

EGL's activities in Energy Community

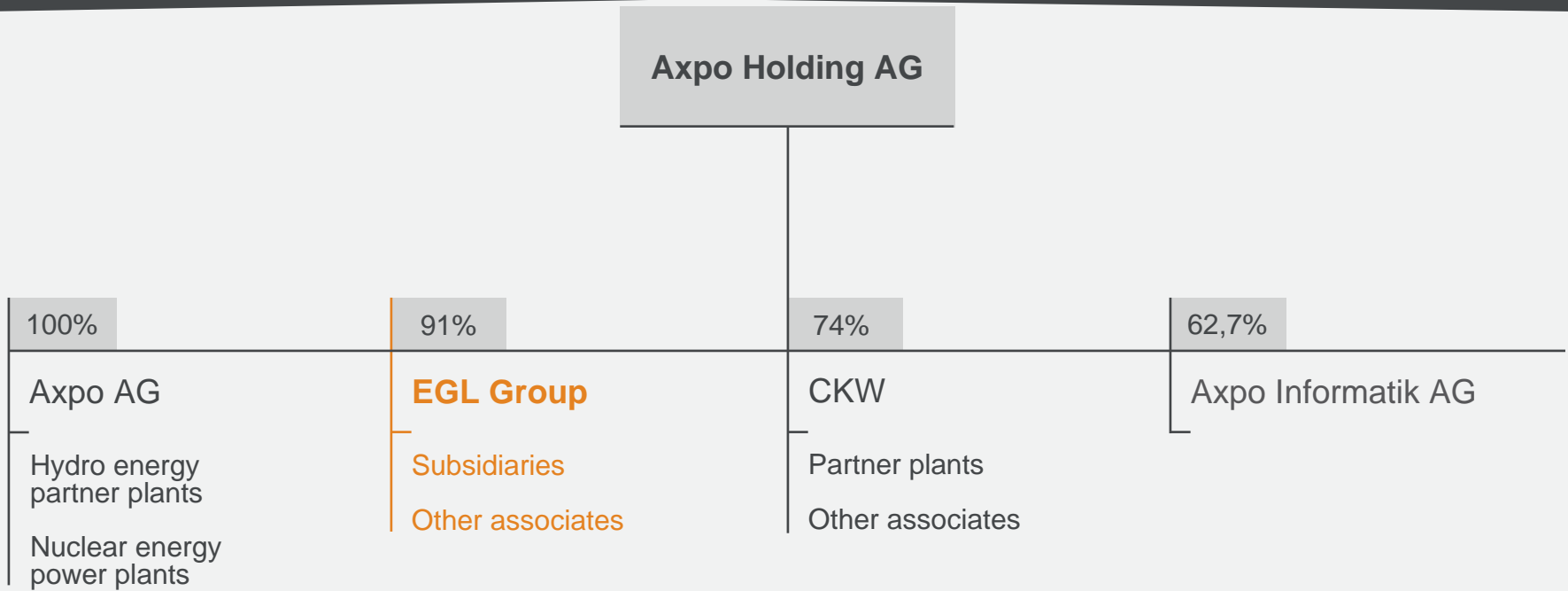
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Naske Afezoli
Head SEE Gas & Power

- **Introduction EGL AG**
- **EGL's vision on SEE**
- **Bringing Together a “Smart Southern Gas Corridor” & Electricity Interconnectors is EGL's Vision on Gas and Electricity**
 - **...on gas – TAP**
- **Bringing Together a “Smart Southern Gas Corridor” & Electricity Interconnectors is EGL's Vision on Gas and Electricity**
 - ...on electricity...**
 - 1) **Submarine Transmission from Montenegro to Italy**
 - 2) **Submarine Transmission Albania to Italy**
 - 3) **Submarine Transmission from Montenegro to Italy**
 - The Business Idea**

Member of Axpo Group

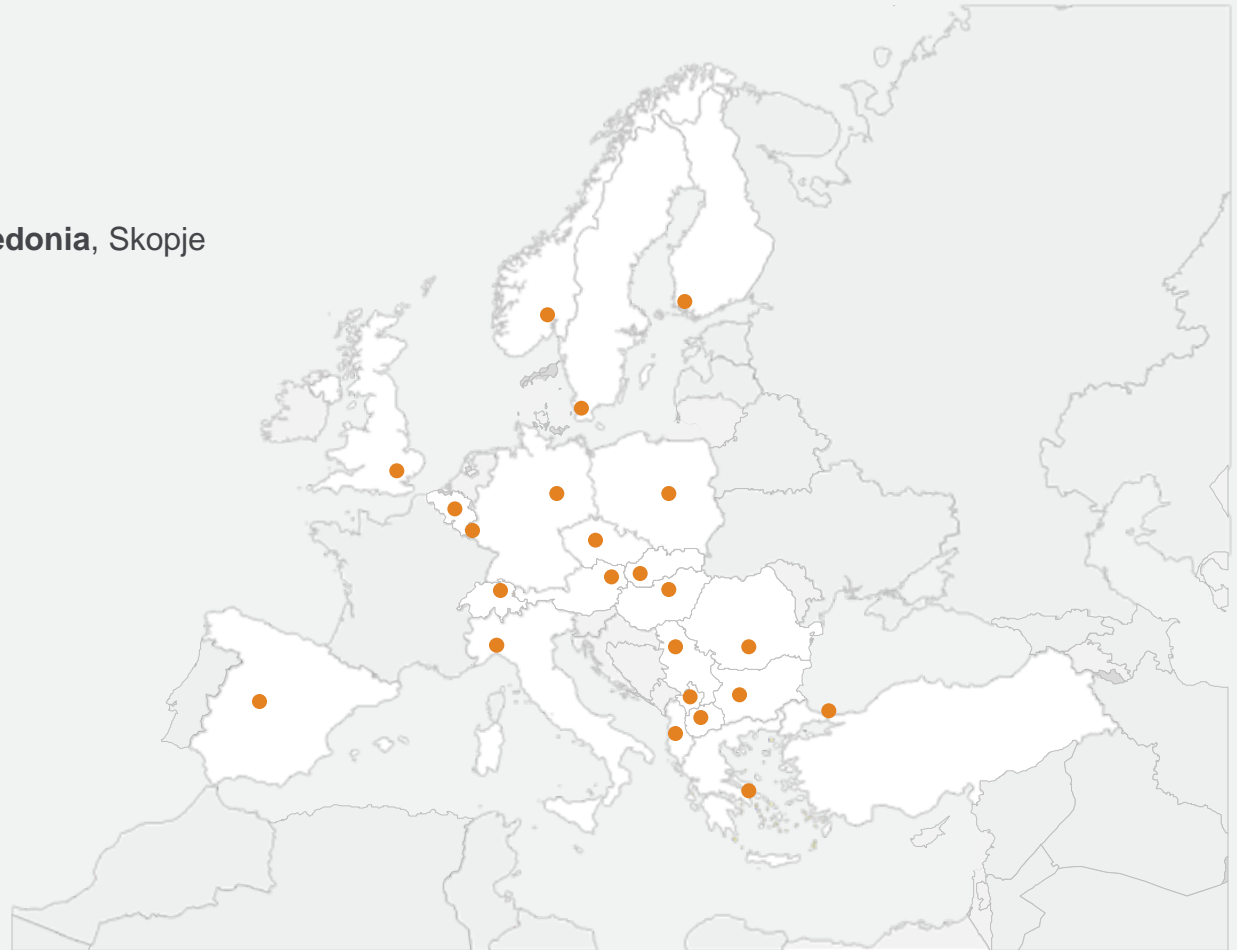
Asset backed-trading company developing the most economic pipeline in SEE



