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**TURKEY’S ENERGY STRATEGY**

Energy sources are being extensively used for many purposes such as transportation, heating and industrial production. Affordable and uninterrupted flow of energy sources are of significant importance for the economic development of our countries. Energy supply security has also been often associated with issues of foreign policy, national security, economic welfare and global stability.

**I. Turkey’s Energy Profile and Strategy**

With a rapidly growing economy, Turkey has become one of the fastest growing energy markets in the world. Turkey has been experiencing rapid demand growth in all segments of the energy sector for decades. Over the last decade, Turkey has been the second country, after China, in terms of natural gas and electricity demand increase. Turkey is expected to become one of the most dynamic energy economies of the world in terms of increase in energy demand.

The limits of Turkey’s domestic energy sources in light of its growing energy demand have resulted in dependency on energy imports, primarily of oil and gas. At present, around 26 % of the total energy demand is being met by domestic resources, while the rest is being satisfied from a diversified portfolio of imports.

The primary aim of Turkey is to realize its own energy security, and then the second objective is to contribute to Europe’s energy security.

Turkey is geographically located in close proximity to around 72 % of the world’s proven gas and around 73 % of oil reserves, in particular those in the Middle East and the Caspian basin. Turkey, forming a natural energy bridge between the source countries and consumer markets, stands as a key country in ensuring energy security through diversification of supply sources and routes, considerations that have gained increased significance in Europe today.

Major pipeline projects, realized and proposed, which will contribute to Europe’s energy supply security, will enhance Turkey’s role as an important and reliable transit country on the East-West as well as North-South energy axis.

**II. Turkey’s Role as a Reliable Transit Partner**

The main component of the East-West Energy Corridor is the ***Baku-Tbilisi-Ceyhan (BTC) pipeline***, which is a dedicated crude oil pipeline system that extends from the Azeri-Chirag-Deepwater Guneshli (ACG) field through Azerbaijan and Georgia to a terminal at Ceyhan on the Mediterranean coast of Turkey, bypassing the environmentally sensitive Black Sea and the Turkish Straits. The pipeline, which started with an initial amount of 1 million barrels per day, had its capacity increased to 1.2 million barrels per day, and at 1760 kilometers is the second longest of its kind in the world. The first cargo of oil, which had travelled through the BTC pipeline to Ceyhan, has been loaded onto a tanker on 4 June 2006. As of 10 January 2011, over 1 million barrels of Azeri oil was loaded to tankers from Ceyhan and shipped to international markets.

On 16 June 2006, Kazakhstan has officially joined the BTC oil-pipeline project. A Host Government Agreement to that effect was signed on that day in Almaty by the Presidents of Azerbaijan and Kazakhstan, His Excellency İlham Aliyev and His Excellency Nursultan Nazarbayev, respectively. Kazakh crude oil has started to be shipped to Baku across the Caspian Sea, and then pumped through the BTC pipeline to Ceyhan as of November 2008.

The **Iraq - Turkey (Kirkuk – Yumurtalık) Crude Oil Pipeline System** transports the oil produced in Kirkuk and other areas of Iraq to the Ceyhan (Yumurtalık) Marine Terminal. The pipeline system with an annual transport capacity of 35 Million tons was commissioned in 1976. The capacity of the line was increased to 46.5 Million tons/year in 1984. With the completion of the second pipeline, parallel to the first one, the annual capacity reached 70.9 million tons as of 1987. Turkey has concluded the negotiations with the Iraqi side aiming at extending the duration of the transportation agreement via this pipeline on 19 September 2010.

The second component of the East-West Energy Corridor, namely the ***Baku-Tbilisi-Erzurum (BTE) Natural Gas Pipeline***, has become operational as of 3 July 2007. Designed to transport natural gas from the Shah Deniz field in the Azerbaijan sector of the Caspian Sea, through Georgia and on to the Georgia-Turkey border, it is envisaged that the pipeline will export 6,6 billion cubic meters a year according to the Agreement between our country and Azerbaijan for Phase I. As for Phase II, a common understanding was reached between the parties on 7 June 2010 in İstanbul in terms of both Azeri natural gas amount to be exported by Turkey, and Azeri natural gas amount to be exported to Europe via Turkey, and also price and transit tariffs.

