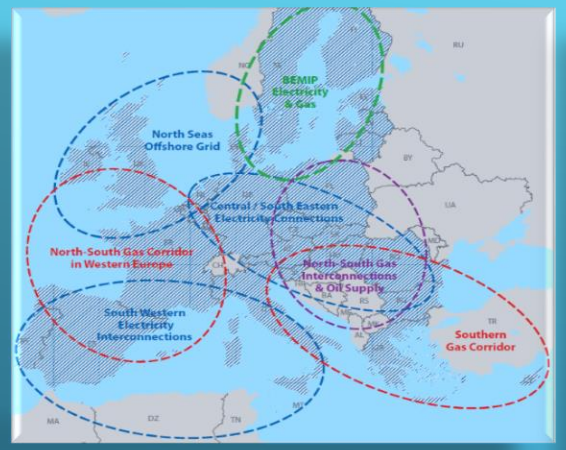
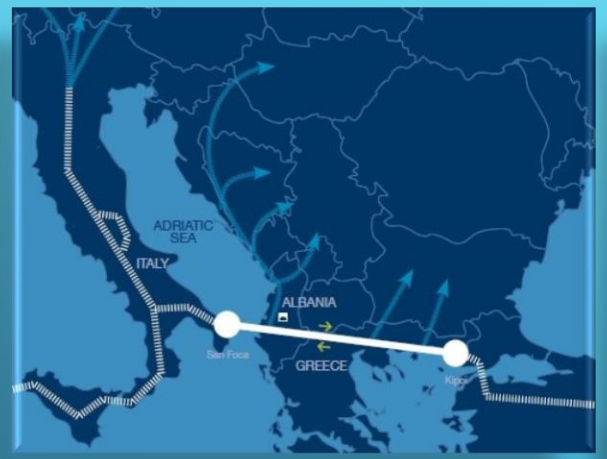
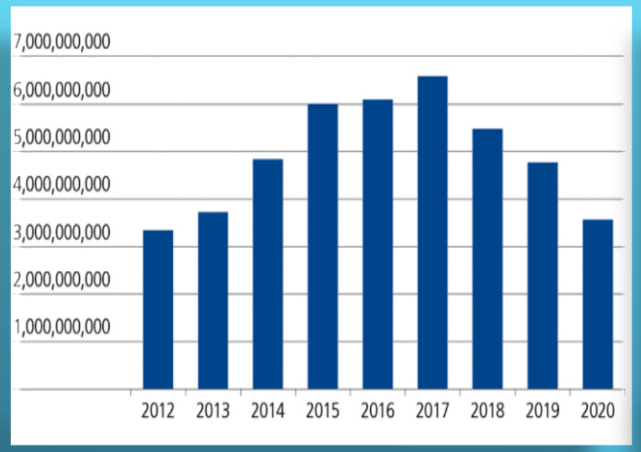






