

*Energy Community 9th Oil Forum:
27 – 28 November 2017, Belgrade, Serbia*



***JANAF PIPELINE AS IMPORTANT FACTOR ON ENERGY MAP
OF ENERGY COMMUNITY AND EU***

CONTENT



- ❑ **General framework and challenges for oil industry**
- ❑ **Importance of oil pipelines in energy policy implementation**
- ❑ **Position and importance of JANAF pipeline and storage capacities in energy supply security of EnC and EU Member States**

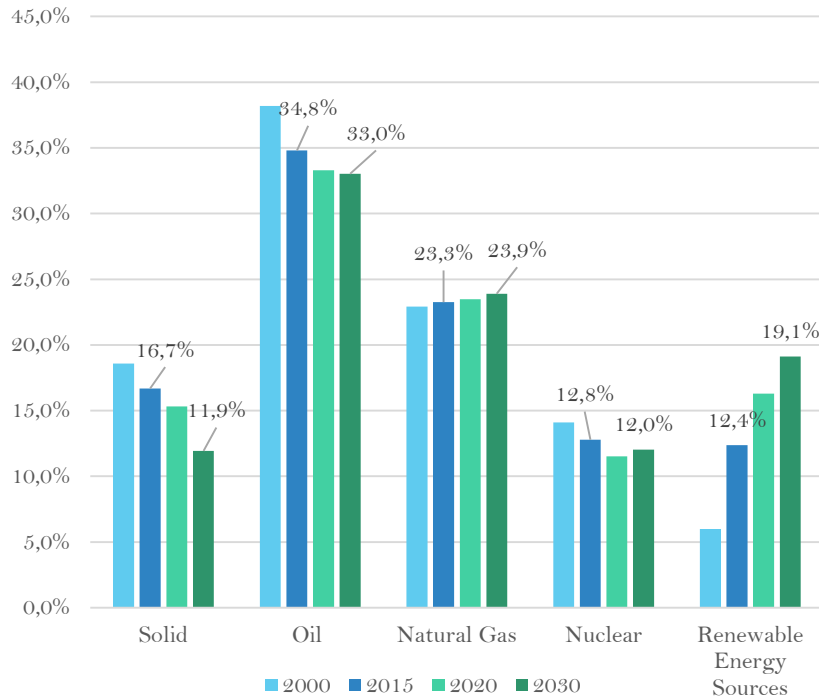
GENERAL FRAMEWORK AND CHALLENGES FOR OIL INDUSTRY

Climate policy implementation

- ❑ Paris climate conference (COP21) in December 2015
 - ❑ Legally binding global climate deal
 - ❑ Document enters into force on 4 November 2016
- ❑ Governments agreed
 - ❑ a long-term goal of keeping the increase in global average temperature to well below 2°C;
 - ❑ to aim to limit the increase to 1.5°C, since this would significantly reduce risks and the impacts of climate change
- ❑ EU's role
 - ❑ The EU has been at the forefront of international efforts towards a global climate deal

EU ENERGY STRATEGY

EU28 Primary Energy Consumption Structure



- ❑ *EU oil consumption 2030 - 513 mil. tons*
- ❑ *Petroleum products would still represent 86-87% of the EU transport sector needs by 2030 compared to 94% today.*
- ❑ *Non energy use of oil - **petrochemical industry***

Real situation:

- ❑ *Consumption: 613 mil. tons in 2016 compared to 591 mil. tons in 2014*

Targets for 2030

- ❑ 40% cut in greenhouse gas emissions compared to 1990 levels
- ❑ at least 27% share of renewable energy consumption
- ❑ at least 30% energy savings compared with the business-as-usual scenario

ENERGY SECURITY STRATEGY

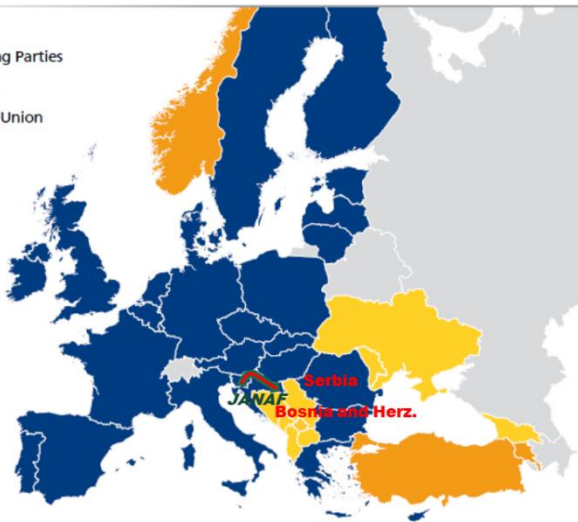
Strategic goals for 2030 relevant for oil pipeline infrastructure