As in the case of oil, projects are also underway to link the Eastern shores of the Caspian to its Western shores, enabling the Turkmen, Kazakh and at a later stage Uzbek natural gas to flow to the West.

The transportation of Caspian oil and natural gas resources via multiple pipelines to Europe through such projects as the interconnection of the gas pipeline networks of Turkey, Greece and Italy within the ***Southern Gas Corridor*** will also constitute an essential component of Europe’s energy diversification efforts.

The incorporation of Turkey’s energy network with that of the EU was realized with the conclusion of the Intergovernmental Agreement on the ***Turkey-Greece Interconnector*** signed in February 2003 and the Sale and Purchase Agreement between BOTAŞ and DEPA in December 2003. The Trilateral Intergovernmental Agreement for the Turkey-Italy-Greece Interconnector was signed in Rome on 26 July 2007.

The Turkey-Greece Interconnector became operational on of 18 November 2007, following the inauguration ceremony held in Ipsala with the participation of Prime Ministers of both countries. Moreover, a Memorandum of Understanding (MOU) was signed among BOTAŞ, DEPA and Edison with regard to the ITGI Project on 17 June 2010 in İstanbul, which will link the European Union countries Greece and Italy via Turkey to Caspian and Middle Eastern natural gas resources.

With the implementation of the Greece-Italy connection, the completion of this project will contribute to the EU’s energy supply security and will serve the EU’s goal to diversify both energy sources and routes

Efforts are also underway to construct the ***Nabucco Natural Gas Pipeline*** project which envisages the transportation of natural gas via Turkey through Bulgaria, Romania and Hungary to Austria. The signing of the Intergovernmental Agreement (IGA) in Ankara on 13 July 2009 and entry into force of the IGA on 1 August 2010 have been important milestones. The Project Support Agreement (PSA) constitutes the second phase of the legal framework of the project.

The ***Arab Natural Gas Pipeline*** is envisaged to constitute another vein that will support the proposed Nabucco pipeline project. Turkey has signed two documents with Syria in August and December 2009 with a view to completing in the near future the pipeline connection between the two countries. With the establishment of this link, the Egyptian, or at a later stage, Syrian natural gas will be able to reach Turkey and beyond, and alternatively, there will be a possibility to transport natural gas to Syria via Turkey.

From the energy security perspective, the ***Turkish Straits*** are of particular importance as around 3.7% of the world’s daily oil consumption is shipped through the Turkish Straits. The amount of oil and oil products transported through the Strait of Istanbul has increased dramatically from 60 million tons in 1996 to around 150 million tons in 2008. This figure is expected to reach around 190-200 million tons in the coming years due to the expected throughput from the Caspian region reaching the Black Sea in addition to the large amounts of Russian oil.

In view of the heavy tanker traffic, as well as the physical characteristics and peculiarities of the Turkish Straits, a maritime disaster caused by a tanker carrying hazardous cargo seems inevitable sooner or later. In addition to the humanitarian and environmental perils, such a disaster would interrupt the regular flow of oil to world markets. Consequently, the solution lies at the use of alternative oil export options that by-pass the Straits.

Among the various by-pass proposals, the Turkish Government, after completing the implementation of the BTC, decided to support the ***Samsun-Ceyhan by-pass oil pipeline***. The advantages of the project over its alternatives can be summarized as follows:

The proximity of Samsun to the oil outlets on the Eastern Black Sea will minimize the seaborne transportation of oil in the Black Sea, and the existing energy infrastructure in Ceyhan obviates the need for undertaking new and costly infrastructure investments. Moreover, the project constitutes the most environmentally manageable by-pass option.

