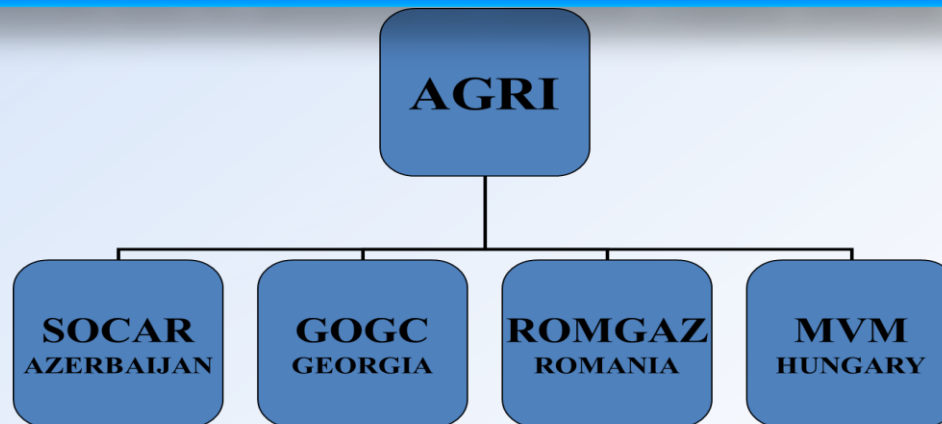
Azerbaijan-Georgia-Romania Interconnector (AGRI) Project



Shareholders of AGRI PROJECT

The AGRI (Azerbaijan-Georgia-Romania Interconnector) Project offers the countries of the SE Europe the opportunity of a secure supplies and import diversification, to reduce its dependence on individual suppliers, by diversifying both supply sources and delivery channels.

- Provides another route to market for Azeri (and/or Caspian) gas
 - Avoids sole reliance on pipelines and on sole transit route/supplier
 - Gas likely to reach EU gas hubs
 - Increases energy security in the participating countries and SE EU, I
- BUT**
- Requires investments for onshore pipelines in Azerbaijan, Georgia, Romania, Hungary
 - Could be suffered due to absence of reliable supply source



AGRI Project (Feasibility Study Results)

- The feasibility Study explores three independent scenarios of the gas transporting capacities: 2, 5 and 8 bcm/y and two project development options: full chain from supplier to consumer and as transportation project across the Black Sea including liquefaction and regasification terminals
- Principal target market – Romania and Hungary;
- Secondary target market – Bulgaria, Serbia, Croatia, Slovakia, Moldova and Ukraine;
- Based on other transport route other countries market could be considered;

Main conclusion of the Feasibility Study

- The AGRI transportation project is capital intensive, but it can be developed efficiently and profitably;
- Various throughput options exhibit viability of project depending on gas availability and demand of target markets
- Long-term commitments to reserve and pay for transportation are required to give confidence on overall project viability;
- The transportation project has the potential to generate significant economic benefits.

Partners' political support

Joint Declaration on AGRI Project signed in Bucharest on June 24 2015 by the Energy Ministers of Azerbaijan, Georgia and Romania.

- To reiterate the support for further development of the AGRI Project
- To support the possible participation of other interested partners in the development of the AGRI project;
- To assist the participating companies in attracting the financial sources ;
- To further sustain AGRI project as a component of the Southern Gas Corridor having an important contribution to the European energy security.

Project Development Phases and Perspectives

- Establishment of AGRI company – COMPLETED;
- Conducting the feasibility study - COMPLETED;
- **Project Development Decision – estimated 2017;**
- Market research based on 2012 data have to be updated
- FEED study;
- Construction phase.

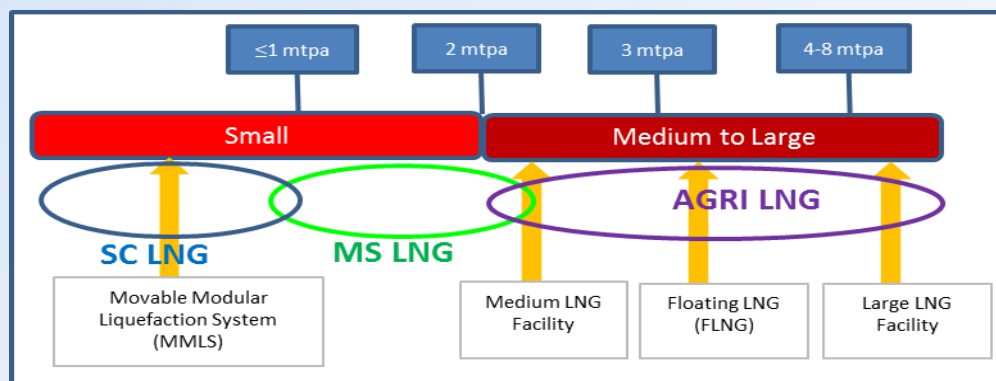
Why LNG ?

Why LNG?

The political uncertainty, which is usually attached to pipeline contracts, and more commercial uncertainty, which is attached to the spot trading calls for engagement in LNG trade, considering long-term LNG contracts to assure security of guaranteed supply.

Which Conditions Support LNG Project Development?

- Limited availability of Gas
- Need for diversification of Supply Sources and Routes
- Need for More Security of Supply





GOGC

Thank you for your attention!

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