

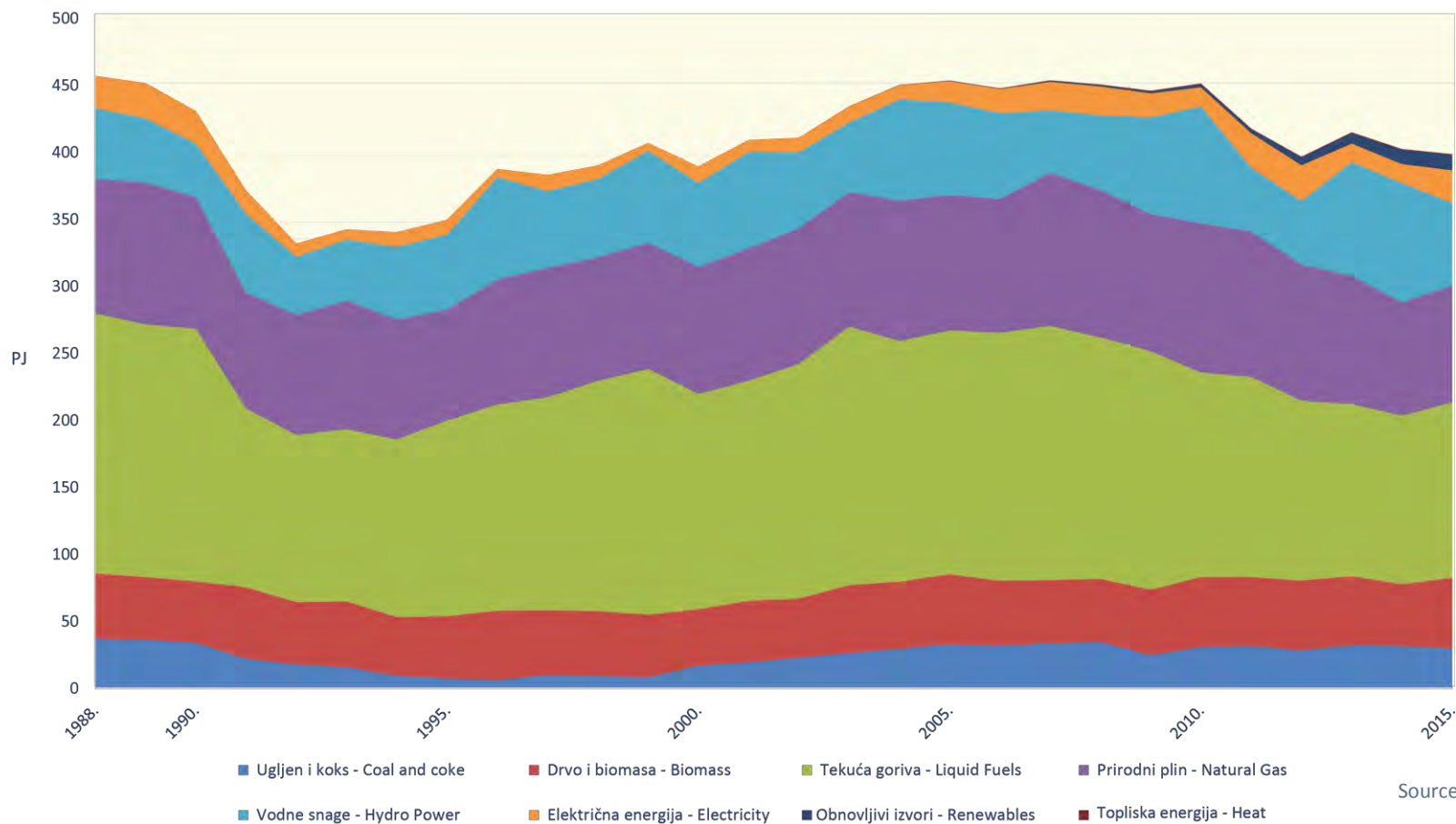
THE FUTURE OF NATURAL GAS SECTOR OF THE REPUBLIC OF CROATIA

Vladimir Đurović

10TH SE EUROPE ENERGY DIALOGUE

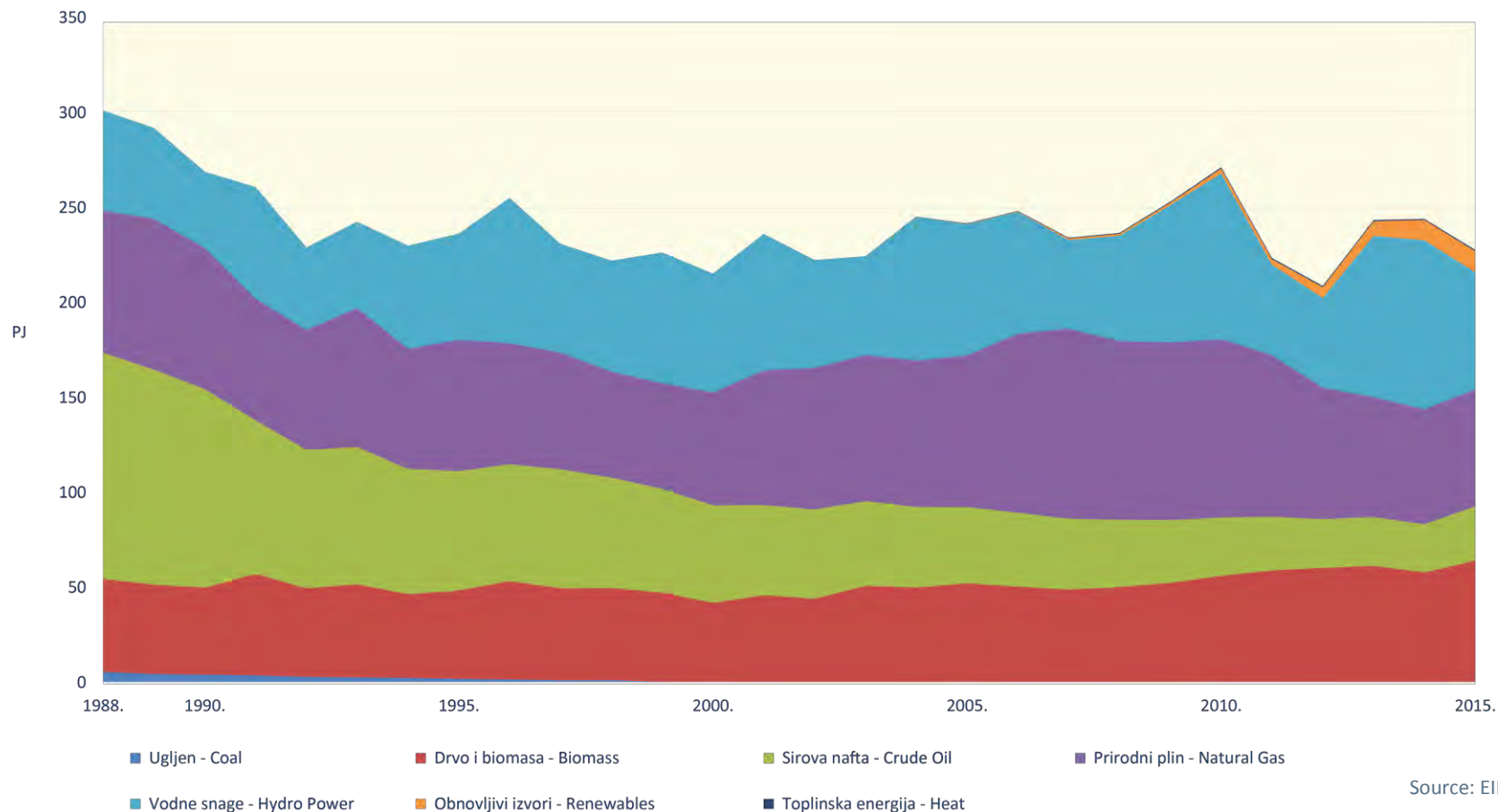
Belgrade, 13-14 June, 2017

TOTAL PRIMARY ENERGY SUPPLY



Source: EIHP

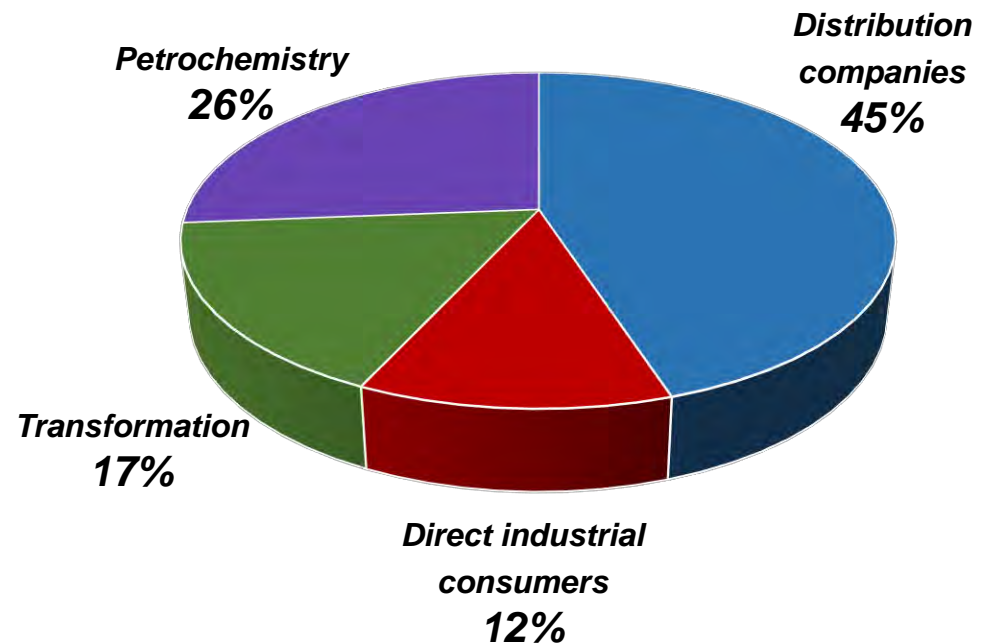
PRIMARY ENERGY PRODUCTION