Pipeline growth in the Balkans: An emerging energy force

ACERC

Albanian Centre for Energy Regulation and Conservation

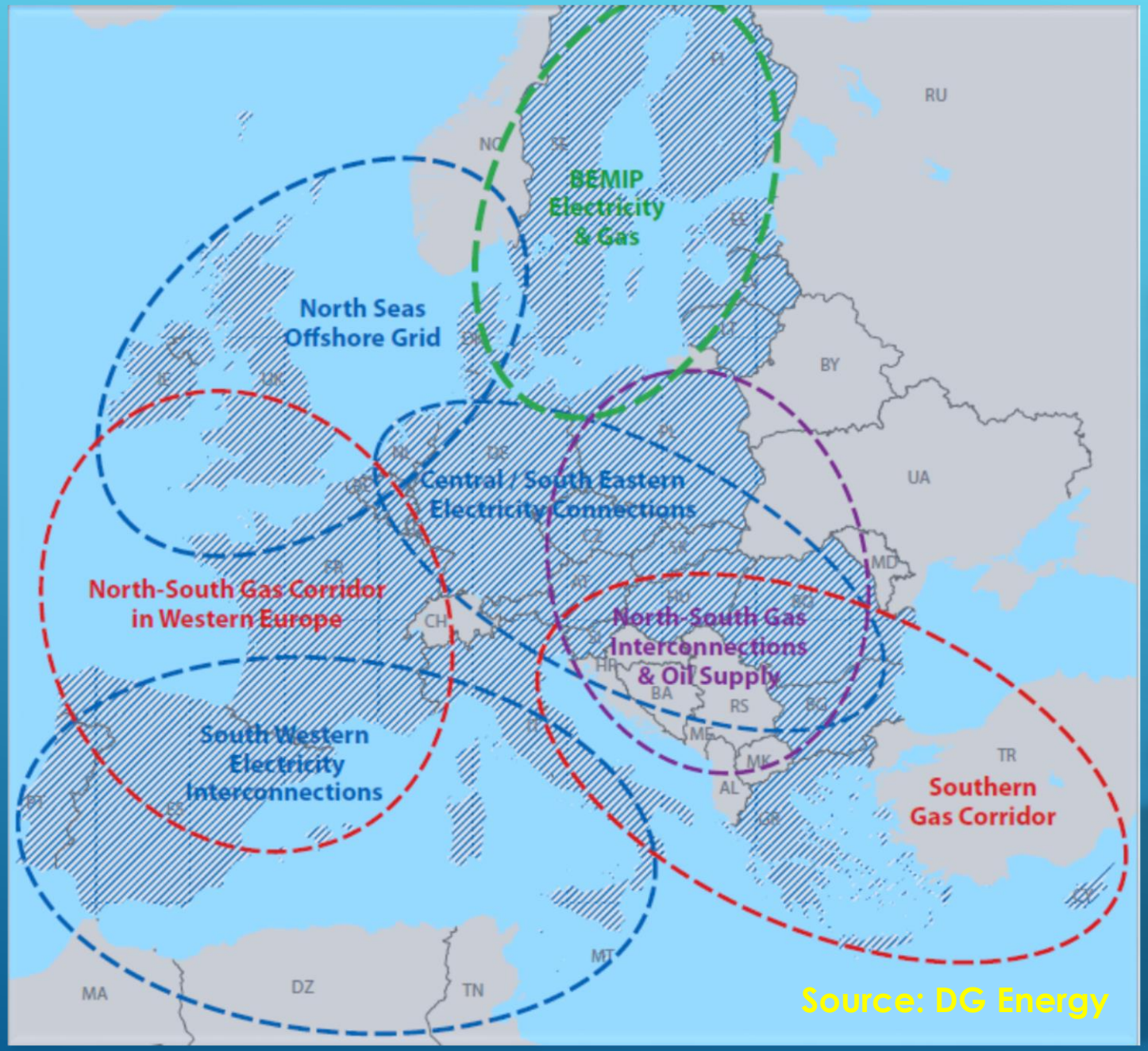
Conference 7th Annual Global Pipetech Summit 2014,

on the16th June - 18th June 2014, Sheraton Roma, Roma, Italy

June 2014

7th Annual Global Pipe Tech Summit 2014

16 - 18 June 2014 | Sheraton Roma, Rome, Italy



An overview of the sceneries of the reference

Southern Gas Corridor (SGC) EC's Com. "Second Strategic Energy Review" at the 2008, with the three pipeline sections:

- Azerbaijan/Georgia (SCP),
- Turkey (TANAP)
- Europe (TAP)

North-South Gas Inter-connections and Oil Supply:

- New European Transmission System (NETS)
- Energy Community Gas Ring

Brief overview on the energy sectors in the WB

Common Features:

Small & fragmented markets.

Dependent on domestic **fossil fuel (coal/lignite)** or **imported gas** and oil.

Single source of **gas imports.**

Power generation based on technologies from 60' and 70' – exceeding their life span, high reliability and environmental concerns. Urgent **need for major retrofit**, and **new power plant.**

High potential for renewable energy (especially hydro, biomass, wind, solar).

Current, **relatively low energy consumption per capita**, gives an indication a growth potential.

Markets are small in the WBs but **rapidly growing**.

In more, there is in the most of the contries the strong political prospective to **become members of the EU**.

