

THE ROLE OF THE REPUBLIC OF CROATIA IN DEVELOPMENT OF THE NATURAL GAS SECTOR IN THE REGION

4th South East Europe Energy Dialogue,

3 – 4 June 2010, Thessaloniki, Greece



GAS TRANSMISSION SYSTEM OPERATOR

+

GAS STORAGE SYSTEM OPERATOR

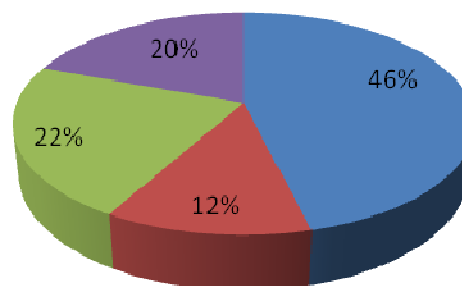
NATURAL GAS SALE 2009

Distribution companies
Direct industrial consumers
Croatian electric power industry supply
Petrochemistry
TOTAL

Bcm
1,28
0,34
0,62
0,54
2,78

NATURAL GAS SALE 2009

- Distribution companies
- Direct industrial consumers
- Croatian electric power industry supply
- Petrochemistry



NATURAL GAS SUPPLY 2009

Domestic production

Production Panon

Production north Adriatic

Import

TOTAL

Underground storage

MARKET TOTAL

Bcm

1,72

0,91

0,81

1,04

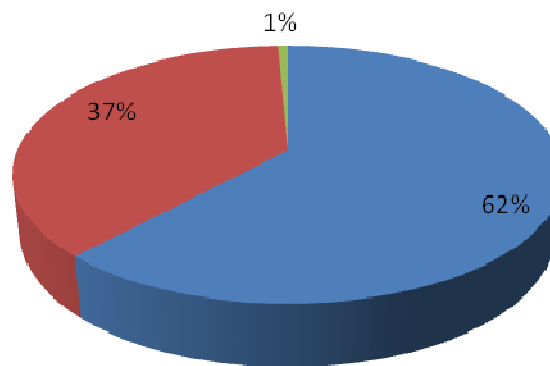
2,76

0,02

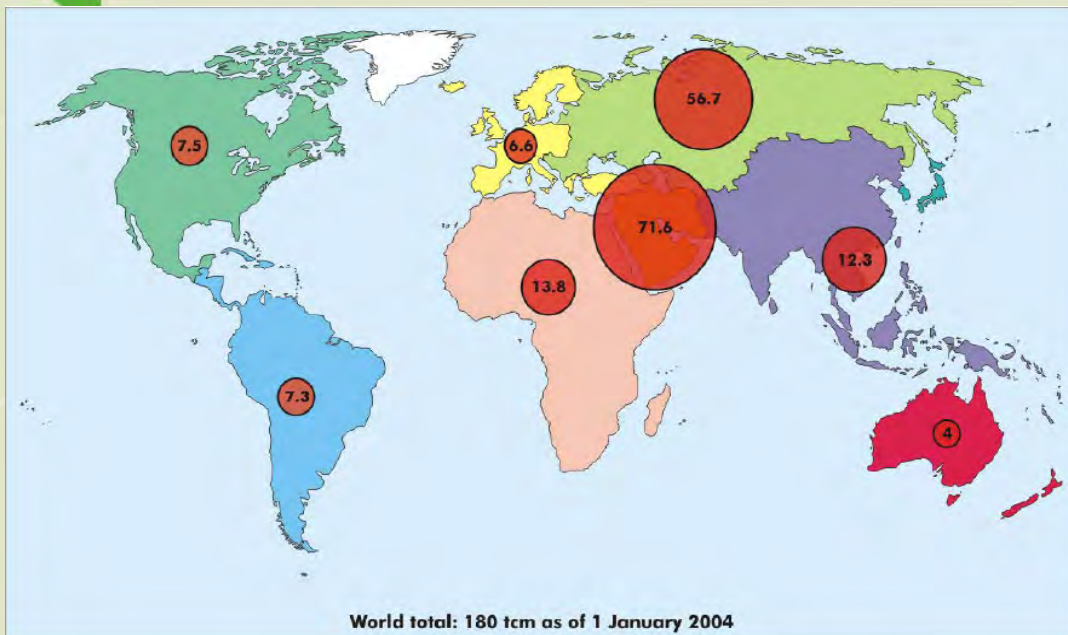
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NATURAL GAS SUPPLY 2009