- 1956 EGL is founded by the Kraftwerk Laufenburg (KWL) as an electricity trading company
- 2000 EGL established three strategic business areas: **electricity** trading, **natural gas** trading, **asset** portfolio – as asset-backed trading company
- 2004 EGL presented successfully to the World Bank, the EU and the US the TAP concept and the **importance** and **strategic position of TAP - part of the Southern Corridor** - the most economic solution for security of supply and greatest impact to the SEE
- 2005 The World Bank **approved** the importance of TAP for the EU and SEE

Local presence throughout Europe

- Albania**, Tirana
- Austria**, Vienna
- Benelux**, Brussels
- Bulgaria**, Sofia
- Czech Republic**, Prague
- Finland**, Helsinki
- Former Yugoslav Republic of Macedonia**, Skopje
- Germany**, Leipzig, Dusseldorf
- Greece**, Athens
- Hungary**, Budapest
- Italy**, Genoa, Milan, Rome
- Kosovo**, Pristina
- Luxembourg**, Luxembourg
- Norway**, Oslo
- Poland**, Warsaw
- Romania**, Bucharest
- Serbia**, Belgrade
- Slovakia**, Bratislava
- Spain**, Madrid
- Sweden**, Malmö
- Switzerland**, Laufenburg, Dietikon
- Turkey**, Istanbul
- UK**, London



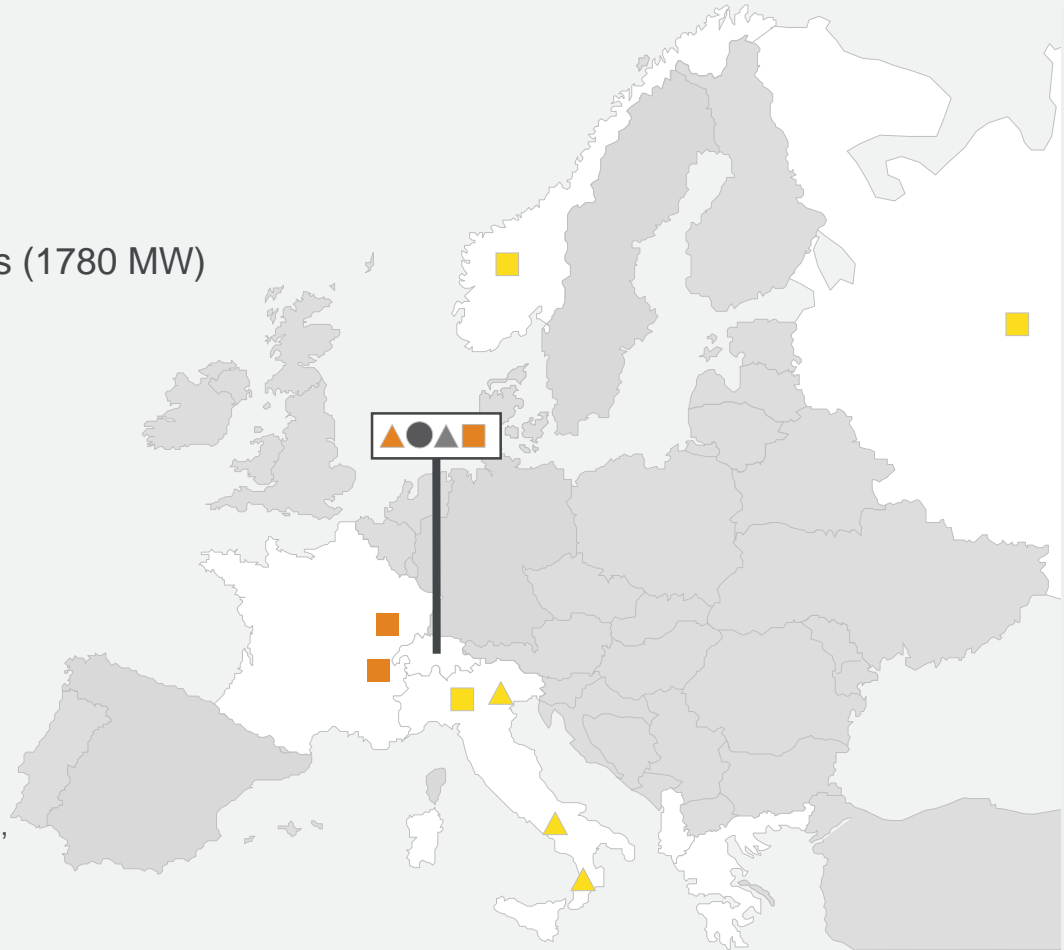
Power assets

- ▲ Hydro power (440 MW)
- ▲ Nuclear power (60 MW)
- ▲ Gas-fired combined-cycled power plants (1780 MW)
- Procurement contracts; nuclear power and other sources (420 MW)
- Transport infrastructure (2250 km)

Gas assets

- Procurement contracts

The various assets of EGL are managed by the Assets, Energy Trading & Origination or Gas Supply & SEE division, depending on their character and way of deployment.



Asset projects

▲ Gas-fired combined-cycled power plant La Zarza
(400 MW; EGL: 100%)

