

# **Supply Prospects and Market Realities in Advancing Gas Use IN ALBANIA**

**11<sup>th</sup> SE Europe Energy Dialogue  
26-27 JUNE, 2018  
THESSALONIKI**

# **Main Pillars of Albania's Energy Policy**

## **➤ Enhanced energy supply security.**

- . Domestic resources
- . Reliable
- . Sustainable
- . Efficient
- . Environmentally friendly
- . Cost effective
- . Competitive

## **➤ Penetration of natural gas in the Albanian energy sector through carrying out selected infrastructure investments and contributed on the development of a safe and secure energy network in the South East Europe**

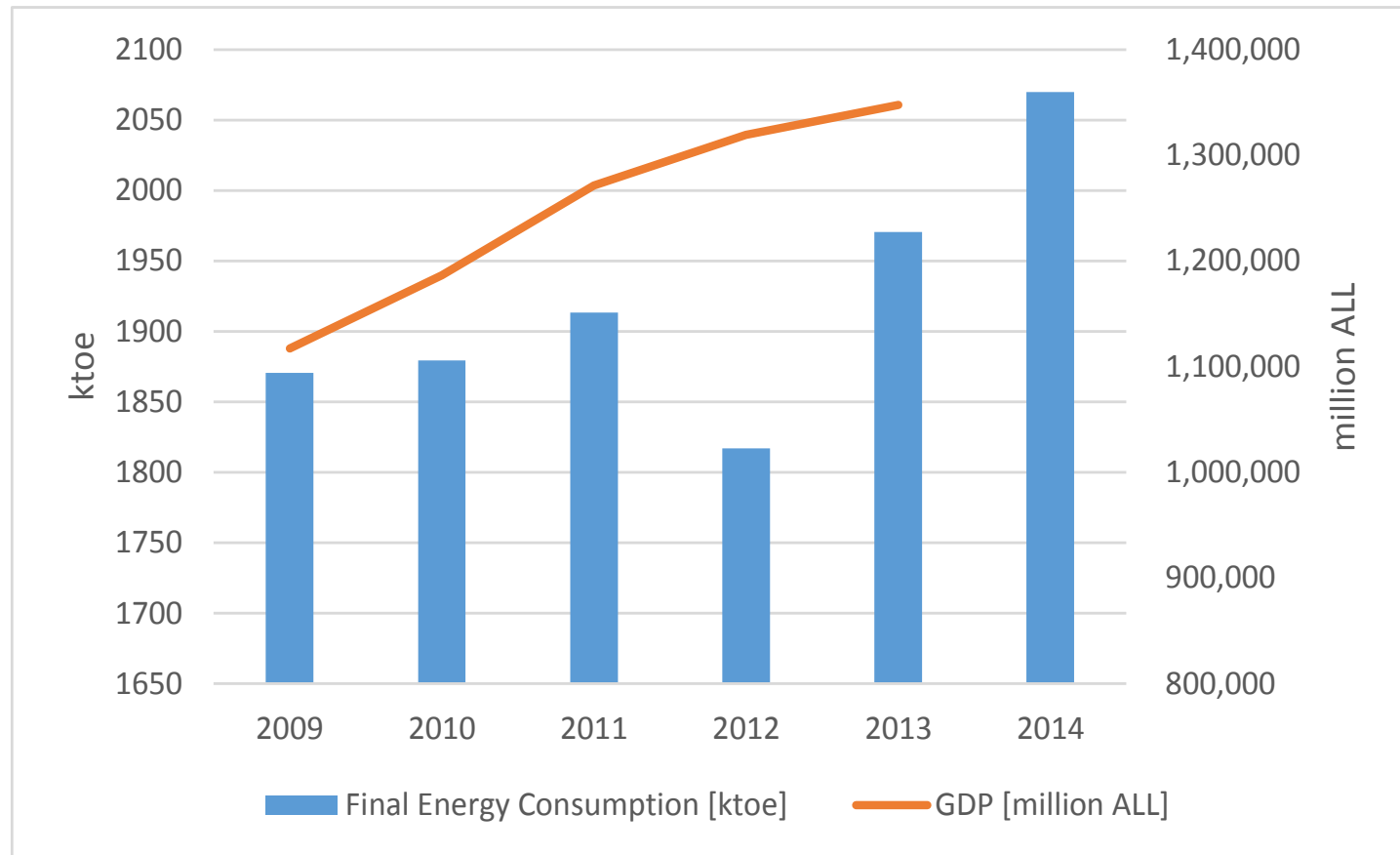
- . Gasification to diversify and to increase energy security of supply
- . TAP project contribution as a part of Southern Gas Corridor