■ Domestic production ■ Import ■ Underground storage



POSITION OF CROATIA IN RELATION TO EXISTING AND NEW GAS SUPPLY ROUTES



IMPLEMENTATION

Of the Plan of Development, Construction and Modernization of the gas transmission system in the Republic of Croatia from 2002 to 2011 with associated Amendments to the second development-investment cycle 2007-2011 and two Revisions

HAS ENTERED ITS FINAL STAGE



ALL GOALS RELATED TO THE CONSTRUCTION OF THE GAS TRANSMISSION SYSTEM WILL BE REACHED

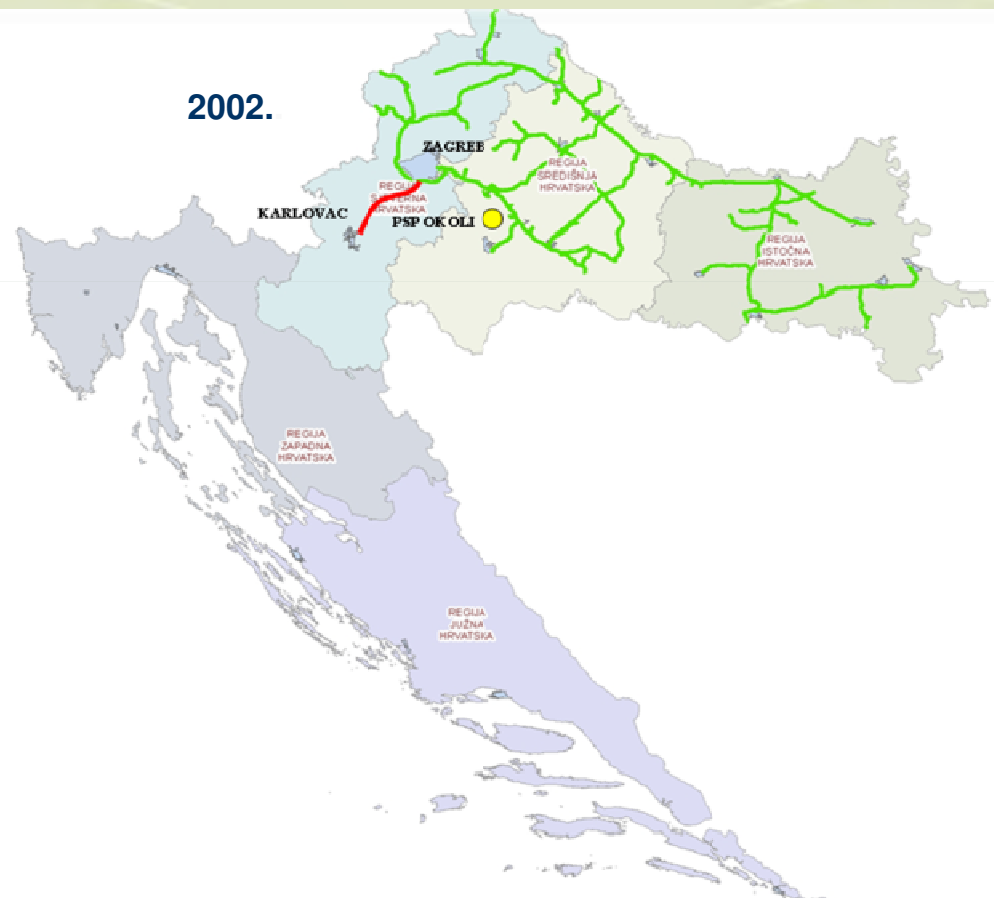
**NEWLY CONSTRUCTED GAS TRANSMISSION SYSTEM WILL PROVIDE PRECONDITIONS
NECESSARY FOR REACHING BASIC GOALS OF THE PLAN RELATED TO THE
CONSTRUCTION OF THE ENTIRE GAS ECONOMY**

