



PERN

EAOTC PIPELINE

CONNECTION OF EU AND EASTERN PARTNERSHIP COUNTRIES

Brussels, June 24th 2016

- ACTIVITIES OF THE PERN GROUP
- EAOTC PROJECT– GENESIS AND CURRENT IMPLEMENTATION
- SIGNIFICANT CHANGES IN THE EXTERNAL ENVIRONMENT INFLUENCING THE PROJECT
- CONCLUSIONS

PERN Group is an important part of the security chain in Polish crude oil and fuels' logistic, with the largest overground oil storage capacities in Poland .

PERN Group Activity

Core



Management of crude oil and fuel pipelines



Crude oil and fuel transportation



Crude oil and fuel storage



Sea handling operations

Supplementary



Telecommunications

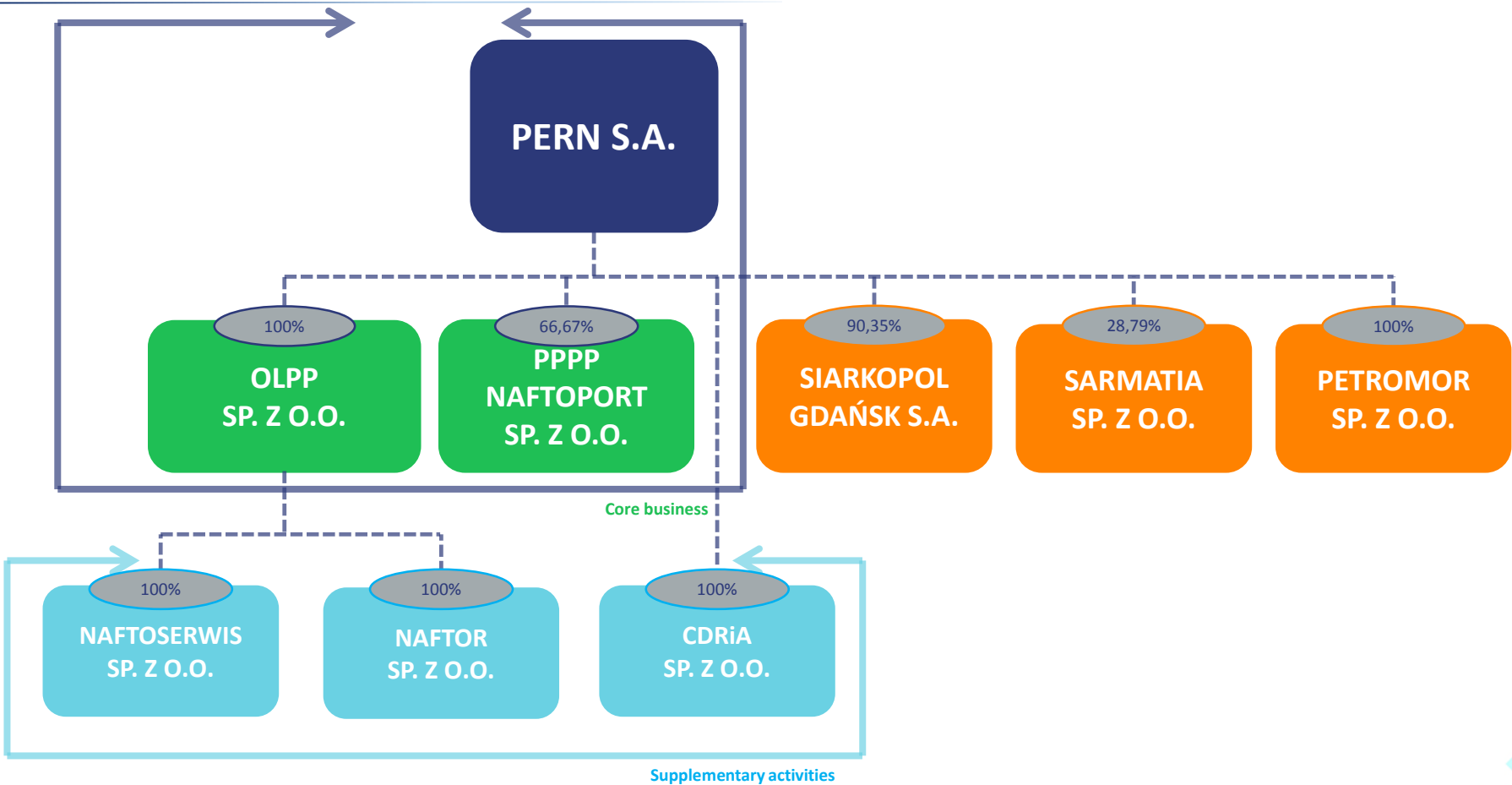


Pipeline inspection