The ground breaking ceremony of the Samsun-Ceyhan by-pass oil pipeline was held on 24 April 2007 in Ceyhan. The protocol between Turkey and Russia on oil, signed during Russian Prime Minister Putin’s visit to Turkey in August 2009, has created a significant momentum with respect to the realization of the project. Subsequently, Turkey, Russia and Italy confirmed their support for the project in October 2009 in Milan. During President Nazarbayev’s visit to Turkey in October 2009, he declared Kazakhstan’s intention to supply oil to the project. Turkey has started negotiations with the Russian Federation concerning an Intergovernmental Agreement for the project.

Energy companies are aware of the seriousness of the situation and they recognize that there is a limit to the amount of oil that can be transported through the Turkish Straits.

Turkey is also interested in the development of Iraqi oil and natural gas reserves. Iraqi natural gas could easily be connected to the Turkish national grid through a pipeline to be constructed parallel to the **Iraq - Turkey (Kirkuk – Yumurtalik) *oil pipeline*** using the right of way of the latter. Within this framework, with reference to Iraq’s commitment to support the Nabucco project, a Memorandum of Understanding was signed between Turkey and Iraq on 15 October 2009 in Baghdad in order to establish a natural gas corridor.

Moreover, with the completion of the projects cited above and more, it is anticipated that 6 to 7 % of global oil supply will transit Turkey and that Ceyhan will become a major energy hub and the largest oil outlet terminal in the Eastern Mediterranean. The ***Ceyhan Terminal*** has already been designed to receive the crude oil reaching Ceyhan from Kirkuk, Baku and Samsun.

**III. Turkey-EU Relations in the Field of Energy**

As an indication of the importance given to regional energy cooperation, Turkey has also started talks with the EU on Turkey’s membership to the Energy Community in September last year.

As a candidate country, Turkey has aligned her legislation with the “acquis [communautaire](http://sozluk.sourtimes.org/show.asp?t=communautaire)”. Turkey believes that the opening of the energy chapter will surely pave the way for the success in negotiations with the EU on Turkey’s membership to the Energy Community.

Moreover, preparations are underway for the synchronous connection with the European electricity network and for joining the European Network of Transmission System Operators for Electricity (ENTSO-E) (formerly Union for the Coordination of the Transmission of Electricity – UCTE). Synchronous operation trial was successfully initiated in order to integrate with the ENTSO-E in September 2010. The operation trial will be completed next year in September. The operation will lead to physical integration of the Turkish electricity system with that of the EU countries. In this context, significant trade opportunities are envisaged to take place upon ENTSO-E membership of Turkey.

**IV. Enhancing National Energy Supply Portfolio**

Accordingly, Turkey’s energy strategy is multi-dimensional. It strives at diversifying its energy supply sources and routes, as well as its energy basket by increasing the share of the renewables and adding the nuclear energy.

Having a substantial potential for the renewable energy resources, Turkey ranks seventh in the world and first in Europe in terms of geothermal energy. Turkey also aims at further increasing its use of hydro, wind and solar energy resources. Turkey envisages producing 30% of its electricity need from the renewables by 2023.

Turkey has participated in the Founding Conference of the “International Renewable Energy Agency” (IRENA) on 26 January 2009 in Bonn and has signed the “statute” of IRENA. Therefore, Turkey has become one of the founding members of IRENA.

Moreover, Turkey has also taken steps in order to liberalize its energy market. In line with its aspiration to become an EU member, Turkey is in the process of harmonizing its energy legislation with that of the EU acquis.

**V. Nuclear Energy**

Currently, Turkey envisions reducing dependency on imported fossil fuels through the sequential commissioning of nuclear power into the Turkish electricity grid. In this respect, Turkey intends to establish around more than 10.000 MW of nuclear capacity by 2030. In this respect, Turkey has already signed an intergovernmental agreement with the Russian Federation concerning the construction and operation of a nuclear power plant at the Akkuyu site.