- ❑ Increase of energy supply security by
 - ❑ Diversification of energy supply routes and sources
 - ❑ Strengthening interconnection capacities between countries
 - ❑ Strengthening strategic partnerships between consuming and producing countries through ownerships, common investments, etc.
- ❑ Establishment of 12 energy priority corridors and areas
 - ❑ *Oil Supply Connections in CE Europe corridor (OSC)*

EUROPEAN AND EnC OIL PIPELINE-STORAGE INFRASTRUCTURE - KEY PILLARS OF ENERGY SECURITY

As of July 2017, the Energy Community has ten members: the European Union and nine Contracting Parties - Albania, Bosnia and Herzegovina, Georgia, Kosovo*, former Yugoslav Republic of Macedonia, Moldova, Montenegro, Serbia and Ukraine. Armenia, Norway and Turkey participate as Observers.

- Contracting Parties
- Observers
- European Union



European crude oil pipelines length— 22.500 km
 EnC crude oil pipeline length – 6.251 km, of which Ukraine has 72% and Georgia has 19%

Crude oil import/export ports: Marseille, Genoa, Trieste, Hamburg, Rotterdam, Primorsk, Ust-Luga, Omišalj, Odessa, Novorossiysk, Batumi, Supsa, Kulevi, Thessaloniki

JANAF IN EUROPEAN OIL PIPELINE NETWORK AND OIL FLOWS

- ❑ JANAF pipeline has significant role in oil supply to refineries of SE & Central Europe

Refineries:

Rijeka and Sisak (Croatia),
Pancevo and Novi Sad (Serbia),
Brod (Bosnia and Herz.),
Szazhalombatta (Hungary),
Slovnaft (Slovakia), Kralupy
and Litvinov (Czech R.)

- ❑ 1979-2017; oil transport 222 mil. tons



- ❑ Diversification in crude oil and petroleum products storage - 40% of revenues

JANAF OIL PIPELINE & STORAGE SYSTEM

- ❑ JANAF Plc. performs the activities of crude oil transport, as well as storage and reloading of crude oil and petroleum products
- ❑ Designed capacity - 34 million tons of crude oil transported annually (MTA), while the installed capacity amounts to 20 MTA
- ❑ Length of pipeline - 631 km
 - ❑ Omišalj-Urinj subsea oil pipeline linking the Omišalj Terminal and INA-Oil Refinery Rijeka
 - ❑ Subsea oil pipeline linking island Krk and mainland
- ❑ Reversal flow on the Sisak-Croatian/Hungarian border-Sisak section
- ❑ Five terminals with 1,7 mil m³ storage capacities for crude oil and 202.000 m³ for petroleum products:
 - ❑ Crude oil: Omišalj (1,16 mil. m³), Sisak (500.000 m³), Virje (40.000 m³), Slavonski Brod (no storage tanks)
 - ❑ Petroleum products: Omišalj (60.000 m³), Žitnjak-Zagreb (142.000 m³)