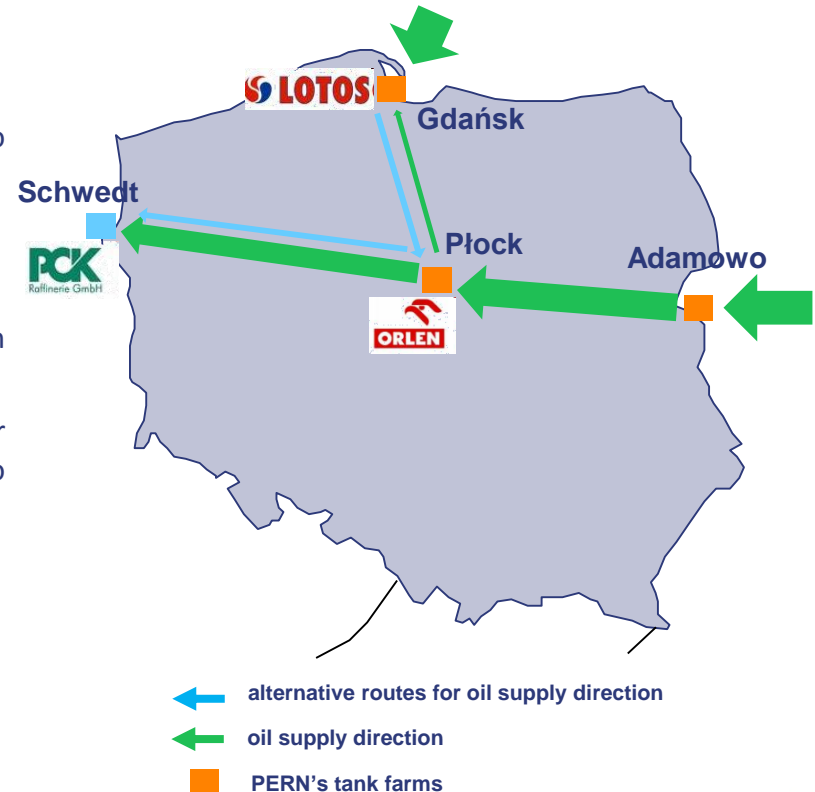
Security services

STRUCTURE OF THE PERN GROUP



PERN infrastructure ensures two alternative routes of oil supply

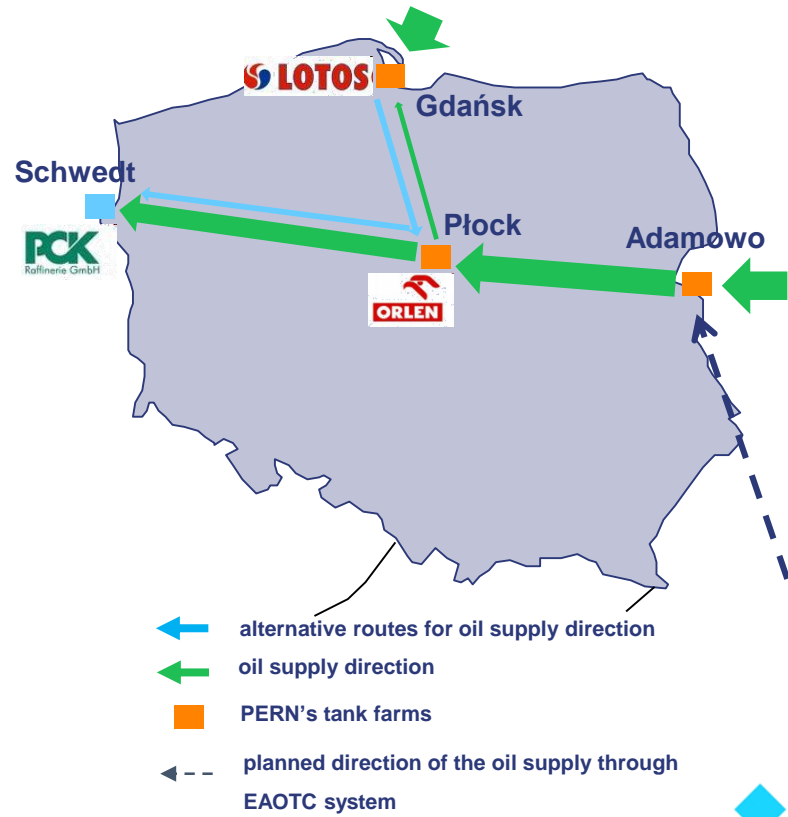
- PERN and Naftoport ensure full supply to Polish refineries with two independent routes:
 - ✓ „Przyjaźń” pipeline (Polish part of Northern Druzhba),
 - ✓ Seaborne deliveries through Gdańsk harbour.
- Oil can be supplied to German refineries through Adamowo or through Gdańsk and the Rostock harbours.
- Reliability of deliveries ensured by PERN is of utmost importance for refineries. Over the last 50 years of PERN's operations, there was no serious problems with supplies to refineries.