## **➤ Function as a regional energy center**

# What is the energy situation in Albania?

## ENERGY BALACE

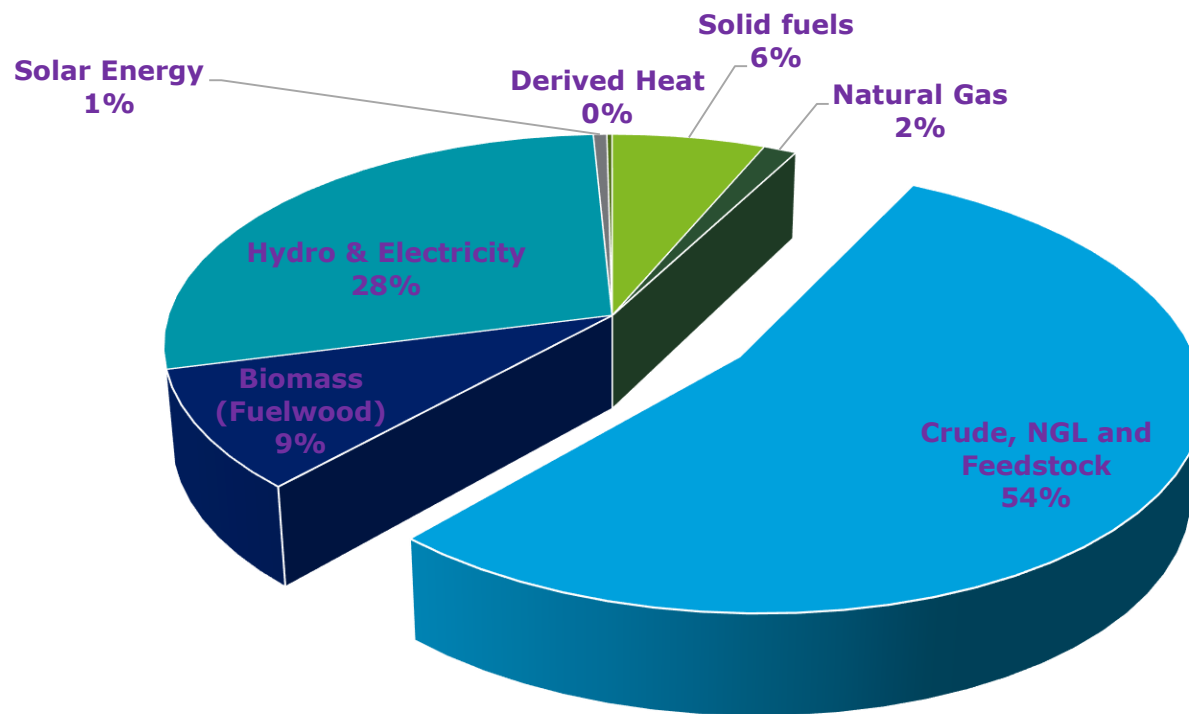
For the period 2009-2014, final energy consumption expanded from 1,871 ktoe to 2,070 ktoe, representing an increase of approximately 11%, but the growth was not consistent over the period



Final Energy Consumption Data

Year 2015	TOTAL	Solid fuels	Natural Gas	Crude, NGL and Feedstock	Biomass (Fuelwood)	Hydro & Electricity	Solar Energy	Derived Heat
Primary production	<b>2116,84</b>	69	30,4	1279,22	214	507,00	12,38	4,8
Recovered products	0,00			0,0				
Imports (Pet Prod+ Electricity)	<b>1507,83</b>	71,48		1232,40	1,390	202,56		
Stock change	127,48			127,48				
Exports	<b>1250,89</b>	0,05		1157,57	11,060	82,21		
Bunkers	27,53			27,53				
	2218,77	140,43	<b>30,4</b>	1199,04	204,33	627,35	12,38	4,80

**In 2015 Energy Supply the Natural gas contribution has been only 1.5%, based on local natural gas and associated gas production.**



**Albania's Gross Inland Energy Consumption – 2015  
in KTOE**

# Historic and Present Situation of the Albanian Petroleum Sector

Albania was established as a Hydrocarbon bearing province as early as Roman times, when **heavy oil and asphalts of Selenica** mine were used for lamps.