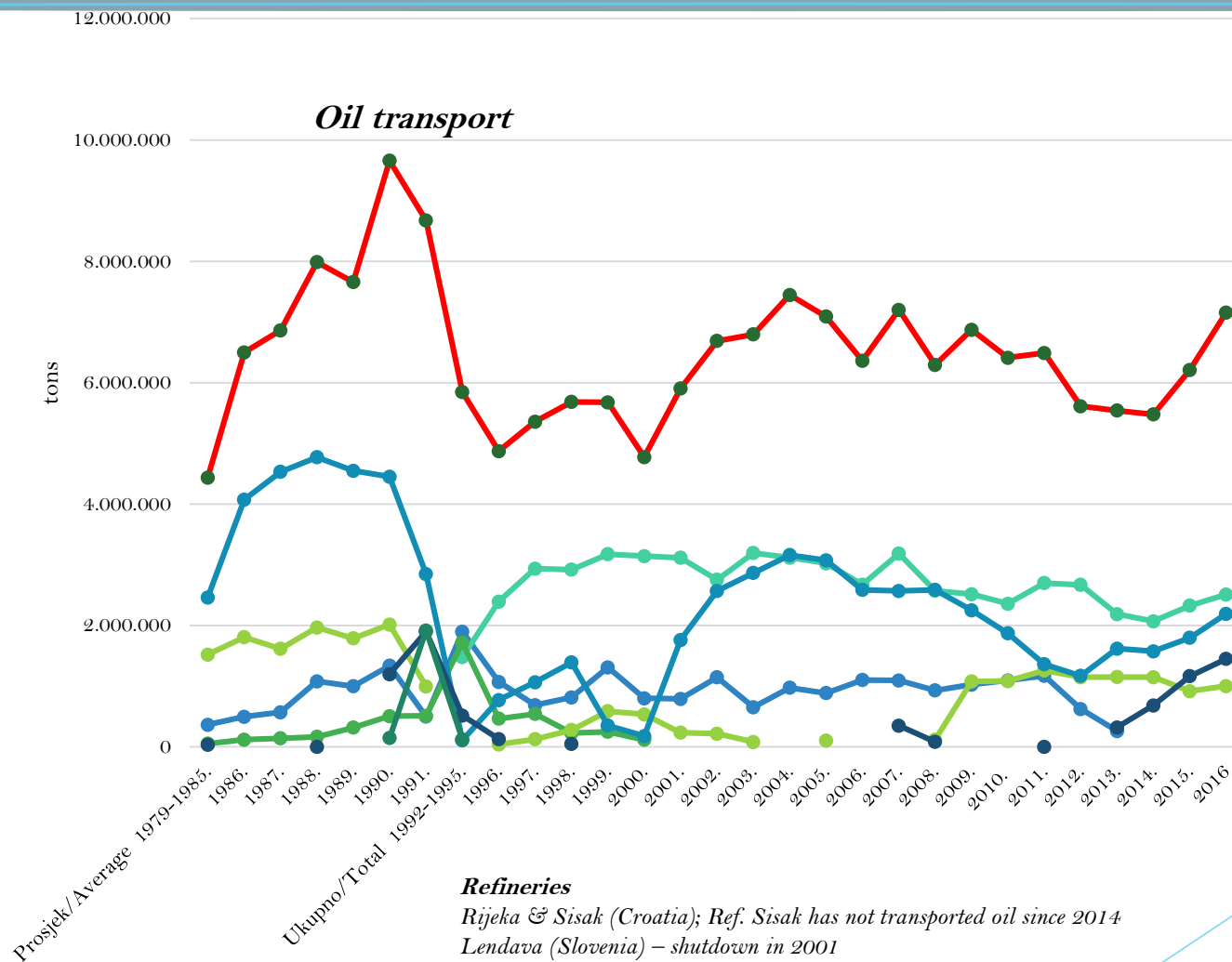


JANAF'S CONTRIBUTION TO OIL SUPPLY SECURITY



- ❑ Oil import from two directions, Omišalj and Druzhba pipeline
- ❑ Market of 6 countries with 9 refineries
- ❑ Available pipeline and storage capacities for crude oil and petroleum products
- ❑ Storage of compulsory oil and petroleum products stocks

CHALLENGES FOR JANAF & OIL INDUSTRY



- Threat of refineries shutdown and transport decrease
- Political and economic challenges

Refineries

Rijeka & Sisak (Croatia); Ref. Sisak has not transported oil since 2014

Lendava (Slovenia) – shutdown in 2001

Pancevo & Novi Sad (Serbia)