EAOTC system would be complementary to the existing oil transportation routes.

- EAOTC project (Euro-Asian Oil Transport Corridor) enables transportation of Caspian crude oil to the countries of Central and Western Europe.
- The planned route would enable the crude oil deliveries to Polish and German refineries. Oil would be supplied through the Black Sea port Pivdenny near Odessa and would constitute for third source of oil supplies for refineries.

CURRENT OIL SUPPLIES ROUTES TO THE REFINERIES VIA PERN'S SYSTEM + PLANNED ROUTE OF THE EAOTC PROJECT



THE IDEA OF THE CONSTRUCTION OF THE EURASIAN CRUDE OIL TRANSPORTATION CORRIDOR WAS DRIVEN BY THE NEED TO CREATE ROUTE FOR THE TRANSPORTATION OF CRUDE OIL INDEPENDENT FROM RUSSIA, WHICH WOULD ADDITIONALLY SOLVE THE PROBLEMS FACED BY TANKERS WHILE PASSING THROUGH TURKISH STRAITS

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The genesis of Eurasian crude oil transportation corridor – the idea behind the Project

- The idea for the construction of the Eurasian crude oil transportation corridor Odessa – Brody – Plock - Gdansk emerged in the mid 90's.
- Ukraine presented a concept of building a new pipeline which would facilitate crude oil supplies from Caspian region to Central and Western Europe through independent route omitting Russia.



- ← Existing crude oil supply routes to Poland and Ukraine
- ← Eurasian crude oil transportation corridor

FIVE COUNTRIES PARTICIPATE IN THE PROJECT IMPLEMENTATION: AZERBAIJAN, GEORGIA, UKRAINE, POLAND AND LITHUANIA



Euro-Asian Oil Transport Corridor is planned to enable oil transportation from the Caspian Sea Basin to Central and Western Europe via Pomeranian Pipeline and the Port of Gdańsk.

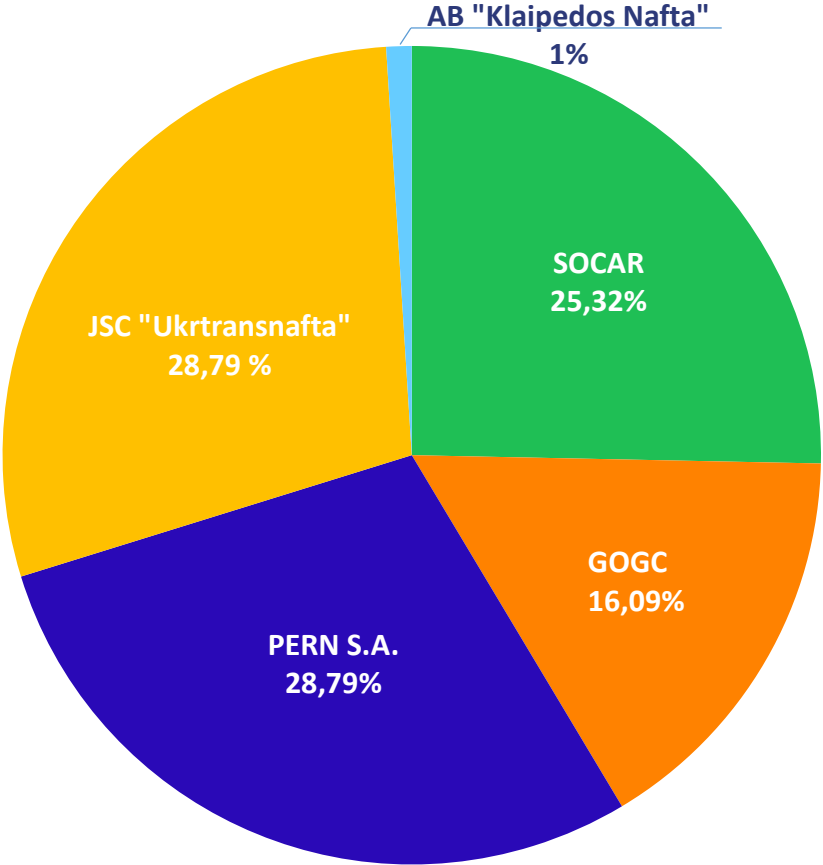
- EAOTC project (Euro-Asian Oil Transport Corridor) enables Caspian oil transportation to Central and Western European countries.
- Caspian oil is to be transported from the Caspian Sea via the Baku-Supsa pipeline, then by tankers to the Ukrainian port Pivdenny near Odessa, further via pipeline to Brody, then in the direction of Slovakia and Czech Republic via the southern route of „Druzhba” pipeline, and in the direction of Poland via the new Brody – Adamowo pipeline and further via the existing „Przyjaźń” pipeline and Pomeranian Pipeline to Gdańsk or through the Western Route to Germany.
- Project is being implemented by special purpose company Sarmatia, which shareholders (together with PERN, representing Polish party) are: Lithuania, Ukraine, Georgia and Azerbaijan.