Source: EIHP

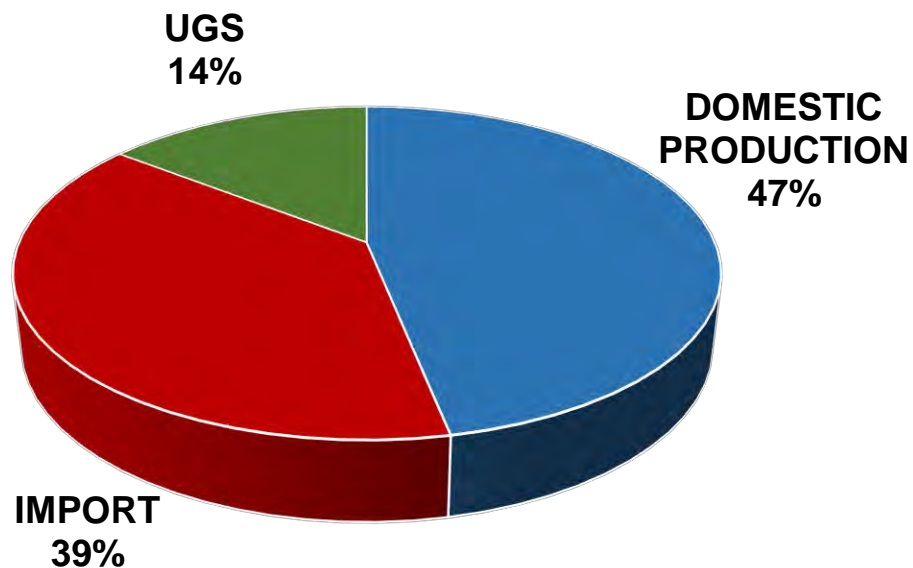
NATURAL GAS CONSUMPTION IN CROATIA IN 2015

NATURAL GAS CONSUMPTION 2015	TWh
Distribution companies	10,34
Direct industrial consumers	2,74
Transformation	3,87
Petrochemistry	6,04
TOTAL	22,99



NATURAL GAS SUPPLY IN CROATIA IN 2015

NATURAL GAS SUPPLY 2015	TWh
DOMESTIC PRODUCTION	12,35
IMPORT	10,19
UGS	3,83
TOTAL	26,37



CROATIAN GAS TRANSMISSION SYSTEM

- 2694 km high pressure gas system
 - 952 km – 75 bar
 - 742 km – 50 bar
- 157 MRS (282 metering lines)
- 10 entry points
- 172 exit points
- 2 interconnections
- 95% covering the territory of Croatia
- 600 mil EUR investments (2002-2015)



