

## TRANS ADRIATIC PIPELINE: ECONOMIC ADVANTAGES OVER THE COMPETITORS BUT EQUAL POLITICAL RISKS

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The expectation of the increase of European energy demand, combined with the decrease of the energy sources within the European Union (EU), stresses a growing dependence on energy importation from outside the continent. According to the most important economic outlooks, the ratio of demand that will need to be satisfied through energy importation will rise from 45% to 65% by 2020. The realization of new infrastructures aimed at gas importation from outside is becoming a priority for Europe. About two third of the world gas reserves are located in Russia, the Middle East and the Caspian region. These identified reserves are large enough to satisfy the European energetic demand for more decades. At present however, Europe energy supplies are reliant on the old Russian pipelines that transit countries in unstable relations with Moscow. In order to reduce this dependence on Russian pipelines, a series of projects have been planned that will allow a direct connection between

Europe and the energy sources of the Caspian and Middle East regions. Thus diversifying energy resources and routes and upgrading the energy security of Europe.

Among these projects is the Trans Adriatic Pipeline (TAP); a planned pipeline that directly concern Italy. The principal reason for TAP is the absence of a direct link between Greece and Italy inside the European energy infrastructure system: which has been called the “missing link” of the south. TAP could fill the gap, ensuring a link that will provide direct contact between Greece and Italy, though Albania. The advantage of TAP is essentially its short length: it is based on the construction of a 520 km gas pipeline, starting in Greece, passing through Albania and the Adriatic Sea, and finally arriving in the Italian region of Apulia, from where it can also supply the European markets. Relying on the gas production capacity, TAP will meet the target of the European demand with a transport capacity of 20 billion cubic meters (bcm)/year.

One of the most important aspects of TAP is that 115 km it will be offshore: the pipeline will be laid down on the seabed of the Adriatic Sea, approximately along the Otranto Canal, at a depth of 820 meters underwater. The total cost of TAP is estimated at 1,5 billion of euro, and the project will be operational starting from 2012.

TAP will be realized through a collaboration between two international energy consortiums: EGL (Elektrizitäts – Gesellschaft Laufenburg AG) and Statoil. EGL is a commercial energy society based in Switzerland, part of the AXPO Group, one of the most important supplier of energy in the country. EGL is listed on the Swiss Exchange SWX, the Switzerland stock exchange and retains 42,5% of the share in the project. Statoil is the other partner in the TAP project: an energy society based in Norway, with the Norwegian state as its principal shareholder (with 42,5% of the share). Statoil is listed on Oslo Børs and on the New York Stock Exchange and joined the project in 2008, after a joint venture agreement in which the development, the construction and the functioning of the pipeline has been subdivided in equal parts.

The third partner is E.ON (a big energy company based in Germany) with a 15% of the share.

Statoil participated in the exploration for, and extraction of, gas in Shah Deniz, Alov, Arez and Sharg gas fields in Azerbaijan. At Shah Deniz, which is considered one of the biggest gas fields of the Caspian Sea, and Statoil has 25,5%, extraction rights. This field will officially provide the gas to TAP. Via Azerbaijan and Georgia, the gas from Shah Deniz will arrive in Erzurum, Turkey. From there it will be distributed inside the Turkish pipeline system of Botas. Botas itself owns a net of pipelines that serves all Turkey and the Greek border, not far away from Thessaloniki. Here is where the proposed TAP pipeline will begin. Along with TAP, there are a lot of competitor projects aimed at the direct connection between Europe and the Caucasus and Middle East regions rich with energy resources. However, because the interests of the sponsor countries behind the pipelines are divergent, the routes of these planned projects differ. The growing numbers of projects, passing through the same geographical area, is bordering on a pipeline war. Among all of these projects, the major competitor for TAP is the Interconnector Turkey-Greece-Italy (ITGI), also known as Poseidon. The Poseidon project is based on the construction of a new pipeline that will connect the gas transportations systems of Turkey, Greece and Italy at a cost of approximately 1.1 billion euro. Nevertheless, the Poseidon project, just like TAP, has been included in the projects of common interest of the EU (the higher priority level of the infrastructure of European Union), and therefore will be financed by Brussels. The agreement between Greece and Italy was signed in 2005, whereas the agreement with Ankara was signed two years later, in 2008. According to the plans, the 970 km pipeline will transport 8 bmc/year of natural gas starting from the second half of 2012, contributing to diversify and assure the European energy supply.

The two companies involved in ITGI are Edison and DEPA, and both established a joint venture named IGI Poseidon S.A., under the legislations of the Greek State.