PLANNED ROUTE OF THE EAOTC PROJECT*



* EAOTC project (Euro-Asian Oil Transport Corridor) enables Caspian oil transportation to the of Central and Western European countries .

Shareholders



BRODY – ADAMOWO PIPELINE PROJECT THE ILF FEASIBILITY STUDY



- Polish section length– 270,6 km,
- Ukrainian section length– 125,7 km,
- Diameter – 32” (800 mm),
- Initial capacity- 10 mln t rocznie,
- Design pressure – 6,5 MPa
- 1 pumping station,
- Control system SCADA
- Estimated project value 2029,3 mln PLN.



Three Feasibility Studies for the project have been prepared over the last 10 years, considering various aspects and scope of the project.

Feasibility Studies

2006



- SWECO limited its analysis to the route from Odessa to Gdańsk, specifying the investment expenditures only for this section – and assessed total capital expenditures Odessa – Gdańsk route on 700-800 mln USD
- Additionally, in the studies performed under the direction of SWECO, the need to expand the project pipeline to Wilhelmshaven, supporting tankers with a capacity of 300 000 DWT was indicated.

2009



- Consultants under the direction of Granherne developed the most comprehensive analysis from the ports in Kazakhstan, Azerbaijan and Georgia to the Gdansk harbour.
- Implementation of the proposed complete oil transportation route (Euro-Asian Oil Transport Corridor) was prepared in variants and demanded, depending on the target level of oil deliveries, huge capital expenditures in all the countries, through which the corridor would run (4,9-8,7 bln USD).

2011



- ILF, which previously worked as a technical consultant, undertook to develop the next Feasibility Study, limited however to the Brody – Adamowo pipeline.
- The report was prepared with particular emphasis on the specifics of obtaining EU financing.

FEASIBILITY STUDY PREPARED BY ILF COVERED:

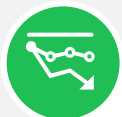
- **PROJECT DESCRIPTION WITH BENEFICIARY MANAGEMENT SYSTEM DESCRIPTION**
- **DEMAND ANALYSIS**, covering oil market situation in Poland and neighboring countries, the impact of the transport system on oil consumption, directions and sources of crude oil supplies to Poland, Germany, Lithuania and other Baltic countries, the development of transport systems in Central Europe, oil demand forecast for Poland until 2040, oil demand scenarios for Poland, Germany, Lithuania and the other Baltic countries until 2040, forecast of demand for oil storage in Central Europe until 2035 and oil prices analysis
- **OPTIONS ANALYSIS**, covering investment options analysis, comparison of the proposed alternatives and comparison of Caspian oil import to other global alternatives
- **IMPLEMENTATION AND FUNCTIONING PLAN OF THE PROJECT**
- **FINANCIAL, ECONOMIC, LEGAL AND INSTITUTIONAL ANALYSIS, RISK AND SENSITIVITY ANALYSIS AND ENVIRONMENTAL IMPACT ANALYSIS**

SINCE THE LAST ANALYSIS THERE HAVE BEEN SIGNIFICANT CHANGES IN THE EXTERNAL ENVIRONMENT THAT MAY AFFECT THE PROJECT

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External environment

Crude oil market situation



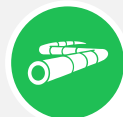
The excess of oil supply over demand

*encourages producers to search for new markets, which may lead to **oil import increase through Naftoport** but it may also become an opportunity for EAOTC project*