1 Off-shore wind park Global Tech I
(400 MW; EGL: 24.1%)

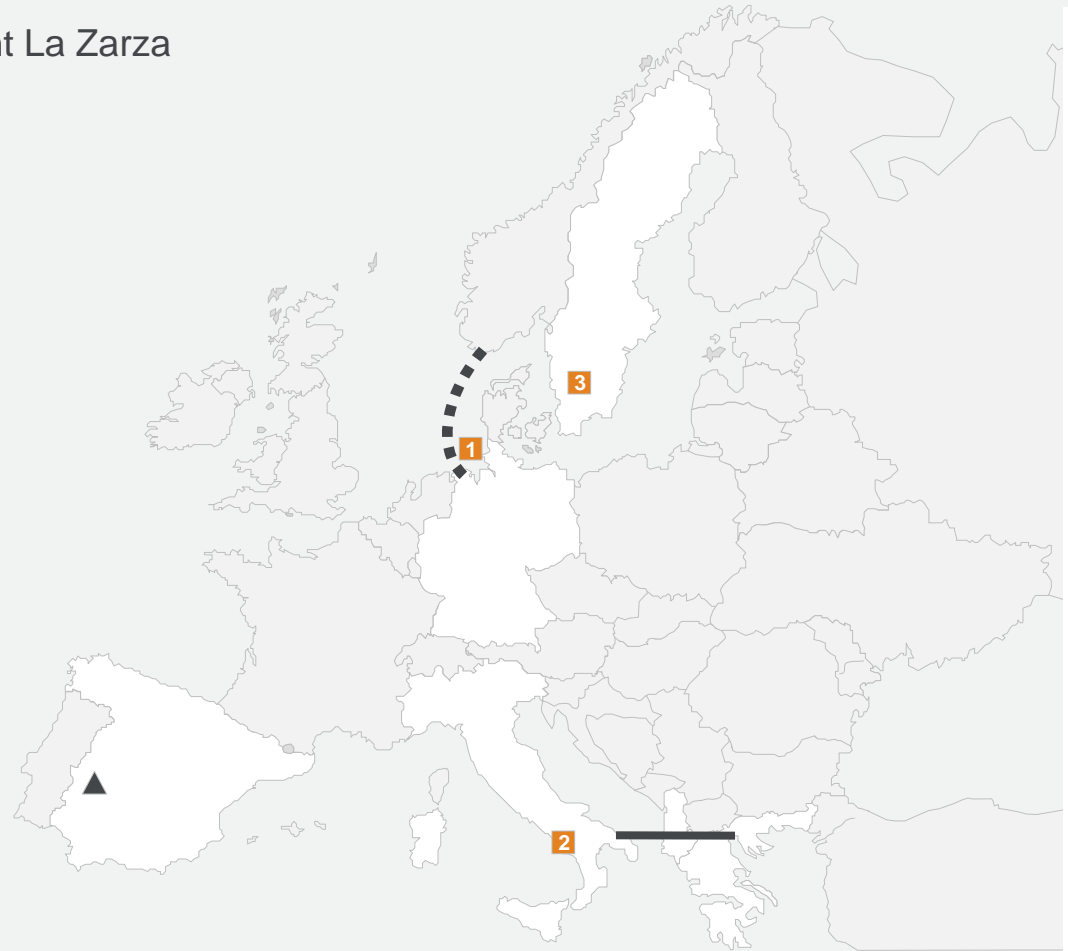
2 Wind park CER/Winbis
(66 MW; EGL: 100%)

3 Various wind power projects HS Kraft
(EGL: 51.6%)

■ Subsea power cable NorGer
(EGL: 16.67%)

■ Trans Adriatic Pipeline (EGL: 42.5%)

EGL launched TAP's concept since 2003
with strong vision and trust to the future of
SEE as part of the whole EU energy market



The main drivers of EGL's strategy in SEE in gas and power

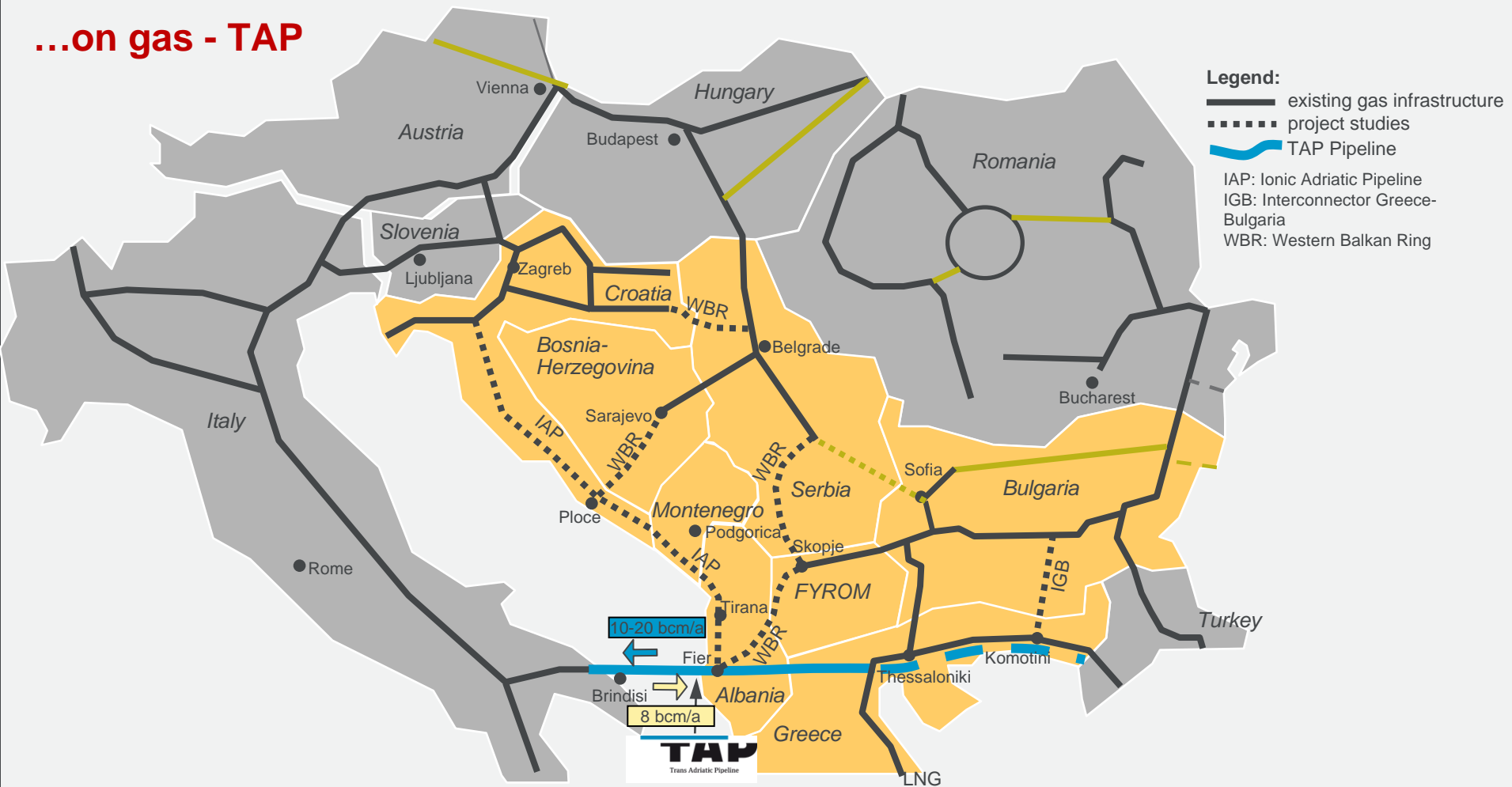
- Establishing balanced and sustainable energy trading in the entire value chain from CBT to domestic markets
- Setting-up a geographically diversified, balanced and complementary asset portfolio in SEE to gradually enhancing activities among all SEE countries
- Developing TAP as a unique & realistic project with the greatest economic impact to the whole SEE region along with powerful global shareholders.