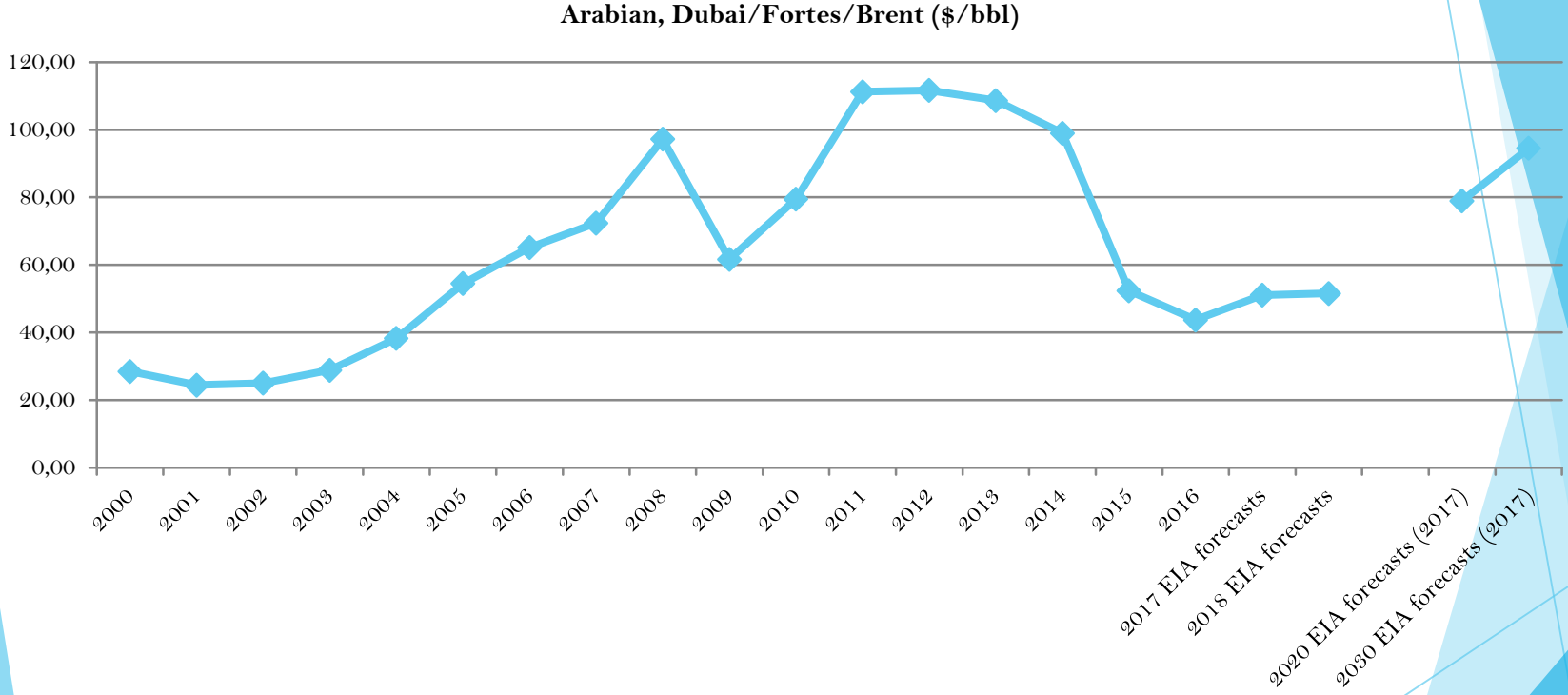
Brod (Bosnia and Herzegovina)

Szazhalombatta (Hungary)

Slovnaft (Slovakia)