Increased competitive pressure on European refineries

*may weaken the condition and limit production capacity of Polish and German refineries, and thus may lead to **decrease in oil transport volume**. Possible changes in the ownership structure of the refineries*



Risk of crude oil export reduction from Russia to Europe

may result in increased demand for the supply of other crude oil grades to Europe



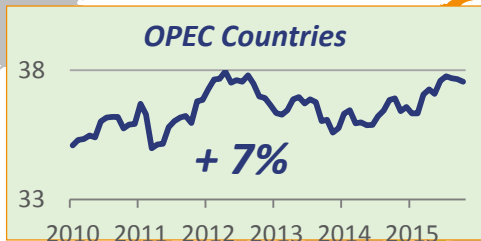
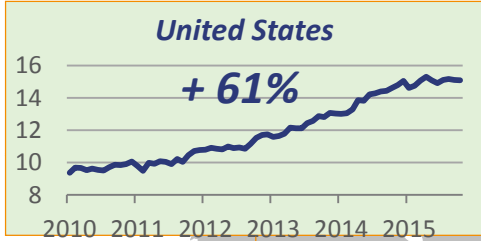
Diversification plans of Polish refineries

*may result in increased **use of Naftoport and Pomeranian pipeline** and may be an opportunity for EAOTC*

OIL OVERSUPPLY RESULTS IN GROWING COMPETITIVENESS BETWEEN OIL PRODUCERS AND SEARCH FOR NEW MARKETS



Crude oil production in 2010-2015 by major oil producers (mln bbl per day)



Global oil market situation

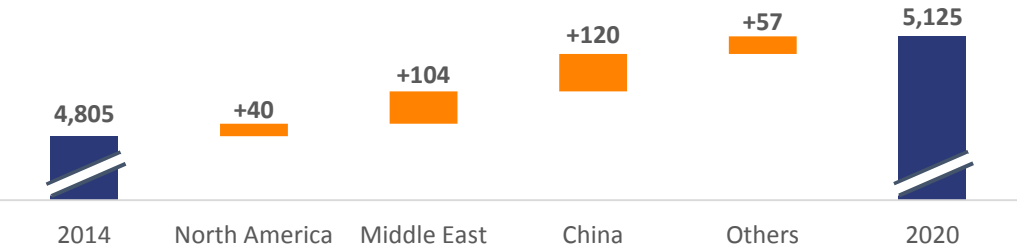
Causes of current situation on the oil market:

- **Oil oversupply**- mainly as the result of too high growth of oil production in relation to changes in demand
- **Technology** – development of oil production technology from the unconventional sources in North America in the past 10 years led to almost doubling the production volume in the United States
- **Maintaining current production level** (or even its increase) by OPEC countries and Russia, which in the environment of low prices fight for market share and have to close national budgets

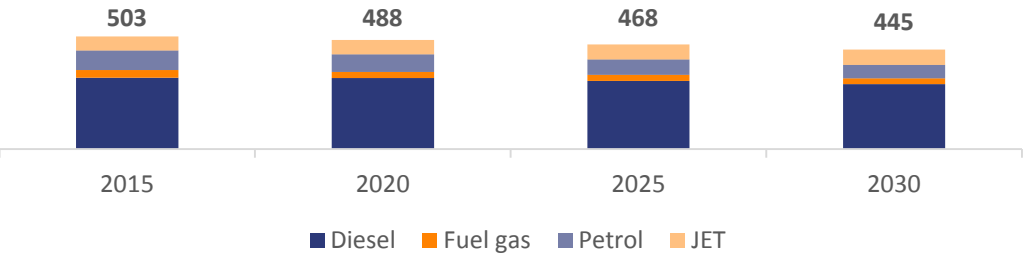
IN THE LONG TERM PERSPECTIVE EUROPEAN RAFINERIES REMAIN UNDER STRONG PRESSURE COMING FROM THE COMPETITORS FROM OTHER REGIONS AND FALLING LOCAL DEMAND



Increase in refining capacity in the world (mln tonnes)



Demand for key fuels in Europe (mln tonnes)