One of the biggest projects in the pipeline war is Nabucco: a gas pipeline that will connect Turkey with Austria, passing through all the Balkan countries. The Nabucco project has been planned by two energy companies, Botas and OMV, an Austrian company. Besides these two promoters, Bulgargaz, Transgaz, MOL and RWE joined the project. All these companies created a joint venture named Nabucco Gas Pipeline International GmbH in 2005. Nabucco will be 3.300 km long and it will start from the eastern border of Turkey, going through Bulgaria, Romania, Hungary and Austria. Once it arrives at the Baumgarten hub, it will be stored and distributed to the rest of Europe. The maximum diameter of the pipeline will be 56 cm and 12-13 compression stations will be built along the route to allow the gas to pass through. The total cost of Nabucco will be approximately of 7,9 billion of euro. Finally, there's the South Stream project. In 2006 a partnership agreement between Russia's Gazprom and Italy's ENI started the planning process for this pipeline. The agreement was announced one year later, when the Chief Executive of ENI, Paolo Scaroni, and the then Vice-President of Gazprom, Medvedev signed, in Rome, a Memorandum of Understanding (MoU). South Stream's construction would provide Russian gas supplies to the Italian market and was started in 2008. The project will be completed in 2015 and it will cost between 19 and 24 billion euro.

As in the previous cases, a joint venture was created between ENI and Gazprom called the South Stream AG, and based in Switzerland. The feasibility study was made by Saipem, an ENI owned company. According to the preventive studies, the South Stream project consists of the construction of a gas pipeline with 63 bcm/year capacity, that will transport gas from the pumping station of Pochinki, Russia, to the Russian Black Sea coast. From here the pipeline will be offshore for 900 km at a

maximum depth of 2.000 meters and it will connect the Russian coast to the Bulgarian coast, near Varna. The planning project foresees that in Bulgaria, near Pleven, South Stream will split in two different directions: the upper route destined to the European central markets; and the southern route destined for Igumenitza, Greece, where the pipeline will continue in Adriatic Sea, arriving in Apulia, near the city of Otranto.

Among all the competitors proposing to fill the gap of the "missing link", for sure the Trans Adriatic Pipeline has a lot of advantages and the fewest shortcomings. In fact, TAP is the project with the smallest number of km, 520, considerably less than the 807 km of ITGI and the 3.300 km of Nabucco. Beside this important specification, it is also necessary to consider the total cost of the project, lower than Nabucco and South Stream: TAP will cost approximately 1,5 billion euro, whereas Nabucco will cost 7,9 billion of euro and South Stream between 19 and 24 billion. Only ITGI will have a lower cost, 1,1 billion euro, thus it will be the best competitor of TAP in these terms. Notwithstanding, what TAP is losing in terms of total costs, TAP will get back in terms of bcm imported through the pipeline. Excluding the giant projects of Nabucco (31 bcm/year at the end of the construction) and South Stream (63 bcm/year), TAP will transport 20 bcm/year, against the 8 bcm/year of ITGI. A different perspective must be taken considering the political factors of the different planned projects. Whereas ITGI will pass through three countries, Turkey, Greece and Italy, in which there are no high political risks and a relative stability, TAP will include in its rout also Albania: a country in which there is democratic instability, stressed by the events of the last January, where the riot in the streets of Tirana and the clash between the Government and the opposition have been rough. A similar situation is actually evolving in Greece, due to the economic crises that is shaking the country. However, neither situation will, in theory, jeopardize the construction of TAP, a project from which also Albania and Greece will profit.

Turkey has a direct interest in the project, despite the fact that TAP will not cross its territory. The negotiations for Turkish European Union (EU) membership could facilitate the realization not only of the TAP, but also of the implementation of the other pipelines passing through Turkey. A full EU membership for Turkey could make this country the most important European hub for the management and for the supply of gas to European markets. However, another important point to be discussed is one common to all projects mentioned: the sources of gas. The big gas fields of the Caspian Sea region and the Middle East are located in highly unstable areas. Azerbaijan, where the Shah Deniz (directly involved in TAP project) and other gas fields are located in which the energy companies have great interests, is actually the most important source for Western countries energy supplies. In neighboring Georgia, the regime is allied with United States of America; Washington pushing for EU and NATO membership for Tbilisi. But Baku and Tbilisi have to confront urgent and critical problems: both countries are under Russian pressure, and Moscow has in its interest pushing forward its pipeline projects to supply gas to Europe. This confrontation was apparent in the 2008 war between Russia and Georgia, in which the diverging interest of Russia and Western countries for the gas and oil field in the Caucasus and its related pipelines projects, became evident.

It is also evident that Nabucco, supported by Washington, and South Stream, sponsored by Moscow with the collaboration of Italy, are in complete contradiction. The Kremlin has in its interest a Europe dependent on Russian energy supplies. This was clear in the gas crises of 2007, when the interruption of gas supplies to Ukraine shook all of Europe. Moreover, both projects need large resources and big investments, with a lot of questions to be resolved. For example, Nabucco was often criticized for the absence of the principal elements needed to pass through its pipeline. In fact, it has not yet identified the source, or sources, large enough to

ensure the correct supply for the Nabucco pipeline, unlike TAP, which has indicated the Shah Deniz field as the source to be exploited. This is an important point to be stressed. Bigger projects, like Nabucco and South Stream, need resources and investments not available in the short term. Moreover, they respond directly to Russian and American interests (in the spirit of the Cold War), more than a profitable collaboration in order to satisfy European energy demand. Smaller projects, as TAP, have instead the advantage of being more achievable and are less subject to political pressures and conditioning that have been manifest in the pipelines war.

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