The SEE united strategic cooperation – the main precondition for an entire regional success

- TAP creates a unique potential of closer cooperation of all members of EnC of SEE: Albania, Serbia, Macedonia, UNMIK, Montenegro, B&H and Croatia through the connection with the Ionian – Adriatic Pipeline (IAP) and other elements of the natural gas ring including potential development of CCGT along the ring
- TAP, IAP and the rest segments of gas ring open new wide windows of opportunities for the development of a number of CCGT's in all contracting countries
- The idea of the creation of an “SEE Energy Pool” materialized through a strong regional energy cooperation strategy among all members of Energy Community enables the crystallization of a necessary substantial pool-demand to the gas suppliers of SD and Middle East.**
- SEE energy pool may utilize synergies & new windows of opportunities on the benefit of all contracting parties allied in a unique strategy**

NEW CONCEPT: SEE ENERGY POOL

...on gas - TAP



- Connects to hubs in Italy, Greece, Turkey and the Balkans
- Cross-border interconnector between the Italian and South East European markets

TAP Rationales

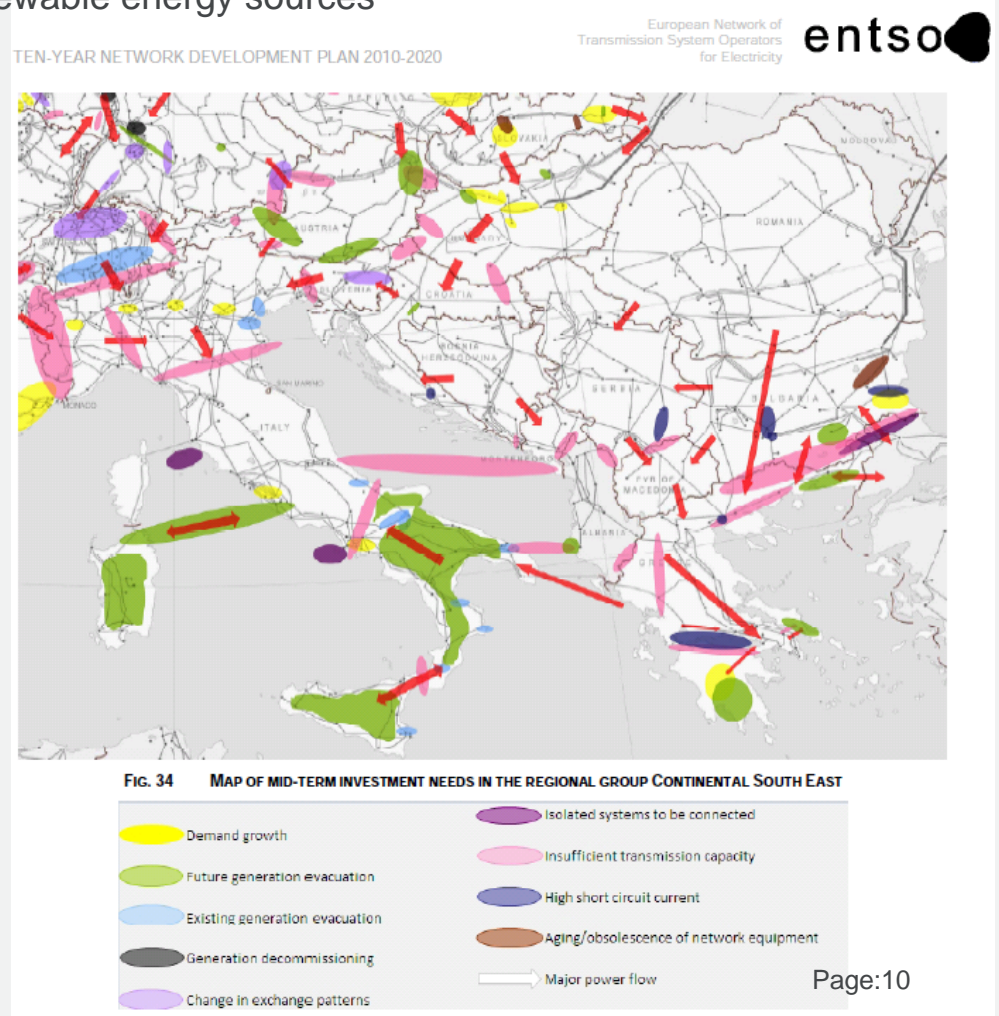
- **TAP** is tailor made solution for available Shah Deniz II volumes, additionally expandable to 20 bcm/a as soon as new gas volumes become available
- **TAP** is the most cost-effective solution in the Southern Corridor
- **TAP** has financially very strong shareholders with vast experiences in gas pipeline development. This also means that TAP is not relying on public grants or subsidies
- **TAP** adheres to the highest international (EBRD) standards
- **TAP** contributes to increased security of supply in Europe and SEE
- **TAP** meets the needs of all producers, shippers and buyers
- **TAP** is the natural fit to contribute to further develop of the SEE gas markets (by connecting to Ionian-Adriatic Pipeline)

We are convinced that with TAP, producers and buyers are best placed to achieve the immediate kick-start to open up the Southern Gas Corridor on the basis of a win-win!

... on electricity...

The potential of SEE in hydro and other renewables calls for one or more sea cables between SEE and Italy for boosting investments in all yet unexploited renewable energy sources

- The components of a “Smart Southern Corridor” are envisioned as a network of natural gas pipelines and other energy projects including submarine transmission between SEE and EU (Italy priority) that will diversify EU sources away from overdependence from one source
- Additional CCGT plants in EnC countries in Adriatic coast should be treated as elements of the Southern Corridor



Three already designed submarine potential projects -

1) Submarine Transmission from Montenegro to Italy

HVDC bipolar cable system, 2x500 MW, LCC
375 km undersea cable, 15 km DC connection in Italy,
60 km AC+DC connections in Montenegro
2 AC/DC stations
1.000 MW thermal capacity

Rome, 23rd November 2010:

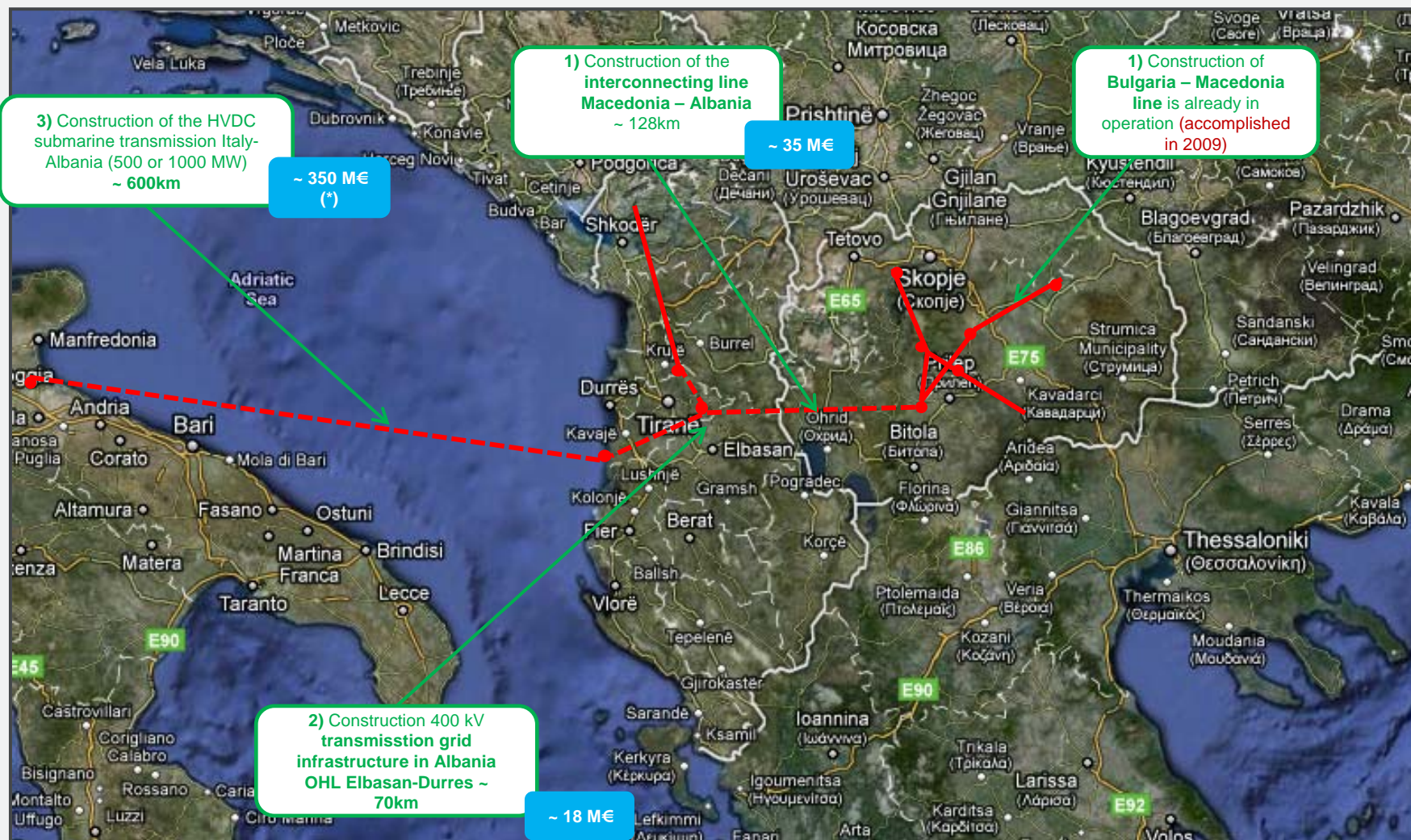
final agreement for the strategic partnership with the local transmission operator CrnoGorski Elektroprenosni Sistem AD ("CGES") and the State of Montenegro, as a majority shareholder of CGES signed



Source: Terna

Three already designed submarine potential projects -

2) Submarine Transmission from Albania to Italy

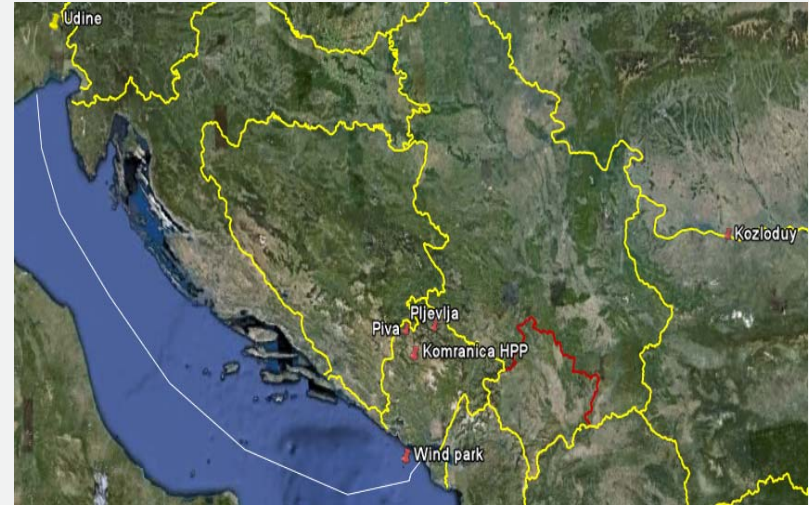


(*): In case of 1000 MW capacity of HVDC cable

- Existing or under construction
- - - To build-up
- Economics estimation

3) Submarine Transmission from Montenegro to Italy

- 2100 MW cable to Italy from Montenegro using state of the art technology



- Proposed cable scheme for 2100 MW: 3x700 MW \pm 500 kV
- For improved timing of project: first 2x700 MW by end of 2016, then another 700 MW.

Source: Fichtner

2) Overall Project Technical Concept - Phase 2



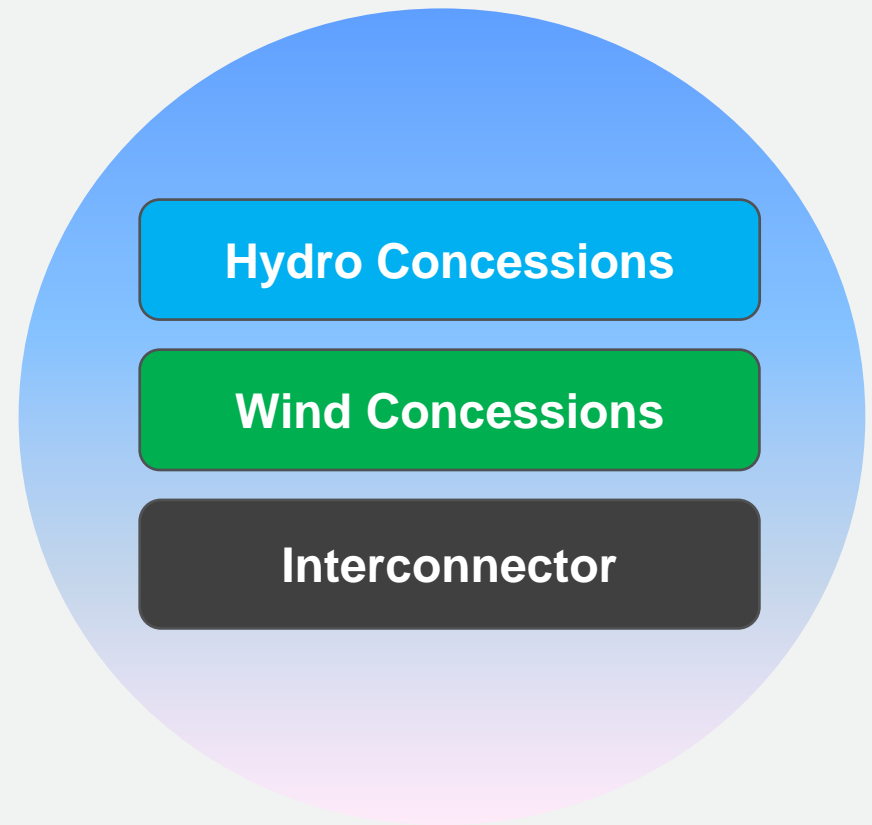
The Business Idea

The business idea is based on the concept of „**leverage**“ among industrial, financial and institutional partners

Industrial Partners
(energy manager)

Financial Partners
(fund manager)

Institutional Partners
(sponsor manager)