DEVELOPMENT PROJECTS

STRATEGIC PROJECTS

- LNG Project
- Ionian-Adriatic Pipeline (IAP)
- Baltic-Adriatic Gas Corridor
- Compressor Stations

INTERCONNECTIONS

- Bosnia and Herzegovina
- Slovenia
- Serbia



IONIAN ADRIATIC PIPELINE - IAP

- *Connecting Croatian Gas Transmission System with project TAP*
- *New supply source for the region from the Southern Corridor*
- *Possibility of gas transit to the Central Europe*
- *Reverse flow*
- *pipeline Split (HR)-Fieri (ALB) DN800 /1000 / 75 bar, L= 511 km, capacity 5 bcma*
- *gas supply of:*
 - Albania - 1 bcma*
 - Montenegro - 0,5 bcma*
 - BiH - 1 bcma*
 - Croatia - 2,5 bcma*



Source: IAP Feasibility Study

INTERNATIONAL ACTIVITIES/IAP

2007:

- **Ministerial Declaration: Croatia, Montenegro and Albania**
- **MoU between Plinacro and EGL** (former TAP project promoter)

2008:

- BiH signed **Ministerial Declaration**

2010:

- establishing **Interstate Committee for IAP** under Energy Community umbrella

2011:

- **MoUC between Plinacro and TAP**
- MoUC between TAP and BH Gas, and TAP and representatives of ALB and MNE
- establishing Joint Working Group TAP/IAP
- **granted 3,5 mil EUR-a by WBIF for the Comprehensive Feasibility Study**
- Joint Working Group TAP/IAP joined by Plinovodi

2013:

- MoUC between **Plinacro and Socar**
- TAP selected for the transmission of gas from Shah Deniz II field

2014:

- **Comprehensive Feasibility Study** finalized

2016:

- Joint Statement of the Ministerial Meeting on the Ionian Adriatic Pipeline
- Memorandum of Understanding and Cooperation: Albania, Croatia, Montenegro, BiH –pending
- Project Management Unit (PMU) – Ministries and TSOs – Albania, BiH, Croatia, MNE and SOCAR

CROATIAN SECTIONS OF IAP

Split-Ploče

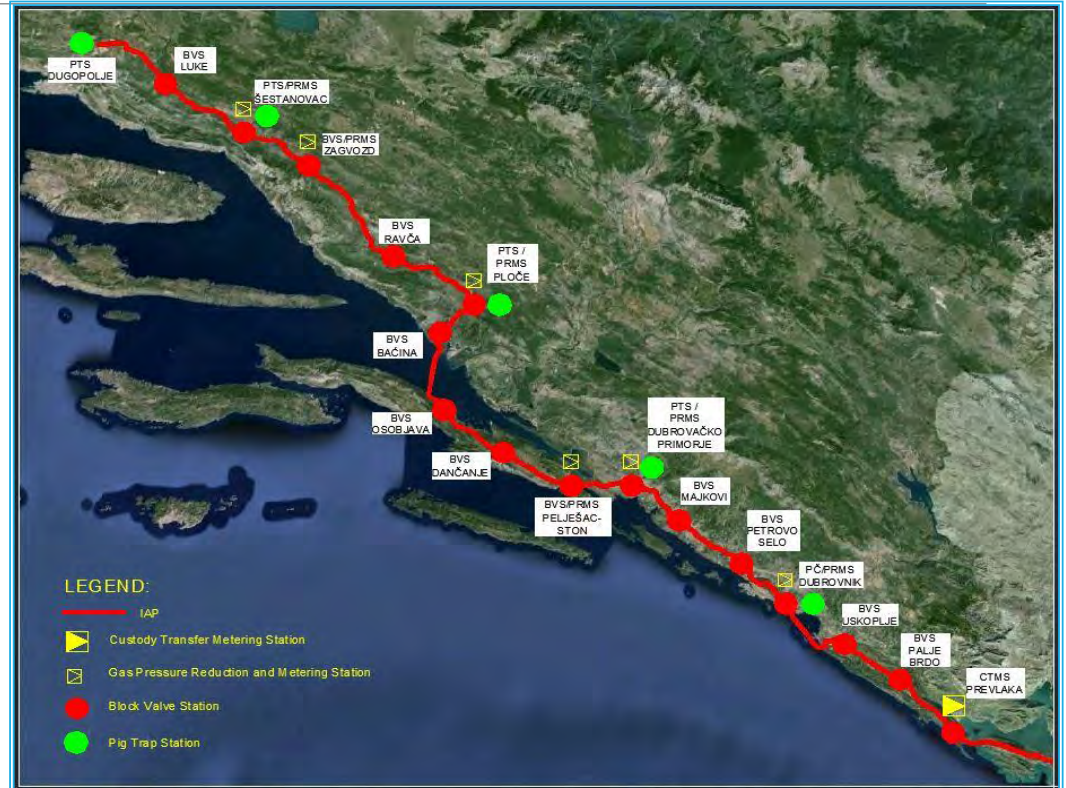
- DN 800/75 bar, L 102 km
- ESIA, Basic Design, Location Permit, Main Design ✓
- Building Permit :
 - 1. Gas Node Split ✓
 - 2. Split-Zagvozd- in progress
 - 3. Zagvozd –Ploče – in progress