The harnessing market's potential within 2030

- **Among the WB countries**:

- Developed gas markets in Croatia and Serbia
- Still small markets in BiH, the FYROM
- No access to gas: Albania, Montenegro and Kosovo

- **Study on the Implementation of the new Regulation (EU) 994/2010** concerning measures to safeguard security of gas supply"

The WB today consumes less than 6 billion cubic meters per year (bcm/y).

Forecasts by 2020 demand will rise to 10 bcm/y,

By 2030, may be as high as 19 bcm/y, thus with a growth more than threefold within 16-17 years.

The harnessing market's potential within 2030

- The **crude oil and petroleum 36% of the energy** mix in the WB.

➢ **Production** is limited around 6 million tonnes and located mostly: in Albania, Bosnia and Herzegovina, Croatia and Serbia.

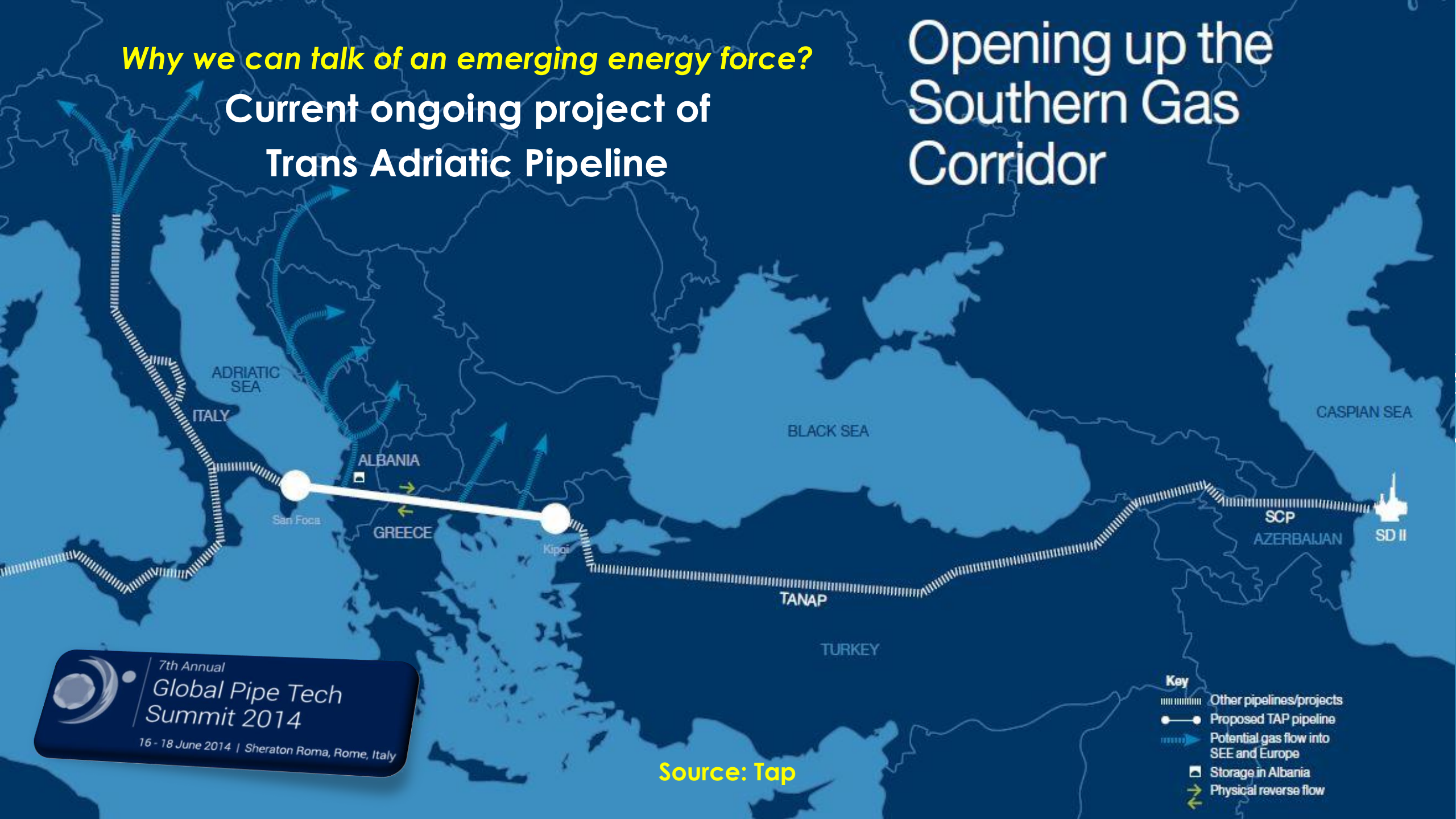
The increase in oil production, in all CP in 2012 1.8% higher than in 2011: by 15% in Albania, and 9.4% in Serbia.