- **reliable and safe natural gas supply,**
- **supply of the largest part of the Republic of Croatia with natural gas,**
- **long-term increase of natural gas consumption,**
- **diversification of natural gas supply,**
- **connection of our gas transmission system with the gas transmission systems of neighbouring countries**



**BUT DUE TO ITS CONFIGURATION AND CAPACITIES IT WILL CREATE SIGNIFICANT
POSSIBILITIES FOR NEIGHBOURING COUNTRIES**

Comparison of the development of the gas transmission system in the Republic of Croatia 2002 - 2012



UNDERGROUND GAS STORAGE

Extremely significant for the development of the entire gas transmission system

Unbundling of the underground gas storage PSP – Okoli into the separate company PODZEMNO SKLADIŠTE PLINA d.o.o. as well as the purchase and takeover of it by company PLINACRO Ltd.

STRATEGIC STEP FORWARD WHICH ENABLED PRECONDITIONS FOR THE FURTHER DEVELOPMENT OF THIS ACTIVITY:

- **with the aim to fulfil the needs of the Croatian market**
- **with the aim to open the possibility of using Croatian storages for neighbouring countries as well as to achieve significant income both from the lease of the storage capacities and related transit**



CROATIAN POTENTIALS FOR NATURAL GAS STORAGE

EXISTING GAS STORAGE UGS – OKOLI

- put into operation in 1987
- maximum operating capacity 550 mil m³ (unused !)
- maximum exit capacity 280 000 m³/hr

NEW PEAK STORAGE UGS – GRUBIŠNO POLJE

- to be completed and put into operation in 2013 !?
- maximum operating capacity 25 mil m³
- maximum exit capacity 100 000 m³/h

NEW SEASONAL STORAGE UGS – BENIČANCI

- to be put into operation in 2015 !
- maximum operating capacity over 2 bil. m³ !

AND OTHER POTENTIAL LOCATIONS!

INTERCONNECTIONS

KEY FACTOR FOR THE DEVELOPMENT OF THE ENTIRE GAS TRANSMISSION SYSTEM

- are preconditions for the reliable, safe and diversified natural gas supply
- are the preconditions for realization of transit and use of the capacities of the Croatian underground storages as well as other business activities related to natural gas which can provide significant additional income
- enable increase of the efficiency of the basic national gas transmission system as well
- increase the flexibility of the entire gas transmission system

Connection of the Croatian gas transmission system with the systems of neighbouring countries to be accomplished in 2011