Ploče-Dubrovnik

- DN 800/75 bar, L 103 km
- ESIA, Basic Design ✓
- Location Permit in progress

Dubrovnik-Prevlaka-Dobreč

- DN 800/75 bar, L 47 km
- ESIA, Basic Design ✓
- Location Permit in progress



Compressor Station Dugopolje (Split)

Source: IAP Feasibility Study

-1,4 MW

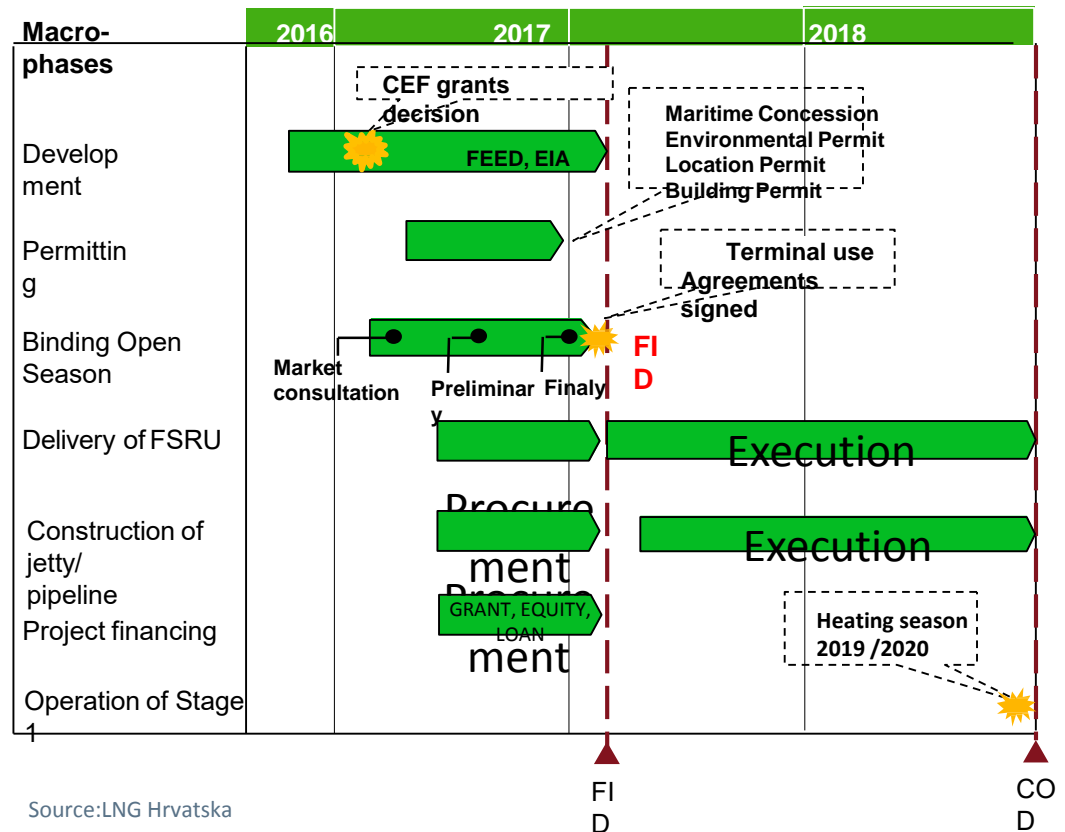
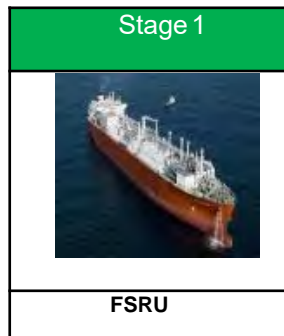
- Conceptual solution in progress