➢ Albania is the only CP that continues to **export** crude oil. Albanian exports grow at 696,800 tons in 2011 to 936,900 tons in 2012 and to 1.1 m tons in 2013.

➢ The total **imports** of crude oil to all CP in 2012 was around 6 million tons. The main source of oil imports is Russia.

Why we can talk of an emerging energy force?

Current ongoing project of Trans Adriatic Pipeline



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Source: Tap

TAP's key facts and figures

- 867 km the length of the route
- 547 km across Greece
- 211 km across Albania
- 104 km under the Adriatic Sea
- 5 km in Italy
- 810 m below sea level – the deepest offshore section
- 1800 m highest elevation point TAP will cross – in Albanian mountains
- 48 inches (1200 mm) diameter pipe onshore – designed for a gas pressure of 95 bar
- 36 inches (914 mm) diameter pipe offshore – designed for a gas pressure of 145 bar
- 17.5-31 the thickness of the steel pipe walls onshore
- 21-34 the thickness of the steel pipe walls offshore

Last development from the Trans Adriatic Pipeline

Project recent milestones:

- The first gas sales for late 2018, and first deliveries to Europe a year late.
- The pipeline developers plan to begin construction in early 2015
- Contract notice for construction of compressor stations in Greece and Albania (05.06.2014).
- Launches pre-qualification for onshore pipeline construction (12.05.2014) (…)

Governmental Agreements:

- TAP receives CDP in Alb. (08.04.2014)
- NRA of Gr-Alb-Italy approve TAP's RCP (26.02.2014)
- Italian Parliament approves tri-lateral IGA on TAP (05.12.2013)
- The Greek Parliament ratifies the HGA (03.12.2013)
- Albanian Parliament ratifies HGA (28.06.2013) (…)

WB Authorities & Company Agreement:

- BP, SOCAR, Total and Fluxys join the TAP project (30.07.2013)
- Greece-Bulgaria MoU on technical cooperation (06.01.2014)
- TAP and DESFA sign cooperation agreement (03.07.2013) (…)

Other Markets:

- TAP main to reach the Italian virtual trading point (PSV)
- TAP can reach Baumgarten: via TAG pipeline
- TAP can reach Germany and France: via Transit in Switzerland (…)