Kralupy & Lilvinov (Czech R.) – transport is expected

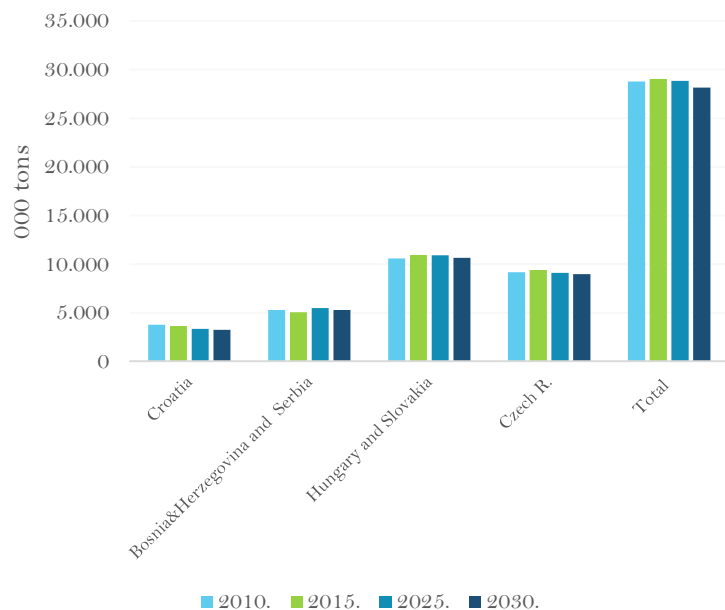
OIL PRICE



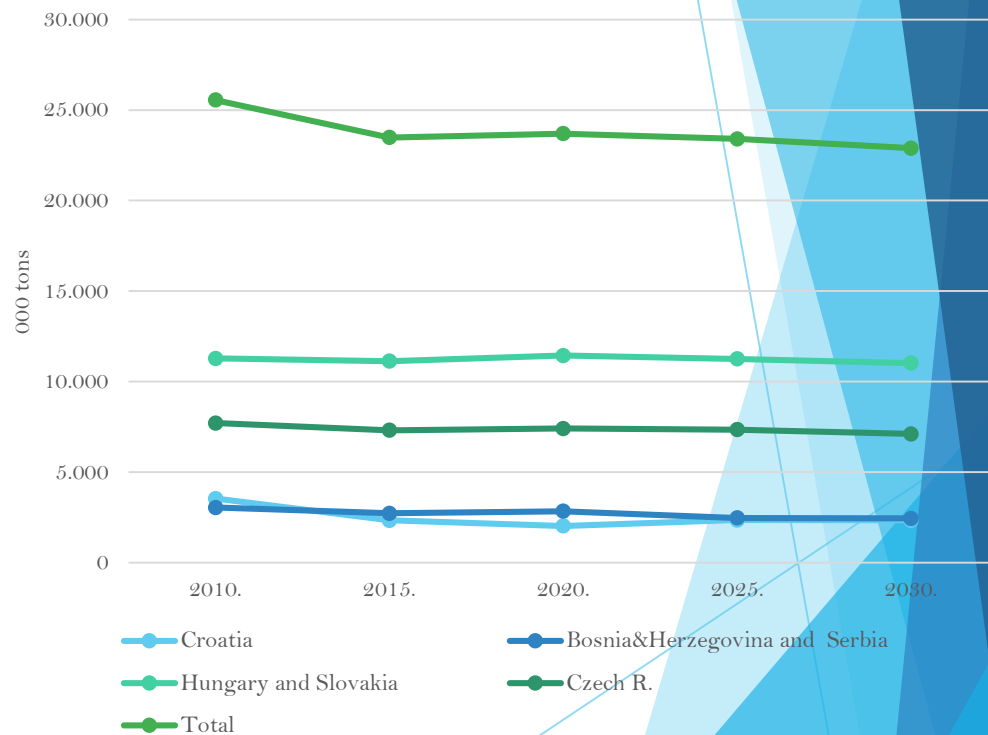
CHALLENGES AND OPPORTUNITIES

DOMESTIC AND SOUTH EASTERN & CENTRAL EUROPEAN OIL MARKET

Petroleum products consumption



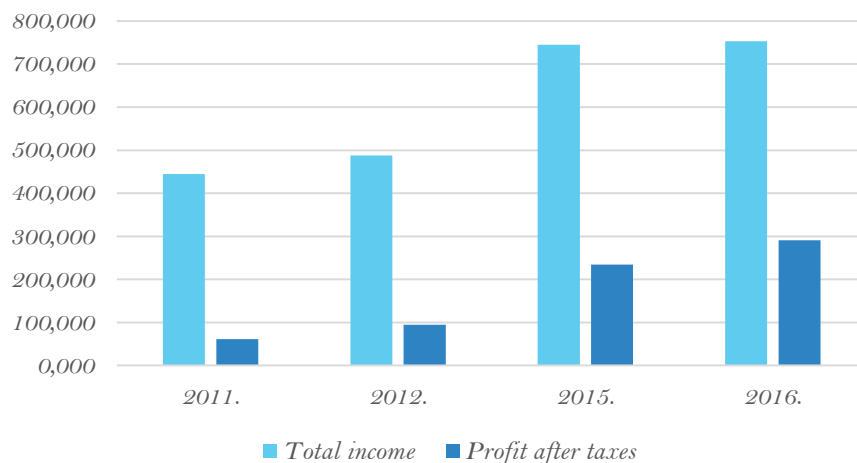
Oil import



- ❑ **Croatia, Hungary, Slovakia, Czech Republic** – oil consumption decrease
- ❑ **B&H and Serbia** – oil consumption increase/decrease