**In 1918 the first oil discovery was made in Oligocene flysch in Drashovica.**

In 1927, 1928 respectively **Kucova and Patosi oil fields** related to Messinian clastic reservoirs were discovered.

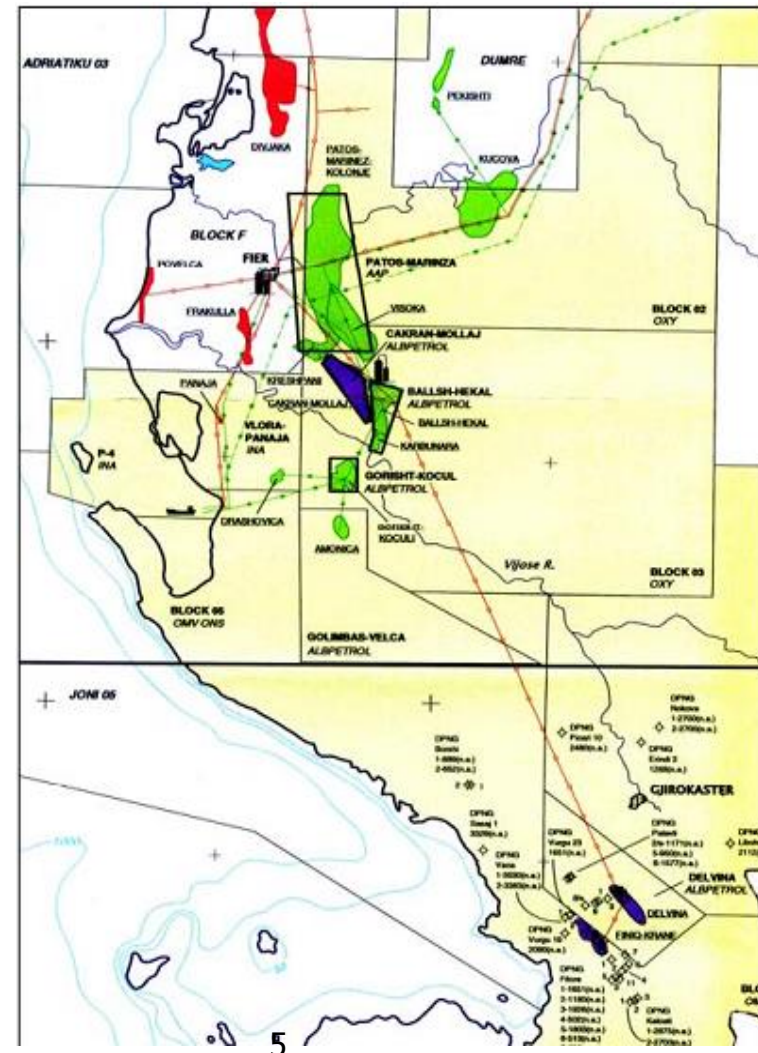
**Marinza** as the biggest oil field in Albania related to Messinian-Tortonian clastics reservoirs was discovered in 1957.

**Visoka**, as the first oil field related to carbonate reservoirs, discovered in 1963, was followed by other discoveries such as: **Gorishti** (1965), **Ballshi** (1966), **Finik-Krane** (1974), **Cakran-Mollaj** (1977), **Amonica** (1980) and **Delvina** (1987).

**With the first Gas discovery (1963) in the Tortonian sandstone layers of Divjaka**, other gas fields respectively: **Frakulla** (1972), **Ballaj** 1983, **Povelca** and **Panaja** gas fields in 1987 and **Durresi** (1988) were discovered.

**Gas production reached its peak in 1982 with 0.937 Bcm/year.**

The cumulative production of N-G estimated at 3.15 Bcm, while the associated gas is at 8.7 Bcm.