TRANSIT GAS TRANSMISSION SYSTEMS

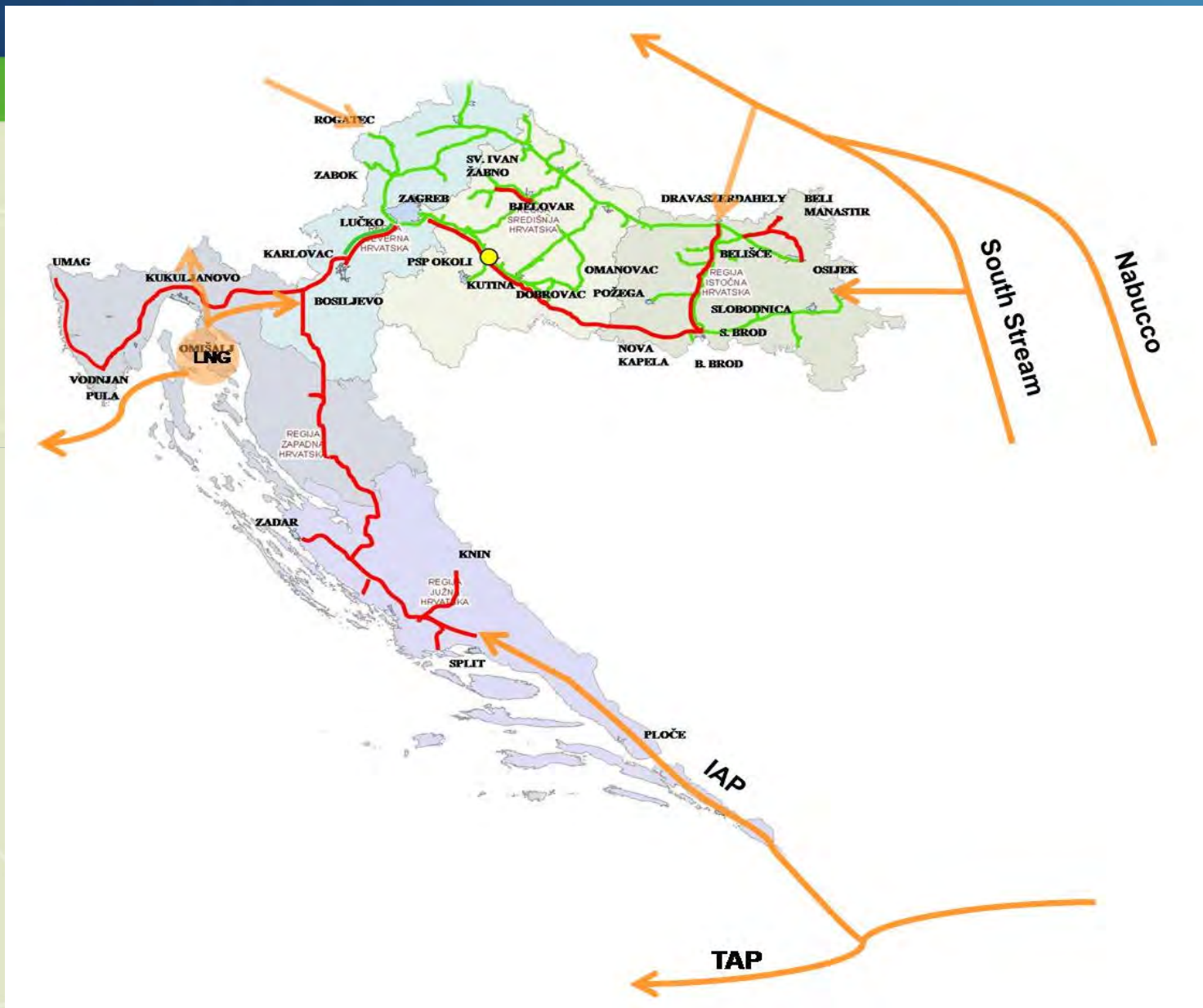
provide transmission of natural gas to the neighbouring countries-TRANSIT through the Republic of Croatia



Directly connected to the implementation of the new supply routes project:

LNG
South Stream
Nabucco
TAP + IAP

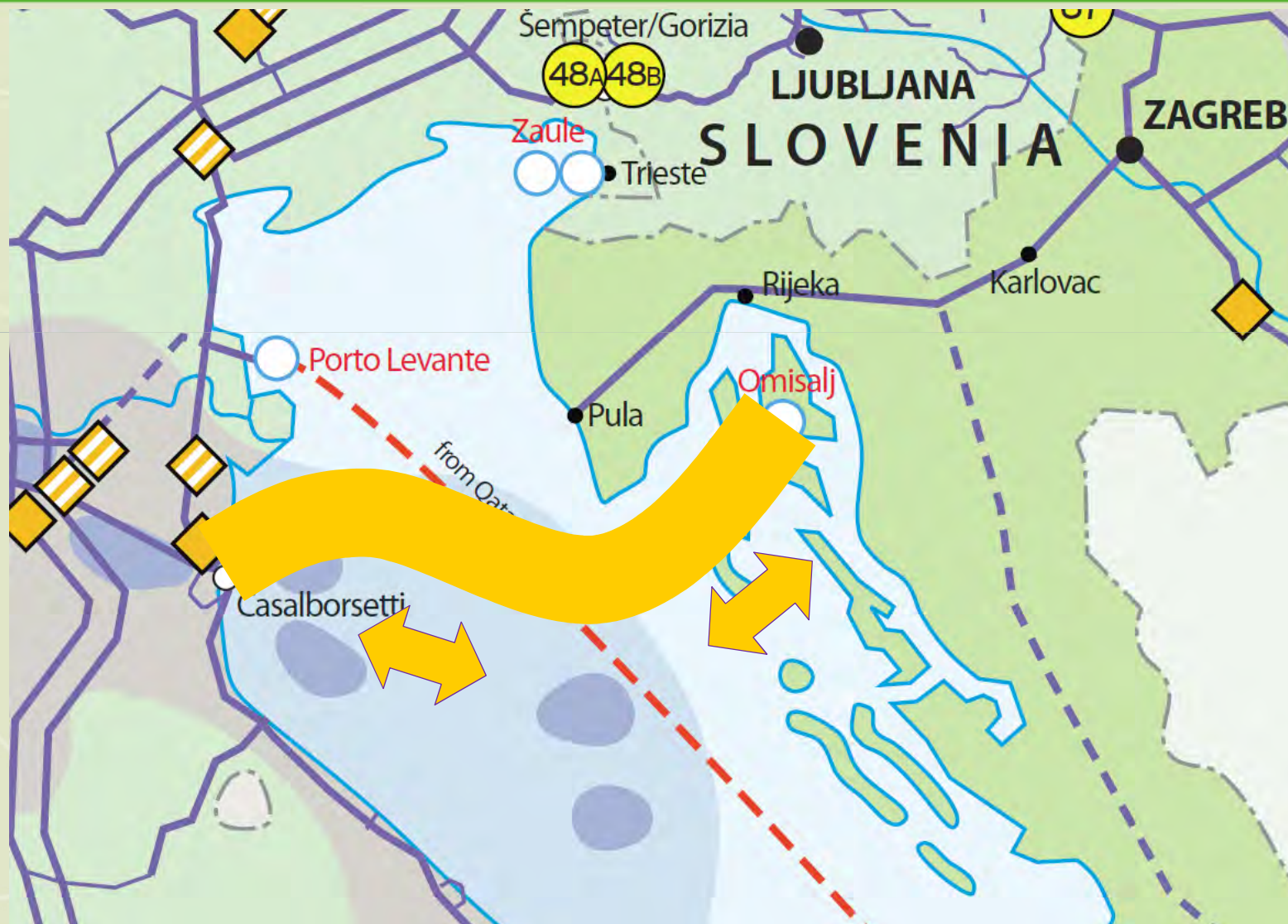
as well as new underground gas storages



MAIN TRANSMISSION AND TRANSIT DIRECTIONS OF SLOVENIAN TRANSMISSION SYSTEM



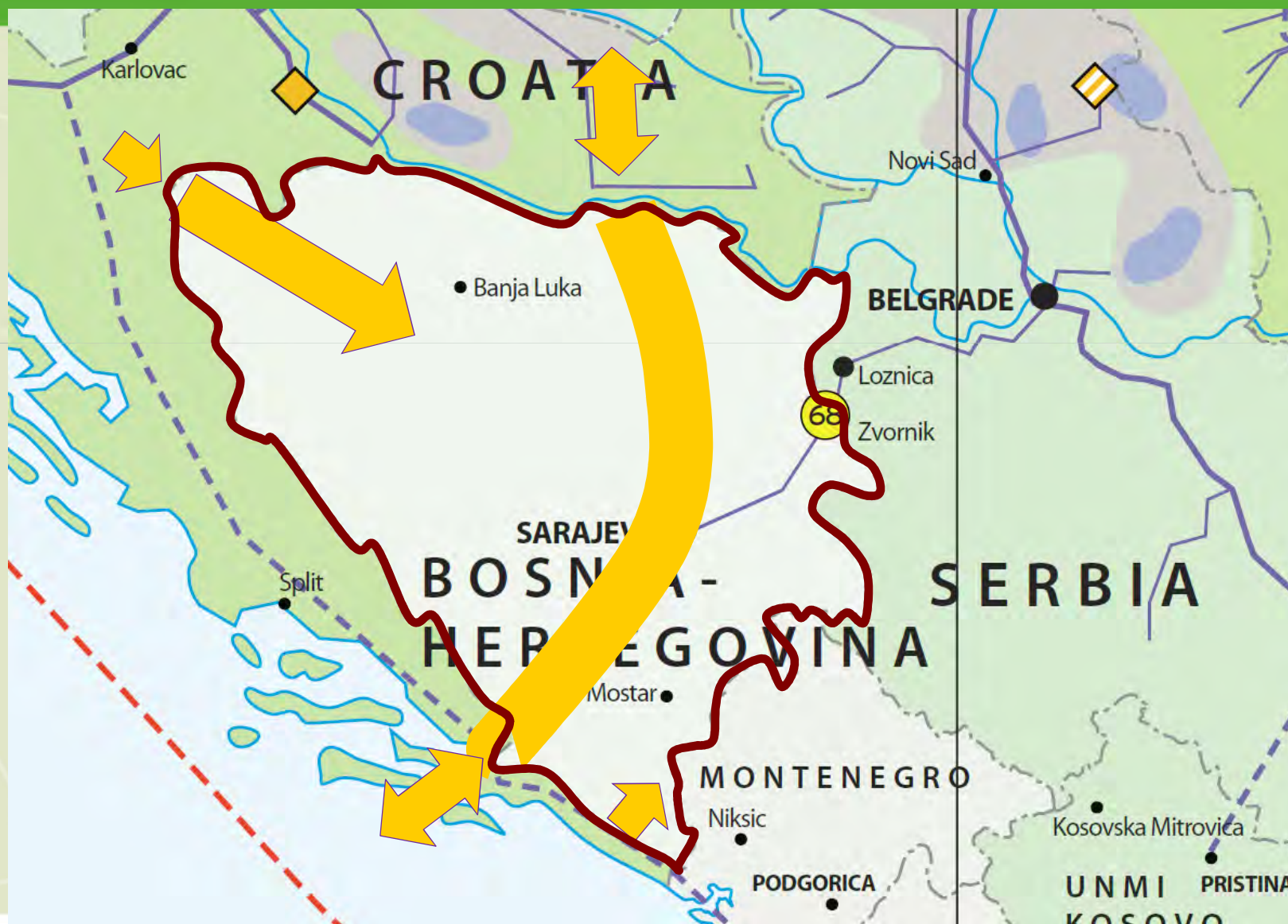
CONNECTING CROATIAN AND ITALIAN TRANSMISSION SYSTEMS THROUGH UNDERSEA GAS PIPELINE OMIŠALJ – CASAL BORSETTI



HUNGARIAN AND SERBIAN GAS TRANSMISSION SYSTEMS AND PROJECTS IN SURROUNDING ARE



THE MAIN DEVELOPEMENT DIRECTIONS OF BOSNIAN AND HERZEGOVINIAN TRANSMISSION SYSTEM



- IAP – Ionian – Adriatic Pipeline
- connection of gas transmission system of Lika and Dalmatia with TAP Project (Trans – Adriatic- Pipeline)
- MP Ploče (HR) – Fieri (ALB) DN800 - DN1000 / 75 bar, L= 420 km
- supply with natural gas - Albania, Montenegro, Bosnia and Herzegovina and Croatia
- possibility of transit of natural gas to Central and Western Europe
- possibility of reverse flow