THANK YOU

WWW.EGL.EU

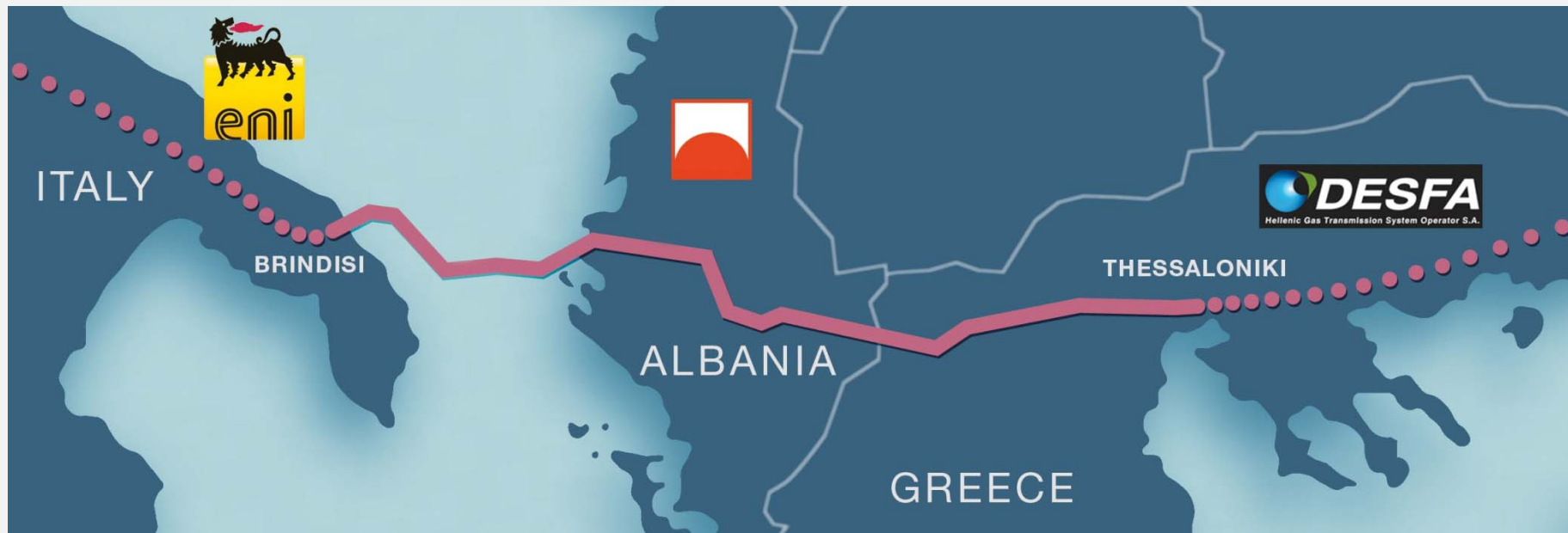
BACK UP

EGL's contribution in SEE in gas assets in the region through TAP – TAP's Key Features

Shortest pipeline length \approx 520 km

Focused on transportation of Shah Deniz II gas

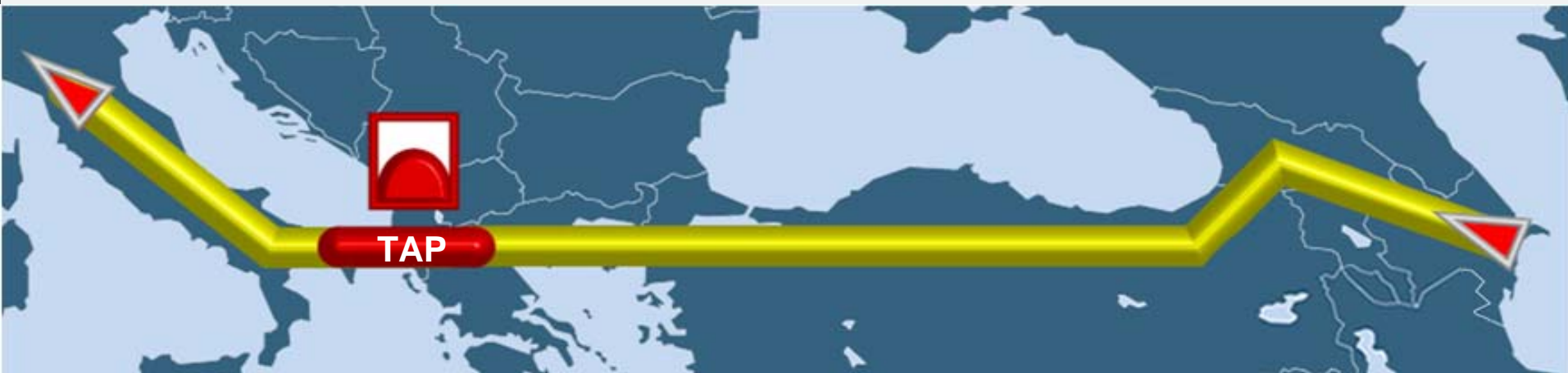
- Connects to existing networks in Greece and Italy
- Designed to expand from 10 to 20 bcm per year
- Gas storage option in Albania - supports European energy security
- Shallowest offshore section (820 m) compared to other pipelines
- Azerbaijan/Turkey signed a transit deal in June 2010 that matured the value chain substantially
- Privately financed project – does not rely on public grants



Building SGC Step by Step

TAP accommodates SD gas volumes in 2017 & in the future

- Shah Deniz II gas to fill TAP's initial capacity of 10 bcm per year
- No other volumes currently available
- Flexible: Expandable to 20bcm to accommodate future volumes
- TAP directly connects Azerbaijan to one of the most valuable European gas markets – Italy



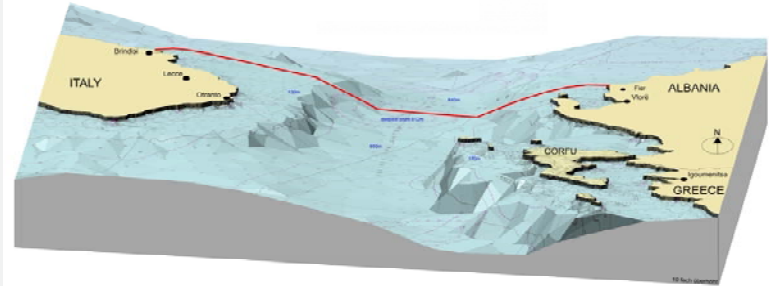
Focus on Technical Expertise

Technical processes adheres to highest (EBRD) standards

- TAP has conducted detailed onshore and offshore technical surveys
- Up to 2000 documents behind each survey
- Attention to detail ensures that TAP adheres to the highest EBRD standards minimizing impacts on local communities & the environment

Offshore survey in 2009 concluded **optimum routing** for 42" pipeline across the Adriatic sea:

- Shallowest water depth (820m) compared to other routes



conditions



Investment confidence in the times of economic recession



EGL (42.5%):

- European energy trading company with own assets in 16 countries
- Operates gas fired power plants in Italy