LNG TERMINAL KRK

- INCLUSION IN EUROPEAN ENERGY SECURITY STRATEGY(28th of May 2014)
- CONFIRMATION OF MARKET INTEREST/RESULTS OF THE NON-BIDING OPEN SEASON(2015)
- DECISION OF THE CROATIAN GOVERNMENT-PROJECT OF STRATEGIC IMPORTANCE(16th July 2015)
- CONCLUSION OF THE CROATIAN GOVERNMENT ON SPEEDING UP THE PROCEDURE OF CONSTRUCTING THE LNG TERMINAL(8th of June 2016)
/I faze – FSRU
- SUPPORT/ CO-FINANCING BY EUROPEAN UNION(CEF) (2017)

IMPLEMENTATION PLAN

First phase implementation plan





Source:LNG Hrvatska

THE FUTURE OF NATURAL GAS SECTOR OF THE REPUBLIC OF CROATIA

- SO FAR THE ROLE OF NATURAL GAS IN ENERGY AND ECONOMY OF THE REPUBLIC OF CROATIA WAS EXCEPTIONALLY IMPORTANT
- THE EXISTING STRATEGY OF ENERGY DEVELOPMENT OF THE REPUBLIC OF CROATIA ENVISAGES A SIGNIFICANT ROLE OF NATURAL GAS IN THE FUTURE, BUT IT IS OUTDATED (the implementation plan has not been adopted, long-term economic crises, accession to the EU, change in trends in energy and environmental protection
- PARIS AGREEMENT ON CLIMATE CHANGES
- LOW CARBON DEVELOPMENT STRATEGY OF THE REPUBLIC OF CROATIA
- NEW STRATEGY OF ENERGY DEVELOPMENT OF THE REPUBLIC OF CROATIA
- IT IS EXPECTED THAT NATURAL GAS WILL MAINTAIN ITS SIGNIFICANT ROLE IN ENERGY AND ECONOMY OF THE REPUBLIC OF CROATIA

STATUS AND EXPECTED DEVELOPMENT OF CROATIAN NATURAL GAS SECTOR BRANCHES

- EXPLORATION AND PRODUCTION – efforts of INA (Croatian oil company) to stop the decline of production on the existing fields, preparation of new concession areas
- NEW SUPPLY SOURCES AND ROUTES – integration into new supply routes, but LNG project is also crucial
- TRANSPORT – reached high level of development, connection with the systems of neighbouring countries, the transport of LNG in focus
- STORAGE ACTIVITY – reconstruction of the existing UGS-Okoli and the preparation of the construction of a new peak storage facility UGS-Grubišno Polje
- DISTRIBUTION – developed distribution systems of continental part, development of new distribution areas/priority Dalmatia
- CONSUMPTION - development of consumption in new areas and consumption by using new technologies

MARKET INTEGRATION

SIGNIFICANT POTENTIAL:

- HIGHLY DEVELOPED NATIONAL GAS TRANSMISSION SYSTEM
- NEW PIPELINES + INTERCONNECTIONS + COMPRESSOR STATIONS
 - NEW SUPPLY PROJECTS (LNG, IAP)
 - NEW PRODUCTION POTENTIAL
 - UGS POTENTIALS



**IMPORTANT ROLE IN REGIONAL SECURE AND
COMPETITIVE SUPPLY**

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**INTEGRATION TO REGIONAL AND EUROPEAN NATURAL
GAS MARKET**

**THANK YOU FOR
YOUR ATTENTION!**