CROATIAN GAS TRANSMISSION SYSTEM





INTERACTION BETWEEN GAS TRANSMISSION SYSTEMS AND PROJECTS OF NEIGHBORING COUNTRIES



**SPATIAL AND LOCATIONAL VICINITY
SAME MARKET ORIENTATION
OVERLAY OF TRANSMISSION AND TRANSIT DIRECTIONS**



GAS TRANSMISSION SYSTEMS SYNERGY

GAS TRANSMISSION SYSTEMS SYNEGRY

+

NEW SUPPLY ROUTES

+

LNG TERMINAL

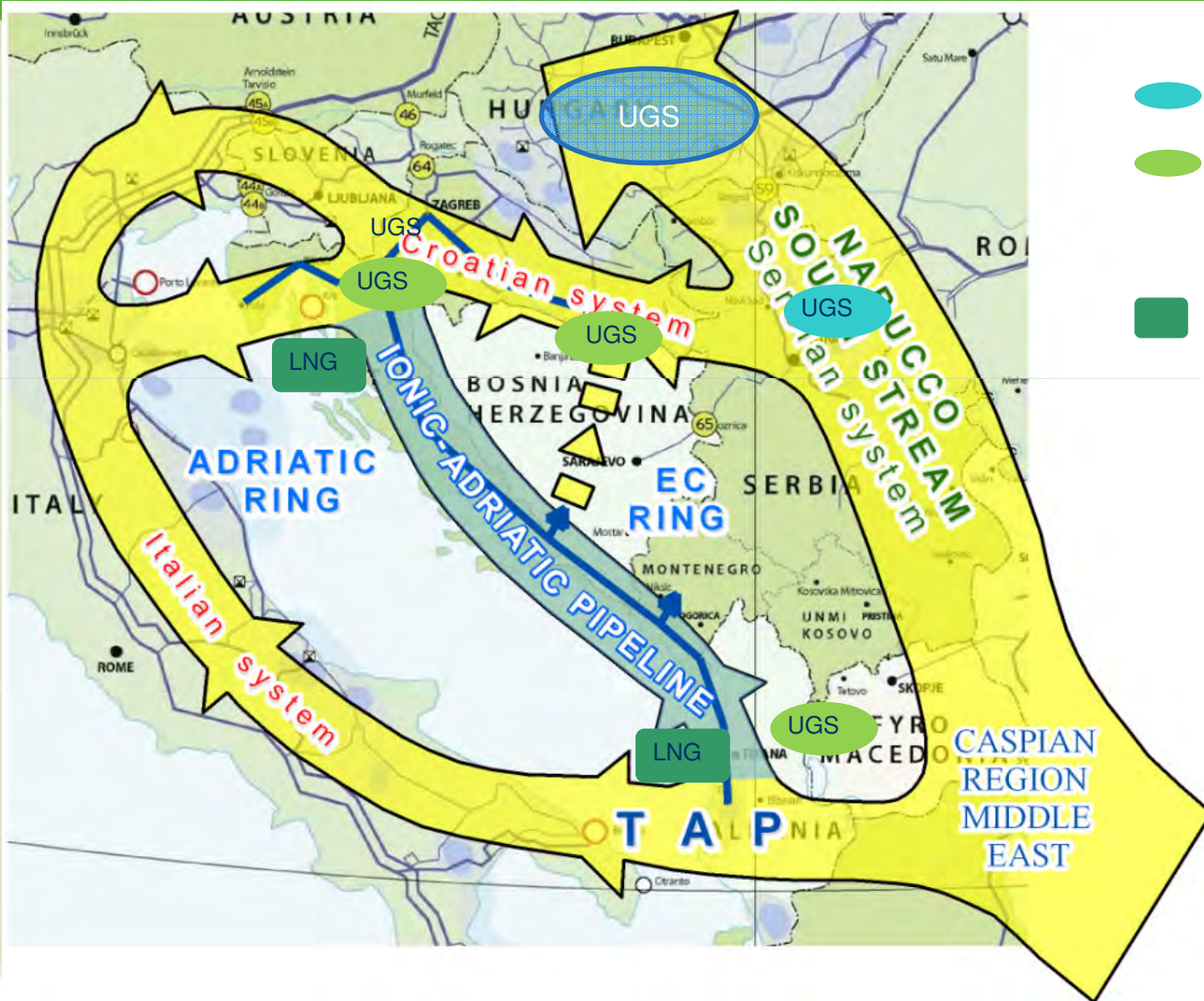
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UNDERGROUND GAS STORAGES



**SYNERGY OF WHOLE GAS SYSTEMS
IN WIDER REGION**

EC RING + ADRIATIC RING



UNDERGROUND STORAGE

- UGS – existing
- UGS – planned

LNG TERMINALS

- LNG - planned



NORTH-SOUTH-EAST NATURAL GAS TRIANGLE

(Energy Summit in Hungary in February 24th 2010)



GLOBAL ECONOMIC CRISES IS PRESENT IN THE ENTIRE NATURAL GAS SECTOR AS WELL



DECREASE OF THE NATURAL GAS CONSUMPTION!



DELAY IN IMPLEMENTATION OF NEW SUPPLY PROJECTS !?



SECURITY OF SUPPLY !?



REGIONAL COOPERATION



USE OF THE REGIONAL POTENTIALS



SYNERGY OF THE REGIONAL APPROACH AND PERFORMANCE