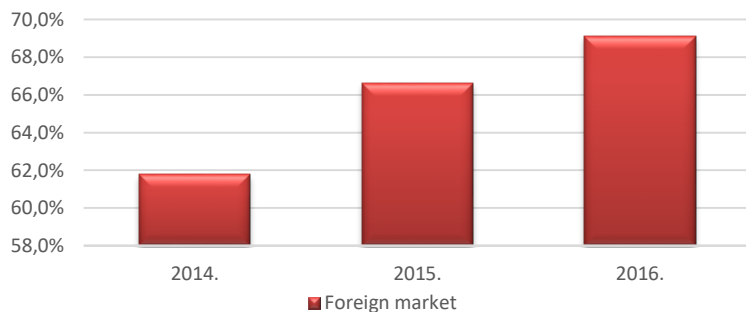
DIVERSIFICATION STRATEGY

JANAF's Total Income and Profit (in mil.HRK)

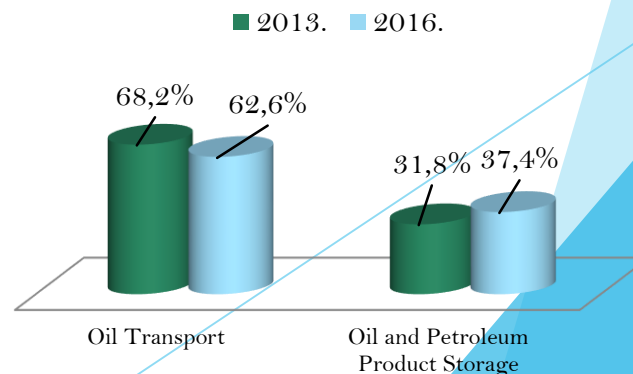


- ❑ **Diversification strategy has been developed** and agreed between all stakeholders
- ❑ Investment in storage capacities & modernization and upgrading of oil transportation and storage system
- ❑ Improvement of services and communications with customers
- ❑ Key issue: Investment and activities in protection and safety of environment, humans and equipment

Share of export in total revenues



Structure of business activities



JANAF IS IMPLEMENTING EU ENERGY POLICY

OIL PIPELINE PROJECTS OF EU COMMON INTEREST

1. Litvinov - Spergau
2. Adamowo - Brody
3. Cluster Pomeranian pipeline, including the following PCIs:
 - o Construction of oil terminal in Gdańsk (phase II)
 - o Expansion of Pomeranian pipeline
4. JANAF - Adria
5. Bratislava - Schwechat
6. TAL Plus

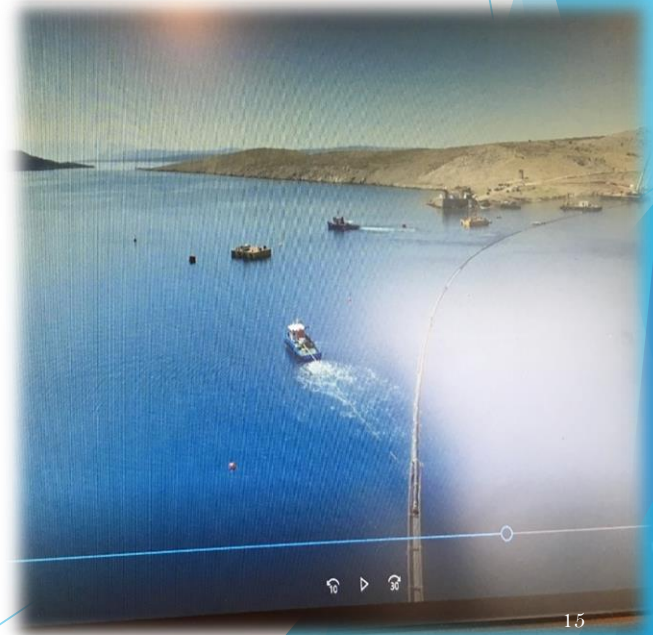


- ❑ JANAF is one of three promoters (MOL, Transpetrol) of the EU project of common interest entitled *JANAF-Adria pipelines: reconstruction, upgrade, maintenance and capacity increase of the existing JANAF and Adria oil pipelines linking Croatian Omišalj seaport to the Southern Druzhba*
- ❑ Strategic task: Increase of oil supply security of CE European countries (land locked refineries), using Omišalj import direction
- ❑ EU PCI JANAF –Adria on the 1st List (2013) & the 2nd List (2015)