Source: Tap

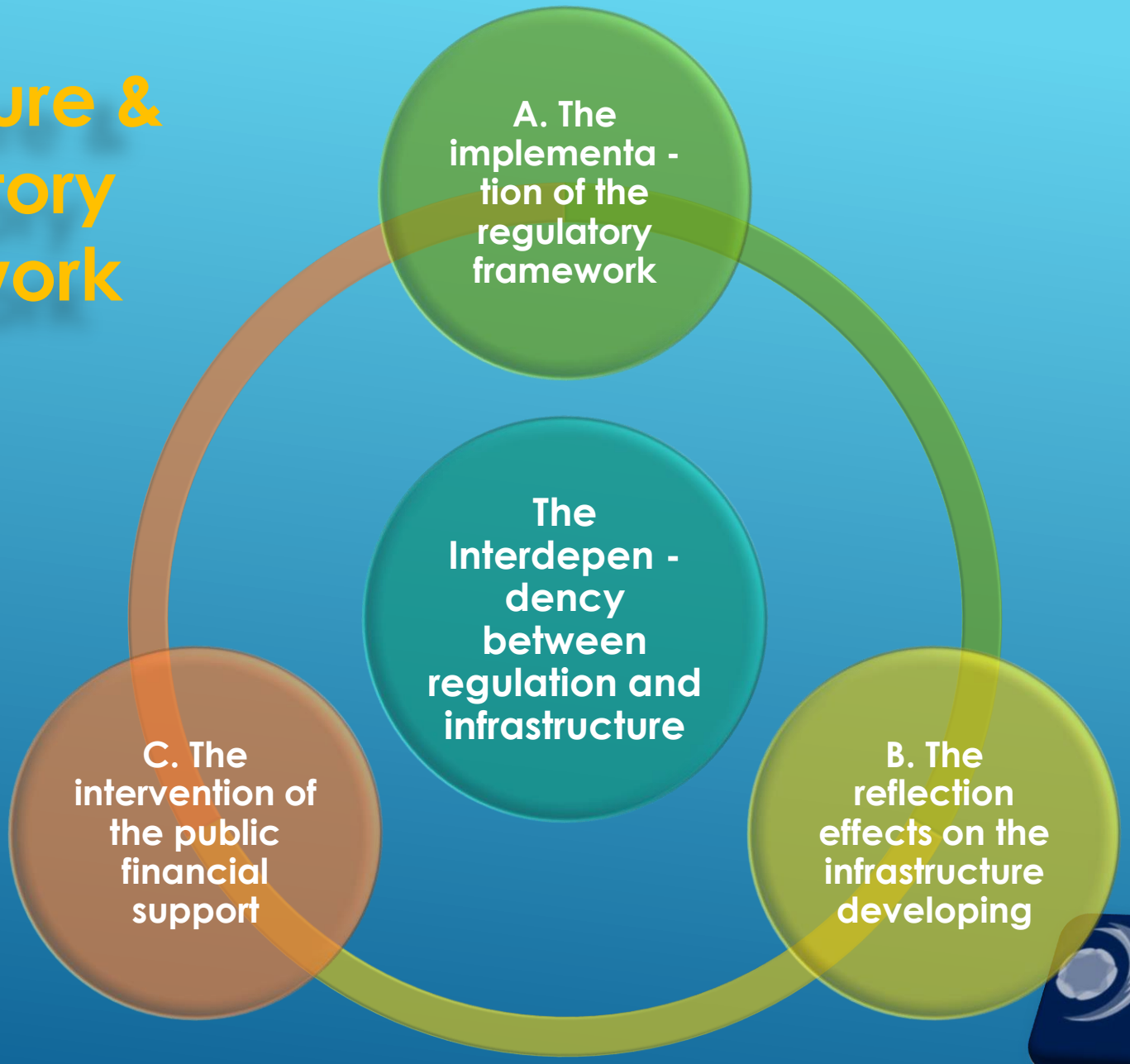
Focus on the main TAP contribution to SEE and the Western Balkan Region

- The SEE countries (i.e. BiH and Fyrom) will benefit in diversification and (i.e. Albania, Montenegro and Kosovo) first interconnection on gas grid.

- A more environmentally balanced energy portfolio, physical reverse flow as the option of underground storage in Albania.

- The ability to connect to several pipeline systems in the region as an integrated part of the Western Balkan Energy.