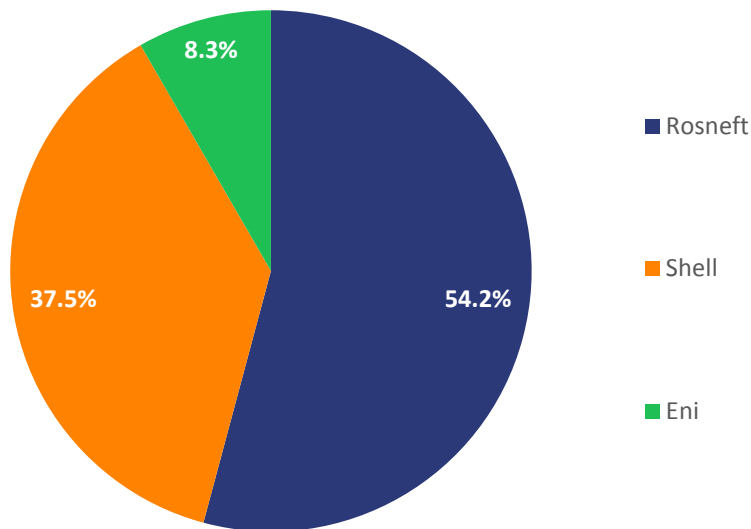
The condition of the refining sector

- Expansion of refining capacity in the regions with access to cheap oil (Middle East, North America, Russia) - the competitive pressure on refineries in Europe in the long-term perspective.
- According to IEA estimates, global production capacity in 2020 will rise by about 6.4 mbbbl /d, which will lead to surplus production capacity of 5 mbbbl/d
- Falling demand for fuels (by 12% to 2030), in particular on motor gasoline (down 31%), will also affect European refinery sector.

ROSNEFT TOOK OVER CONTROLLING STAKE IN PCK SCHWEDT REFINERY, ONE OF THE MAJOR PERN'S CUSTOMERS



PCK Schwedt ownership structure



The acquisition of a controlling stake in PCK Schwedt by Rosneft

- After the sale of 16,67% stake in PCK Schwedt, owned by Total and agreement with BP on the assets reorganization within German Ruhr Oel, Rosneft took over controlling stake in PCK Schwedt refinery
- PCK refinery is currently 100% supplied with REBCO oil provided by the „Przyjaźń” pipeline.
- Potential alternative is Rostock-Schwedt pipeline, with the capacity of 7 MTA.
- Will refinery shareholders be interested in alternative grades?

CHANGES IN THE EXTERNAL ENVIRONMENT AND THE RISK THAT NO FINANCIAL SUPPORT FROM EU WILL BE AVAILABLE DETERMINES THE NEED TO UPDATE THE FEASIBILITY STUDY



The project EAOTC was transferred to the reserve list of POLiŚ. As a result, funds amounting 495 million PLN - previously reserved for Brody-Adamowo - were transferred to the implementation of other infrastructure projects.

Taking into regard the above and changes in the external environment, there is a need to update the current business plan.

All the chapters of current Feasibility Study will be updated except for the following points:

- Legal Terms of the investment
- Technical parameters of the investment (Technical report).

In addition, the Feasibility Study will be "cleaned" off the specifics connected with the Infrastructure and Environment Operational Programme.

The issue of Brody - Adamowo pipeline utilisation in the reverse regime for the organization of oil supplies from the Baltic Sea Basin to the consumers in Ukraine will be also analysed.

The agreement with ILF on updating the Feasibility Study was signed the 18.05.2016 r. Update completion is scheduled for the end of this year.

- EAOTC project could constitute another oil supply route to refineries in Central Europe and contribute to establish the Central European oil ring.
- Its importance was confirmed by the EU, which granted Brody-Adamowo the status of PCI.
- Granting the status of PCI is not associated directly with EU funding, which is why actions have been taken to update the Feasibility Study and assessment of the project as a business project.



- Polish side is interested in the EAOTC project as another route of oil supply.
- However, in the face of significant changes in the external environment, the construction of the pipeline requires further analysis, including updating of the Feasibility Study.
- The decision about further actions and the organization of the project will be taken after analyzing the results of an updated Feasibility Study.

Before the construction of EAOTC pipeline, it is necessary to ensure the expected return rate from the project by:

- securing guarantee of revenues from the pipeline (take or pay guarantee contracts for transportation services with oil suppliers and / or oil recipients),
- confirming available oil volumes for transportation through the planned pipeline,
- providing cost-competitive transport rates in relation to alternative routes (eg. vessel supply through maritime routes)
- determining the system of project funding,
- signing intergovernmental agreements, guaranteeing stability of the project implementation.

Transport capacity has to be secured not only on the Brody-Adamowo section, but on the whole route of the corridor - from the oil sources, to oil recipients: refineries or Gdańsk harbour.



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