JANAF ADRIA PIPELINES

Construction of two pipelines & 100% financed from companies budgets

- ❑ Százhalombatta-Šahy (Hungary-Slovakia) (February 2015)
 - ❑ Capacity - 6 MTA, flow reversal
 - ❑ Length - 128 km
 - ❑ Double increase in route capacity
 - ❑ Promoters: MOL and Transpetrol
- ❑ Subsea pipeline from Krk island to mainland (August 2017)
 - ❑ Length - 5 km, of which 730 m is under the sea, flow reversal
 - ❑ Subsea pipeline replaced crude oil transport through the Krk bridge and increased security of transport and supply
 - ❑ Promoter: JANAF



JANAF - IMPORTANT PART OF CROATIAN & EU COMPULSORY CRUDE OIL & PETROLEUM PRODUCTS STOCKS SYSTEM



□ Omišalj Terminal – 240.000 m³



□ Sisak Terminal -240.000 m³



□ Žitnjak, Zagreb Terminal -126.000 m³

JANAF'S NEW STRATEGY TOWARD FURTHER COMPANY GROWTH AND ENERGY SUPPLY SECURITY

Strategic goals

- ❑ Growth of traditional activities
- ❑ Business diversification developing **new projects aimed at obtaining new revenues**
- ❑ **Strong entrepreneurship position**
 - ❑ **Company profitability, efficiency, share values increase, employees creativeness and satisfaction**
- ❑ Contribution to **energy supply security** of Croatia, South-Eastern and Central European countries enabling oil import from different directions and sources

NEW DEVELOPMENT PROJECTS



- ❑ Protection and safety
- ❑ Modernization
- ❑ Crude oil transport & crude oil and petroleum products storage
- ❑ Diversification: non-oil projects
 - ❑ Renewables
 - ❑ Electric car & boats, filling stations
 - ❑ Local projects



PROTECTION AND SAFETY

- ❑ With the aim of securing and protecting, as well as prolonging the oil pipeline life service, the company conducts, among others:
 - ❑ Pipeline rehabilitation projects
 - ❑ Technical-physical protection

SYSTEM MODERNIZATION SCADA, GIS, ELECTRICITY SYSTEM

Purpose:

- ❑ to increase the operation safety and efficiency, such as pipeline leakage detection;
- ❑ to monitor and plan batches and scraper/pig runs, etc.

SCADA - Control Centres at Omišalj and
Sisak Terminals



NEW STRATEGIC DEVELOPMENT PROJECTS AT OMIŠALJ TERMINAL



- ❑ **Project of Reconstruction & Upgrade of Storage Facilities and Infrastructure**
 - ❑ Purpose of the Project is to improve terminal operations, capacity utilization & interoperability
 - ❑ Further increase of storage and oil transport is expected
 - ❑ Storage construction of petroleum products 20.000 m³ is under way
 - ❑ New storage construction: crude oil (3*80.000 m³) – under way
- ❑ Total storage capacities in next years:
 - ❑ **crude oil - 1,4 mil. m³: JANAF total 1,94 mil. m³**
 - ❑ petroleum products 80.000 m³: JANAF total 222.000 m³

NEW STRATEGIC DEVELOPMENT PROJECTS

Sisak Terminal

Further increase of storage activities

- ❑ Potential new capacities: crude oil ($2 \cdot 80.000 \text{ m}^3$), depending on market demand



Žitnjak, Zagreb Terminal

Further increase of storage activities

- ❑ Potential new capacities: petroleum products (60.000 m^3), depending on market demand



CONCLUSION

- ❑ ***Strategic position*** in energy supply security of EnC and EU Member States
 - ❑ Providing oil transport from 2 directions, particularly Omišalj, and numerous sources, available capacities, safe and reliable transport and storage
 - ❑ Storing compulsory and ‘commercial’ oil & petroleum products stocks
- ❑ JANA F continues developing ***new projects and business diversification strategy***
 - ❑ Particularly, improving security, reliability, and quality of transportation and storage services
 - ❑ Ensuring company growth and profitability
 - ❑ Contributing to positive climate changes
 - ❑ Contributing to energy supply security, energy market integration and economy development of EnC & EU Member States.



Thank you for your attention!

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