Infrastructure & Regulatory Framework

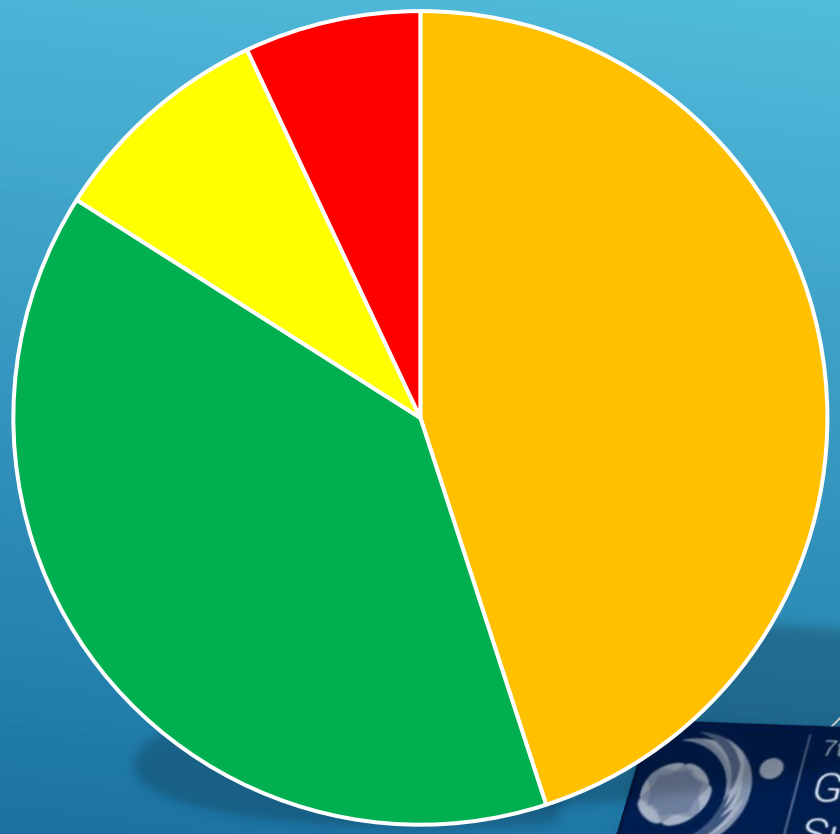


The prospective of ongoing market of the Western Balkan

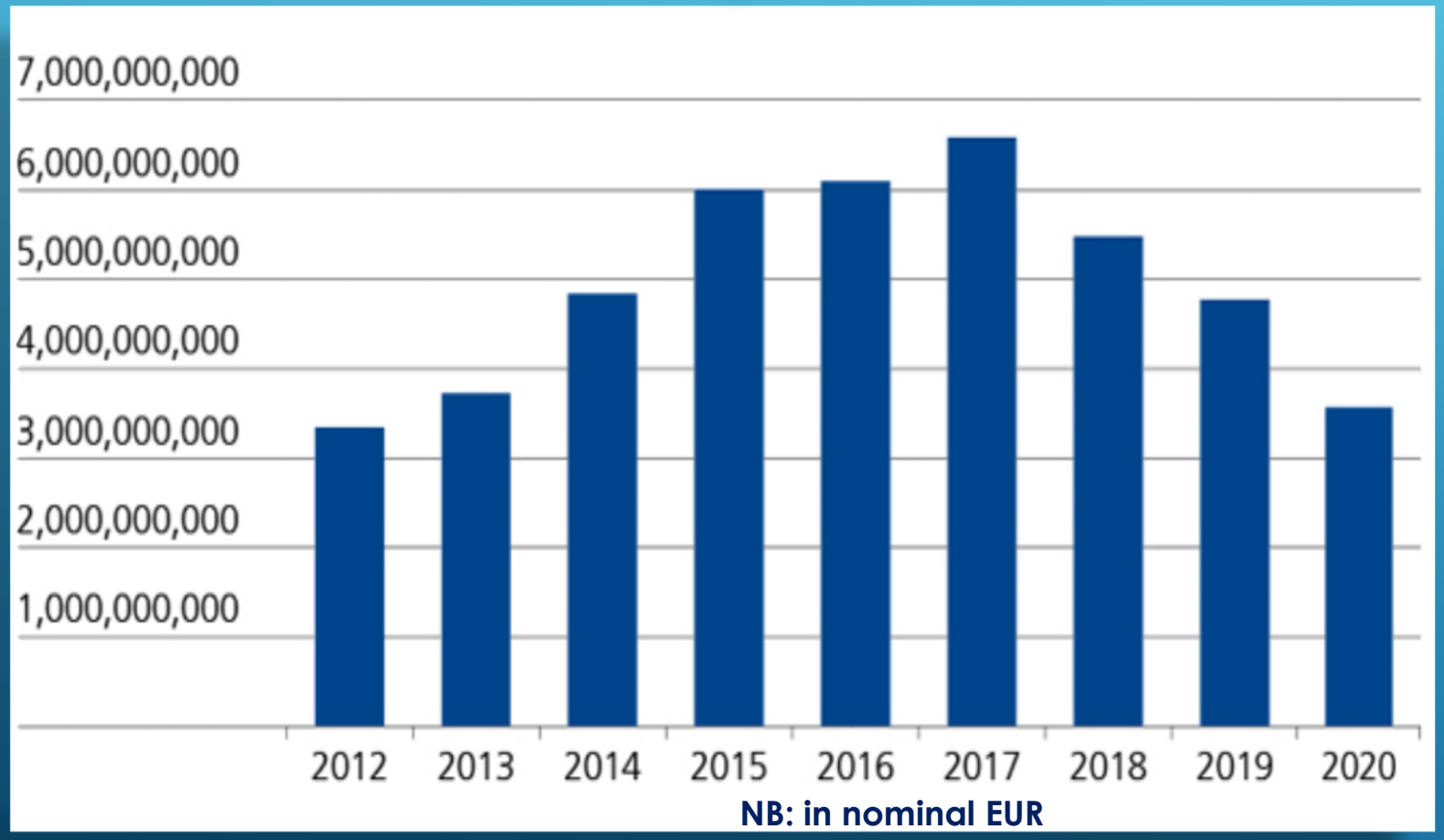
The **new CP mix** generation capacity (without Ukraine included) **13,23 GW** forecast for the period **2012 - 2020**, based on:

- coal/lignite for 45%
- hydro energy for 39%
- **natural gas for 9%**
- and other renewable energy for 7%

The chart of new 13,23 GW

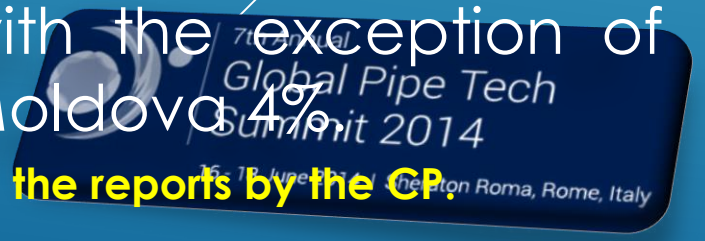


The capital investments required in the WB



The new generation capacity mix (without Ukraine) daunting EUR **28.8 billion**. To this contributes:

- Serbia with 25%,
- Each of the others countries with approx. 10%,
- with the exception of Moldova 4%.



Source: Calculations made by the Energy Community Secretariat based on the reports by the CP.

The boost of the infrastructural investment

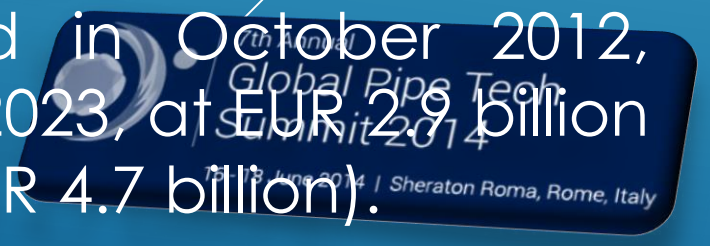
The new investments should be directed predominantly towards:

- new renewable energy generation
- and natural gas fired power plants

(by *ECS, Energy Community Strategy and Projects of Energy Community Interest, Nov. 2013*).

The main key of transformation:

- The **planned Ionian Adriatic Pipeline** (IAP). The **Gas Ring and Gas-to-Power Initiative**: with other links between Croatia - Bosnia and Herzegovina, Serbia - Romania, Moldova - Romania, etc.
- **Directive 2009/119/EC in the oil stocks** adopted in October 2012, imposing the required investments, within 1 January 2023, at EUR 2.9 billion (plus the part of petroleum products for storage to EUR 4.7 billion).



Consideration of the potential investment

An Overview of the activity focus:

The **attracting investments** remain a key requirement for the development of a liquid and competitive electricity market in SEE. Facilitating and stimulating new investments is therefore a core responsibility of both national legislation and regulatory praxis:

- The Ministerial Council in 2011 invited the Contracting Parties to prepare the Energy Community Strategy

  The Strategy represents a first step to defining the required operational framework and methodology.