Oil and Gas Fields in Albania

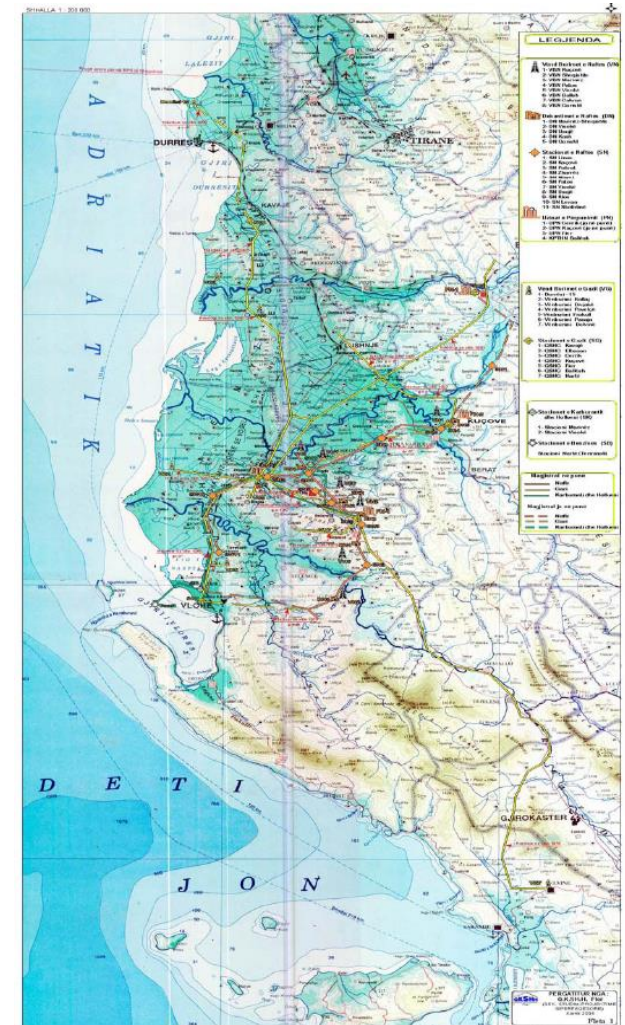
# Historical development of transport infrastructure and the import and export of oil, gas and their derivatives.

► Infrastructure Network on natural and associated gas transport has had a broader extension than oil transport infrastructure, which is conditioned by the greater geographical extension that have gas fields, starting from Durres to Delvina.

► Existing Gas Pipeline Network has a length of about 410 km and connects all existing gas fields (Divjaka, Frakulla, Povelça, Ballaj, Delvina) and existing oilfields that have significant amounts of associated gas.

► Over the last decade due to low gas production, some of gas pipelines aren't in operation, which has brought their damage.

► The current pipeline network in Albania is of a low pressures one, and can not serve as supply network in the case of the international gas network connection.



Oil and Gas Pipelines network in the Albanian Territory



# Main goals for Gasification of Albania

- Linking Albania with the international gas network according to the best option (Eurasia Gas Corridor and Energy Community Gas Ring)
- **Preparation of the necessary Albanian legislation for the gas sector** in compliance with European legal framework (Regulatory and Investment framework reliability)
- Development of national gas resources and national gas infrastructure
- **Restructuring the existing pipeline system** for gas transmission in Albania
- Management of the Albanian gas market
- **Use of natural gas as an alternative energy source** and for the production of electrical energy with gas fired thermal power stations-
- **Development of underground gas storage reservoirs and LNG Terminals projects.**