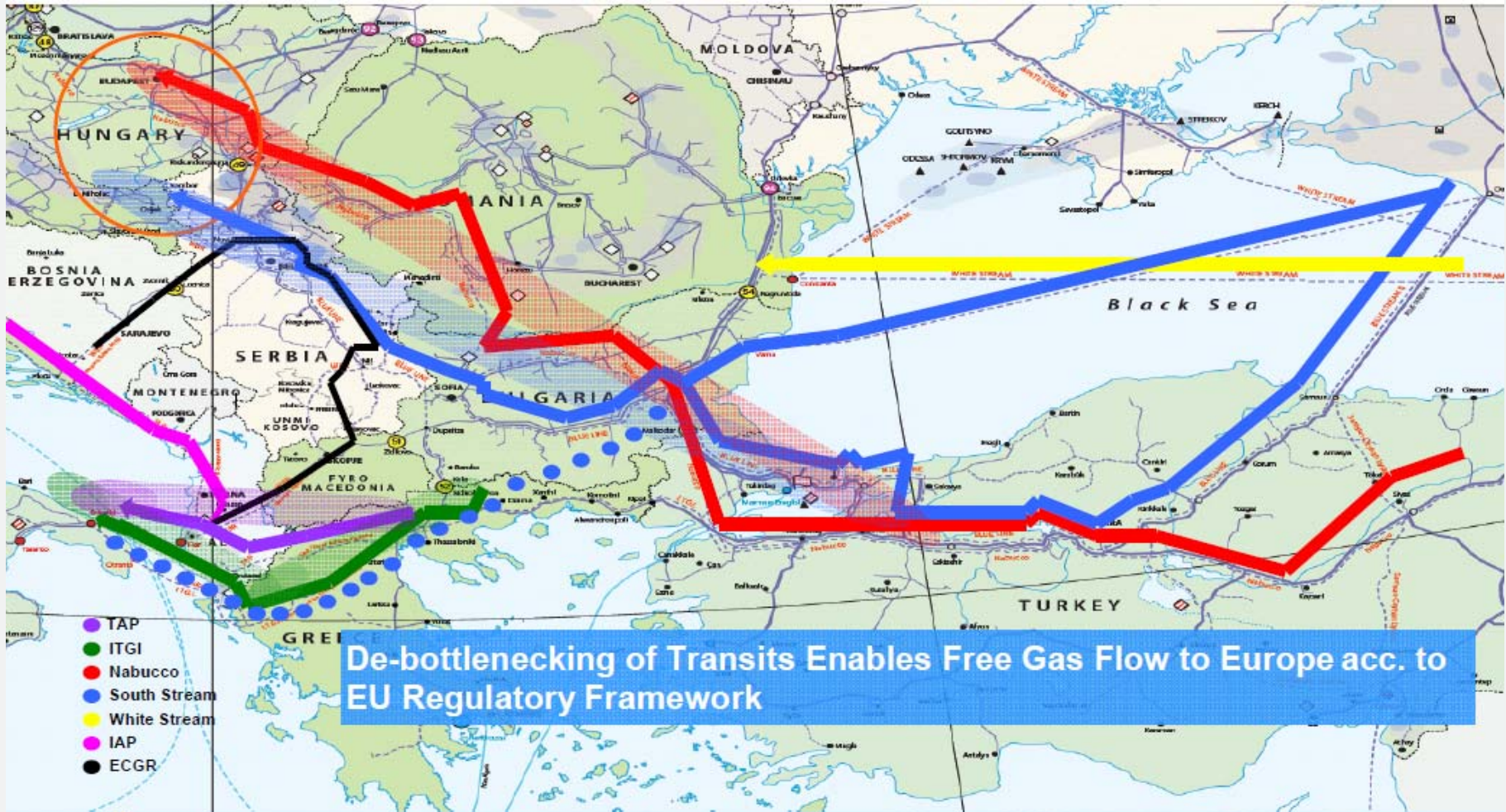
Statoil (42.5%):

- Second largest gas supplier to Europe
- The world's largest deepwater operator (8'000 km of subsea pipelines)
- Partner and commercial operator of Shah Deniz consortium

E.ON Ruhrgas (15%):

- Europe's largest private utility supplying 53 billion m³ of gas yearly
- Own supply system comprises 11'600 km of gas pipelines

SEE Gas Ring in the context of Southern Corridor TAP and IAP constitute half of the Gas Ring



TAP (in second phase 20 Bcm) + IAP is the most optimum solution to EU and SEE

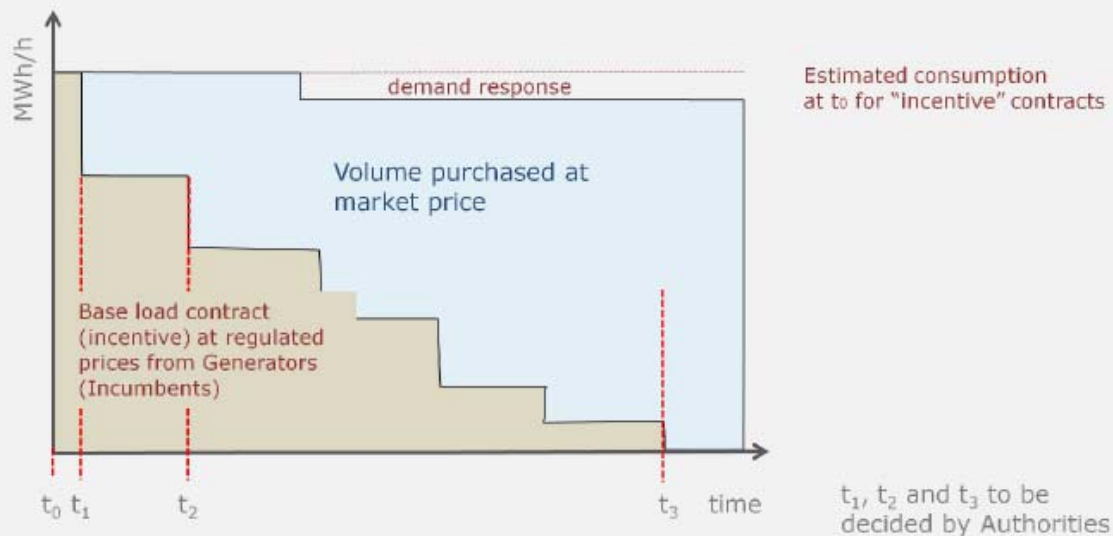
TAP has significant physical reverse flow possibilities



- Physical reverse flow: up to 8.5 bcm of 10 bcm capacity per year
- Cross-border interconnector between the Italian and South East European markets
- Connecting to future gas hubs in south Italy, Greece, Bulgaria and Turkey
- Securing emergency supply: connecting SEE to Algerian and Libyan gas resources

Diagnosis

- No regional electricity market
- Lack of market price penetration to final customers
- No competitive/liquid national markets
- Decentralized approach - each country proceeds at its own pace with its own advisors



Effective Electricity and Wholesale Market opening: World Bank Project on South East Europe

Wholesale market opening:

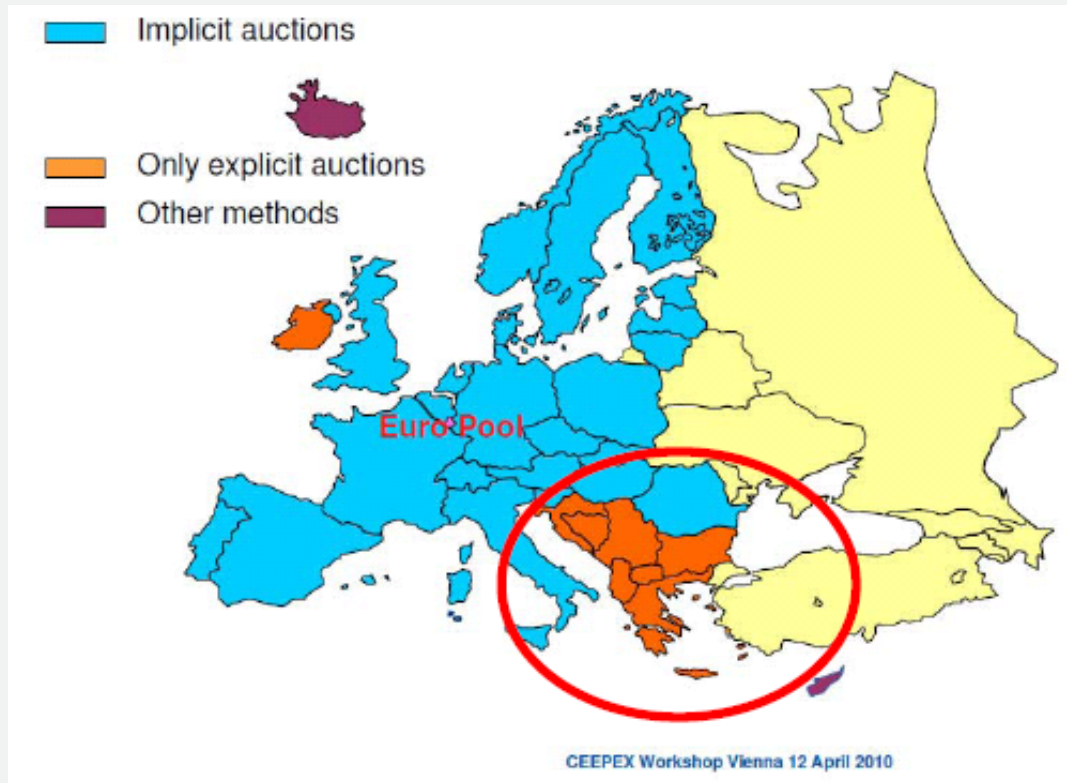
- ESMAP and PPIAF (two multi-donor trust funds) provide financing
- WB contracted a consortium of Poyry Energy and Nord Pool Consulting
- Final Report is available – www.energycommunity.org
- Next Step: Action Plans to be implemented
- **Implementation of DAM, by the willing & others to follow (EC's current gradual progress expected to continue) was targeted to be launched in Jan 2012, SEE-wide 2015.**

Already active DAM (power exchange) activities in Hungary, Slovakia, Romania and Greece. Daily capacity auctions on almost all borders in SEE

Electricity market opening:

- Allow state utilities to sell to the market in addition to the regulated customers
- Reduce volumes of tariff sales & allow volumes of market sales to increase
- Promote effective market opening
- Promote internal cash generation by state utilities for their future investment and ability to survive in future market competition with private companies
- Promote energy efficiency when consumers increasingly have to pay the real price for electricity
- **Successfully done in Romania in 2001-2007, up to 50% market opening; and further progress in 2010**

Effective Electricity Market opening – e.g. Implicit vs. Explicit Auctions



Explicit capacity auction:

The transmission capacity on an interconnector is auctioned to the market separately and independently from the marketplaces where electricity is auctioned. The capacity is normally auctioned in portions through annual, monthly and daily auctions. Since the two commodities transmission capacity and electricity are traded at two separate auctions, there is a **lack of information about the prices of the other commodity**

Implicit capacity auction:

With implicit auction the day-ahead transmission capacity is used to integrate the spot markets in the different bidding areas in order to maximize the overall social welfare in both (or more) markets

 = SEE Challenge

Continuously Progressive work of EGL with Energy Community Secretariat in SEE

- The Treaty establishing Energy Community centers at the creation of an integrated market "*based on common interest and solidarity*", including prohibition of anti-competitive agreements and dominant positions
- A stable regulatory and market framework is prerequisite for attracting investments in generation and transmission networks
- The application of harmonized technical standards is another precondition for a functioning regional market as well as the concept of a **single market** based on **effective competition** constitutes the fundamental basis of EU policies across a wide range of sectors
- Expecting further liberalization and the forthcoming Central Allocation Office (CAO) which will facilitate optimization in origination and CB trading activities
- Many important prerequisites for a regional market opening are only fulfilled to a limited degree:
 - TSO Unbundling
 - Supplier Unbundling
 - Eligibility
 - Balance Responsibility and Balancing Mechanisms
 - Market Concentration
 - Transparency
 - Establishment of a Regional DAM

The common challenges of the SEE Region

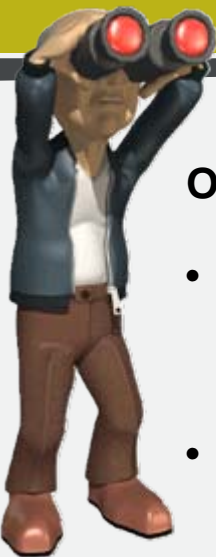
- Low market **transparency**
- **Not fully liquid markets**
Most of the production is still state-owned and under the procurement law the state-owned producers are unable to sell/buy on the OTC market (exception Romania – DAM)
- **Some market players are very aggressive**
Having strong market power and being allied with each other, they block fair competition.
- Too little **CBC is made available** to the market. Creation of artificial bottlenecks.
- **Government effectiveness** to be improved
- Establish an **efficient energy sector** concerning both financial and technical aspects

Using SEE opportunities

- Increasing demand in basically every sub-area of the energy sector: generation, transmission, efficiency, environmental impact – in all those areas there are significant investment needs
- Despite the current global crisis SEE remains a region with high growth potential. Once the crisis has eased, demand for energy will rise again sharply. It will then be good for investors to be on the supply side
- Create dedicated segment of transparent energy capital markets to attract foreign & domestic capital investors
- A time of scarce finance forces us to sharpen our thoughts. It is now that we have to find innovative and affordable solutions which will last
- EGL is eager to contribute in the development of the SEE region

**EGL trusts the conditions will improve in SEE
and
is committed to participate with new assets!**

EGL's outlook and challenges



Outlook

- Strong confidence in SEE business, high growth region with full EU future membership
- SEE is in the value chain of TAP, the **most economic transportation infrastructure solution** to supply natural gas to Italy and influenced by implementation of EGL gas S/P contracts
- EGL's long run objective: supplier eligible customer portfolio, recognized player in the market
- Establishing new partnerships on asset development
- Extend gas business and access to LNG downstream

Challenges ahead

- EnC: harmonisation of markets, EnC treaty as integral part of EU directives / treaty
- Political dependencies
- Slow paces of liquidity growth
- Improvement of market transparency is required
- Large players are entering with secured market advantages
- Selecting partners with complementary features and strategies
- Insufficient network codes
- Non-transparent tariff system