- A second step focus on the identification of Projects of Common Energy Community Interest (PECI)

The regional energy outlook and potential value

The three scenarios of the **regional energy strategy** selected (excluding Ukraine), analysis the future energy consumption and the estimated costs of covering (or not covering) this demand:

I. 'Current Trends', the unmet electricity demand for 70 TW by 2020 and the investments request at **6,1 Bln**

II. 'Minimal Investment Costs' meeting energy demand regardless of the environmental impact estimate necessity of **15,1 Bln.**

III. 'Low Emissions Development/Sustainability' expected investment costs are over **EUR 32,3 Bln**

The development of Gas Regional Initiatives

A. Gas to Power Initiative in the Western Balkans

The so called "gas ring" concept will need to be transposed into an implementable project or a series of projects:

- The clear investment decisions to build new gas-fired power plants
- These will require large amounts of capital that must come from private sources, in the form of Public Private Partnerships
- The World Bank's experts has proposed the form of a special Consortium
- The Consortium would determine the required gas infrastructure needed to deliver gas to its national PPP companies which would build the power plants. This infrastructure would be in line with the development intentions of the "gas ring".
- This is an innovative approach in the WBs, but has successfully used in Finland since 1930s for the development of hydro power plants.

The development of Gas Regional Initiatives

B. Projects of Energy Community Interest (PECIs)

CP agreed to cooperate in the process of identifying those projects which have the highest positive impact in the largest possible number of Contracting Parties, so called Projects of Energy Community Interest (PECIs):

- The selection of these projects was achieved in a collaborative process undertaken by the same Task Force that contributed to the preparation of the Energy Strategy
- In November 2012, ECS invited promoters to submit their project proposals
- The project proposals were submitted by 31 December 2012 and during the public consultation phase (until 29 April 2013) were investigated according to the pre-assessment steps
- In total, 100 project proposals were submitted. In pre-assessment process, these projects were reduced 82

Projects of Energy Community Interest in the WBs

Gas Infrastructure			
01	AL-ME-HR-BiH	G008	Ionian Adriatic Pipeline (IAP)
02	GR-AL-IT	G022	Trans Adriatic Pipeline (TAP)
03	AL	G002	EAGLE LNG Terminal
04	BiH - HR	G006	Interconnection Pipeline BiH - HR (Slobodnica-Bosanski Brod-Zenica)
05	BiH - HR	G003	Interconnection Pipeline BiH - HR (Ploce-Mostar-Sarajevo/Zagvozd-Posušje/Travnik)
06	BiH - HR	G007	Interconnection Pipeline BiH - HR (Lička Jesenica-Tržac-Bosanska Krupa)
07	HR	G010 G011	LNG Terminal HR + Pipeline Zlobin-Bosiljevo-Sisak-Kozarac-Slobodnica
08	HR - RS	G009	Interconnection Pipeline HR - RS (Slobodnica-Sotin-Bačko Novo Selo)
09	SR	G013	Interconnection Pipeline RS (Nis) - BG (Dimitrovgrad)

Projects of Energy Community Interest in the WBs

Oil Infrastructure			
Contracting Party		Project ID	Project
01	HR	OIL001	Project of Inspection, Evaluation, Rehabilitation, Upgrading and Reconstruction of the existing JANAF Oil Pipeline

Geographical Location of the Projects of Energy Community Interest

Based on the results of the assessment, **on 24 October 2013**, the Ministerial Council adopted the list of 35 PECIs.

Among other, nine gas infrastructure and one oil infrastructure projects selected regard the WB countries

In regard, almost 40 billion EUR is required until 2020.

Way Forward

"In today's geopolitical situation we realize better than ever before how important for prosperity and stability in entire Europe is secure, competitive and sustainable energy supply. The Energy Community is a key instrument of international energy policy and its efficient functioning is essential for achieving the goal".

Jerzy Buzek: "*An Energy Community for the Future*" 11 June 2014

Key points:

- A **Single European Energy Market**
- Building a **single market requires investment**
- Efficiency of the **Law enforcement**
- More funding for **investments and market integration**
- **More transparency** on the whole process

ACERC

Albanian Centre for Energy Regulation and Conservation

Thank you for your attention!

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