## Natural gas scenario for Energy Supply

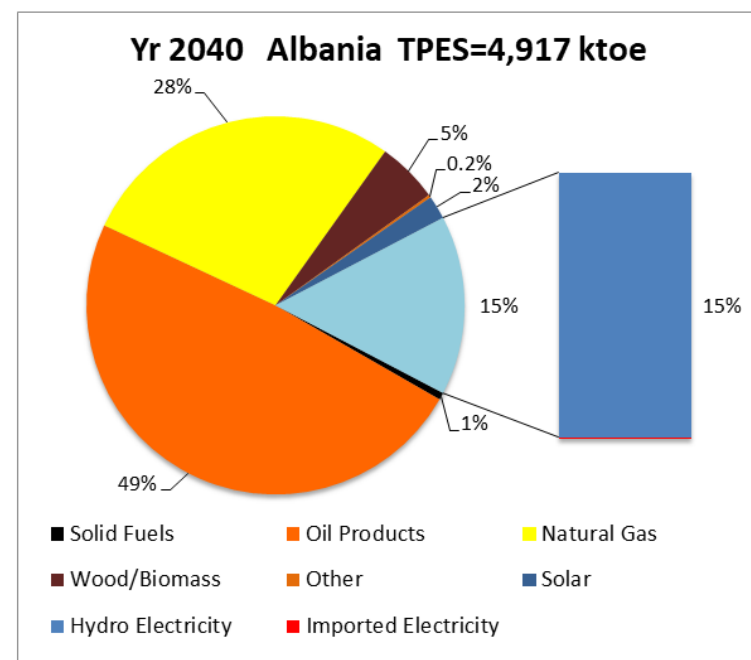
•Calculation of total energy supply was done with the assumptions that Natural Gas will primarily replace 100% of the imported electricity, the remaining natural gas energy will replace 20% of wood energy and the rest will replace oil products.

•**In the case of heavy industry and anchor loads**, such as refineries, it is assumed that natural gas energy will primarily replace oil products.

Furthermore, assumptions were made for the efficiency of CCGT plants in generating electric energy : this efficiency was assumed to be 60%,

Based on the above, below Tables present the Total Final Energy Supply by sector and fuel type in Albania for the natural gas scenario. The gas contribution will arrive up to 28%

	2013	2020	2025	2030	2035	2040
Solid-fuels	93	93	79	41	34	30
Oil-products	1,200	1,424	1,697	2,054	2,302	2,393
Natural-gas-incl.-CCGT	8	242	458	833	1,060	1,371
Wood-biomass	182	255	281	290	287	257
Other	16	18	19	18	18	12
Solar	6	22	31	43	55	99
Hydro-electricity	409	623	769	778	754	755
Imported-electricity	454	252	34	0	0	0
<b>Total</b>	<b>2,367</b>	<b>2,928</b>	<b>3,369</b>	<b>4,057</b>	<b>4,509</b>	<b>4,917</b>





# Gas Master Plan for Albania & Project Identification Plan.

**Approval of the GMPA by the DCM No 87, Dated 14.02.2018**

## Potential Natural Gas Consumption by 2040

Natural gas scenario for Energy Consumption

-. Implementation of the full GMP for Albania will, lead to a **potential gas consumption in Albania by 2040 of total 927 mcm in the residential, service and industrial sectors and 684 mcm for anchor consumers.**

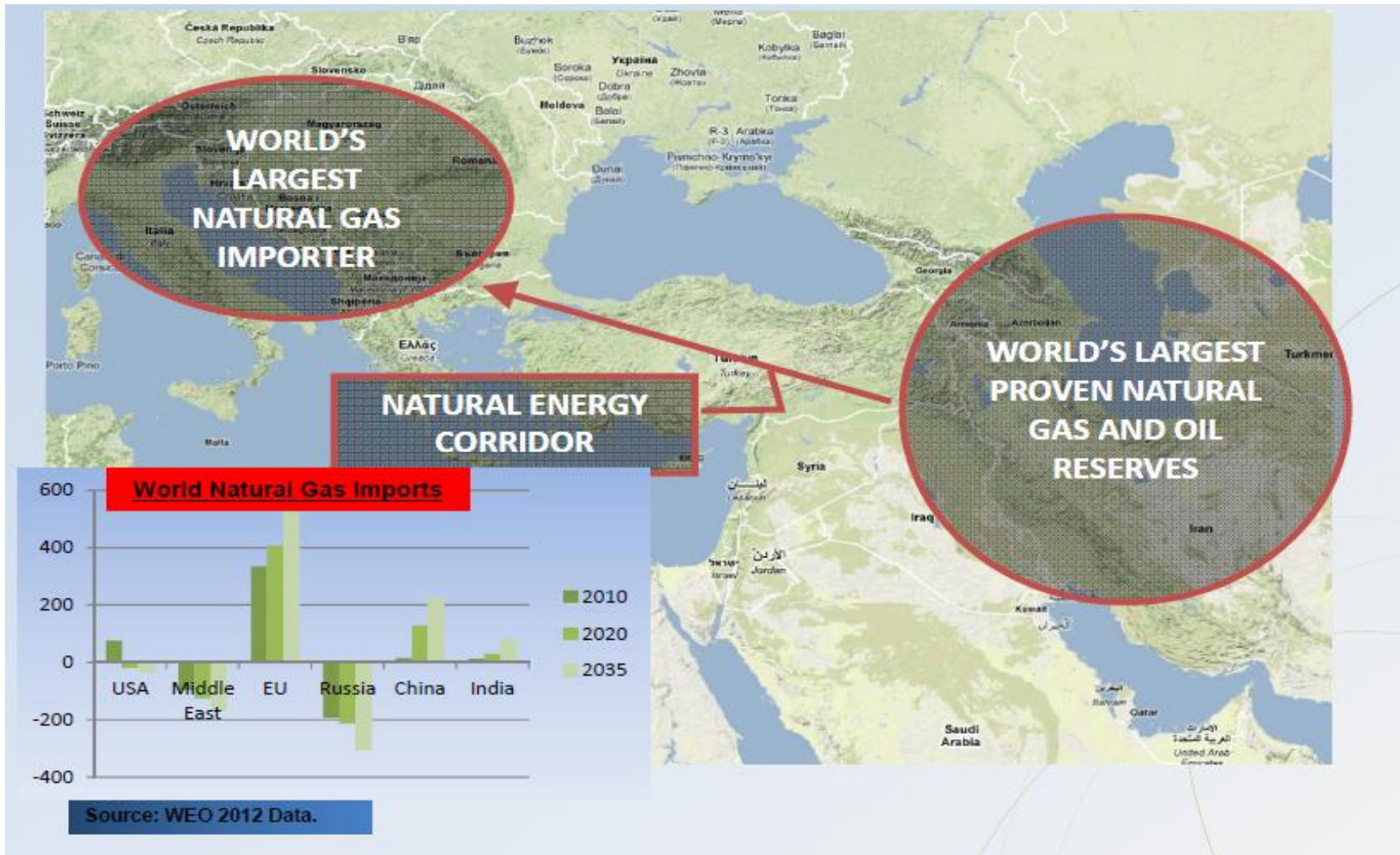
-. The gas consumption is presented in below Table

	mcm	ktoe
Residential sector	228.8	190.0
Service sector	267.8	222.5
Industrial sector incl. agriculture and transport	430.2	357.3
Total for sectors	926.8	769.8
Anchor consumers	684.4	568.4
Total	<b>1,611.2</b>	1,338.2

# Recent developments on gasification of Albania.

## 1.- Trans Adriatic Pipeline Project (TAP Project)

### NATURAL ENERGY CORRIDOR FOR EUROPE



# Trans Adriatic Pipeline Project (TAP Project)

## What is the importance of TAP to Albania?

### Overview of Potential Benefits

## Contributing to Economic Growth in Transit Countries

- Direct contribution to **GDP** through taxes
- Direct and indirect **employment** during construction and operation
- Procurement of goods and services via eligible **local suppliers**
- **Social and environmental investments**: community investment programmes
- **Spill over effects**: **new skills and expertise** for companies and workers
- **Improved local infrastructure**: for ex. access roads and bridges in Albania
- Boost the countries' roles **as energy hubs** in the region



# 1.- Trans Adriatic Pipeline Project (TAP Project)



## Some Current Data for project progress

• Right of Way cleared and graded	197 km	• Right of Way Backfilled	167 km
• Pipes Strung	191 km	• Right of Way Reinstated	122 km
• Pipes Welded	185 km	• Hydrotesting	79 km
• Fibre Optic Cable	68km	• Pipes and bends delivered to Durrës	100%
• Trenching	175 km	• Block Valve Stations	54%
• Pipeline Lowered	173 km	• Compressor Station in Fieri	31.7%
• Pipeline segments Tied-in	823 no.	• Metering Station in Bilishti	36.3%



## 2.- Ionian Adriatic Pipeline Project (IAP Project)

The European Union's 2008 IPA Programme for Albania, Bosnia and Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Montenegro, Serbia, Kosovo\*, Turkey and Iceland


**Infrastructure Projects Facility  
Technical Assistance Window (IPF TA)**

EuropeAid/128073/C/SER/MULTI

Sub Project:  
WB5-REG-ENE-03

FS and ESIA for the  
Ionian – Adriatic Pipeline (IAP)

Feasibility Study Report  
January 2014

 This project is funded by the European Union

**COWI • IPF CONSORTIUM**

\* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.



Map of the route of the Ionian-Adriatic Pipeline as defined in the IAP Feasibility Study

Country	Albania	Montenegro	Croatia	TOTAL
Pipeline length (km)	167.67	94.10	249.02	510.79
Number of facilities	12	6	16	34
Number of CS	0	0	1	1
CAPEX Items (1000 EUR)	168 952.42	118 684.22	329 991.49	617 628.13
Pipeline	139 954.47	99 875.33	253 320.36	493 150.16

IAP pipeline system CAPEX (in 1000 EUR)

### 3.- Albania - Kosovo Gas Pipeline Project (ALKOGAP Project)

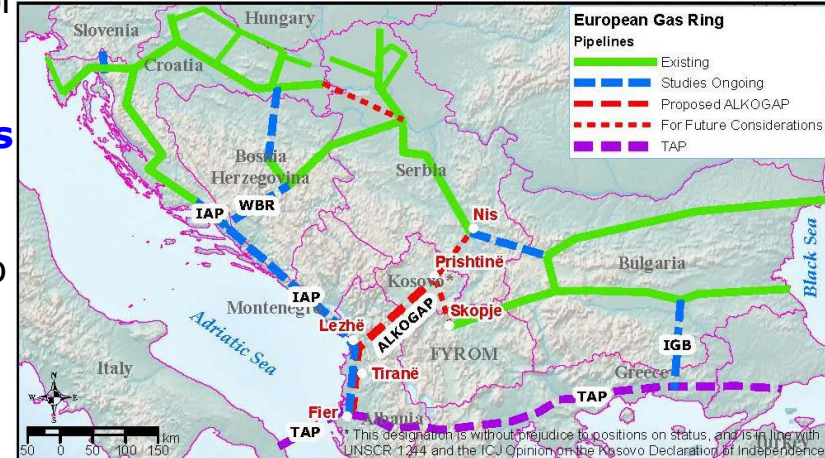
The Albania-Kosovo Gas Pipeline (ALKOGAP) project as an interconnector, is to interconnect the existing and planned gas transmission system of the Republic of Albania (including TAP project) with the future projected gas transmission system of the Republic of Kosovo, and the transmission interconnectors which are part of eastern branch of Energy Community Gas Ring (ECGR), as well.

**The ALKOGAP project however shall be planned as bi-directional pipeline,**

The estimated annual level of ALKOGAP will arrive up to 2 bcm (1-1.3 bcm for Albania and 0.5 - 0.7 bcm for Kosovo).

It would be possible to increase its capacity (double or triple), in the case that ALKOGAP will be used to supply other countries with Caspian or Middle East gas.

**This transmission supply project, of about 260 km total length,**



*ALKOGAP Project*



**4.- TAP/Fier – TPP/Vlora Gas Pipeline Project**

**5.- Dumre Underground Gas Storage Project (UGS Dumrea)**

**6.-Combined-Cycle Cogeneration Power Plant  
CCCPP Korça-500 MWe/ 80 MWt/ 5MWt**

**7.- New petroleum explorations**

## WHY INTERNATIONAL NATURAL GAS CONNECTIONS SHOULD TAKE ADVANTAGE FROM CONNECTION AND CROSSING ALBANIA ?

- Albania is now a member of **NATO** and has the status of the **EU Candidate Member**. Albania looks forwards the **EU membership**.
- Has historically been a **factor of peace and stability** in the region
- Albania has a developed petroleum sector with **the biggest crude oil proven reserves** in the region.
- Its excellent geographical position offers the shortest and therefore the **most cost efficient link** for N-G pipes from Caspian areas to Southern Italy and to Central and Western Europe.

# THANK YOU FOR YOUR ATTENTION !

For any further information you are welcome to visit  
[www.infrastruktura.gov.al](http://www.infrastruktura.gov.al)

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