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Ceyhan - Energy Hub to Four Seas

On 24 April 2007, in the Turkish seaport Ceyhan, a groundbreaking ceremony took place to lay the first stone of the new Trans-Anatolian Pipeline Project (TAP).

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It links Samsun on the Black Sea with Ceyhan on the Mediterranean Sea. The ceremony was attended by Italian Minister for Economic Development Pierluigi Bersani, Turkish Minister for Energy and Natural Resources Hilmi Guler and representatives of international energy companies.

Some experts believe that construction of new alternate bypasses will facilitate solutions to some urgent problems related to the Turkish Straits. This new bypass will also add an impetus for the Caspian states to increase oil production and exports.

Cenk Sidar of Johns Hopkins University believes that the TAP will help to alleviate problems associated with straits utilization, environmental issues and threats of terrorist acts, as well as enhance energy security in Europe and other bulk energy consuming countries such as China and India.

The demurrage of tankers in the Turkish Straits is a significant problem. According to Nikolai Seregin, Head of Gazpromneft's Department of Strategy and Overseas Projects, estimated losses due to demurrage in the straits were \$12-13 per ton in January-February 2007. In his opinion, oil companies will save up to \$750 mln annually by using alternate routes such as the Burgas - Alexandroupolis pipeline.



The strategic geographical location of Turkey enhances its role as a transit corridor for oil and gas flows from the East to the West, while competition between operators of new transportation bypasses in the region is expected to intensify.

According to the Turkish Ministry of Foreign Affairs (MFA), about 7 percent of world oil supplies will pass through existing and planned transportation routes in the country after 2010. A significant share of this traffic will be transported through Ceyhan's port located on Turkey's Mediterranean coast. Thus, Ceyhan may grow into a Port of Four Seas, namely the Caspian, Red, Mediterranean, and Black.

BTC is going to be loaded

Today there are two large oil pipelines running to Ceyhan: the Baku - Tbilisi - Ceyhan (BTC) and the Kirkuk - Ceyhan (KC). According to data obtained from various sources, once the TAP is commissioned, by 2015, Ceyhan will be able to handle 170 to 210 mln t of oil annually assuming maximum utilization of all three oil pipelines. More than half of this expected oil flow will come from Caspian countries.

Experts consider the primary criterion for implementation of these large-scale plans is not the number of pipelines but guaranteed long-term crude supplies.



The BTC route is currently the busier one. Its throughput capacity is expected to increase to 60 mln t of oil per year by 2010. A group of Azeri - Chirag - Gunashli (ACG) fields in Azerbaijan will be a major source of supplies for this route in the mid-term (to 2015). Kazakh oil will become an additional source of supplies to the BTC after 2010 with the commercial development of the giant

Kashagan field.

Experts expect Kazakhstan to become a major crude supplier to the BTC by 2015. The share of Kazakh oil may reach 25 mln t per year. Therefore, the annual BTC capacity may increase to 80 mln t.

Will TAP be pumped by crude oil?

A situation regarding utilization of the TAP is believed to be somewhat controversial, since Kazakhstan and Russia are expected to be the major oil suppliers to this route. The Turkish Ambassador to Russia, Kurtulus Tashkent, noting the proximity of Samsun to the east Black Sea ports of Novorossiysk, Supsa and Batumi, has expressed hope that Russian companies would participate in this project. This may be unlikely, however. At the moment, large Russian companies do not show interest in the TAP because of the alternate bypass of the Burgas - Alexandroupolis pipeline (BAP), which is supported and promoted by the Russian government.

According to Transneft president Simon Vainshtock, the BAP competes with the TAP and BTC projects. "Our goal is to win this competition, and we can do it thanks to our experience," says Vainshtock. Lower construction costs for the shorter BAP makes it a more cost-effective route, which may have an effect on the future crude pipeline tariff.

Companies with production assets in Caspian countries, especially Azerbaijan and Kazakhstan, may be potential suppliers for the TAP. Some of these companies are likely to transport crude oil by other routes as well. For example, the BTC may be used by ENI - a major participant in developing the Kashagan and Karachaganak fields in Kazakhstan. It is believed that in the long run the TAP may be pumping Turkmenian oil as well, as the management of the Turkish Calik Enerji company is interested in some offshore projects there and has close links with the government of the country.

It is believed that alternate routes such as the TAP will help to reduce tanker traffic in the Turkish Straits by 50 percent. In addition, the Ceyhan port is capable of docking tankers with a DWT over 300,000 t, compared to 100,000-150,000 t for those navigating the Turkish Straits.

Other oil options

At the same time, experts are concerned about utilization of the KC pipeline. This pipeline, constructed in 1977, consists of two lines. The KC pipeline has been hampered by repeated acts of terrorism, sabotage and unauthorized ties-in since 2003. This has had a negative affect on its utilization rate, which currently does not exceed 3 percent of total throughput capacity (1.6 mln bopd).

The KC pipeline requires major repair operations. Its throughput capacity may be enhanced by developing political and economic contacts between Turkey and the Kurdish Administration in Iraq. But the outlook for normalization is hardly possible in the short-term due to problems connected with the Kurdish minority in Turkey and Turkomans in Iraq.

The location of the Ceyhan port also makes it advantageous for supplying, for instance, Azerbaijani oil to Israel by two routes, to Haifa and Ashkelon. The more promising of these is a route from Ashkelon to Eilat, which will enable access to the Red Sea coast. Such a pipeline is considered to be advantageous by many foreign companies in that it allows the possibility of bypassing the Suez Canal, which is facing problems similar to those found in the Turkish Straits. The potential capacity of the Ceyhan - Ashkelon - Eilat route will be about 20 mln t per year. Furthermore, the Red Sea coast is suitable for docking tankers with a DWT up to 500,000 t.

A refinery should be there

Concentrating large crude reserves in a single place like Ceyhan opens prospects for the development of new projects, for example, construction of oil refineries. The state agency EPDK (Energy Market Regulatory Authority) is currently reviewing four projects to construct refineries in Ceyhan. These proposed projects differ in their crude refining capacities and construction costs.

The construction of refineries is promising due to the growth in consumption of oil products, especially light ones, in Turkey and countries adjacent to the region. They provide an opportunity for exporting refined oil to countries such as India and Thailand.

Several alliances are taking part in the four refinery construction projects. Most of the alliances include foreign and Turkish companies (Calik Enerji, Petrol Ofisi and Turcas). According to Petrol Ofisi, which is participating in an alliance with Austria's OMV Group, the main criteria for participation in the bidding process include the ability to produce oil products meeting European standards and minimum damage to the environment.

The bidding proposal by an alliance between Calik Enerji and Indian Oil Corporation (IOCL) is of particular interest since both companies are participating in the TAP project. Inasmuch as the TAP project is supported and approved by the Turkish government, this alliance may have advantages which improve its chance of success.

Not only there

Ceyhan also provides an opportunity for implementing a number of large gas projects. The key gas projects envisage construction of gas pipelines to Ceyhan and a liquefied natural gas natural gas plant. According to the Turkish MFA, up to 4 bcm of LNG are to be supplied to Ceyhan by 2010.

It is expected that natural gas from Ceyhan will be supplied mainly to consumers in the Mediterranean countries, especially in Israel. Two supply options are under review: construction of a LNG plant or a subsea gas pipeline to Ashkelon.

The national operator of the Turkish gas transportation network, BOTAS, is reviewing a preliminary feasibility study to construct the LNG plant and is involved in negotiations with potential partners. The results of the feasibility study of capacities and costs and the list of participants will not be disclosed until the Turkish Ministry of Energy and Natural Resources makes the final resolution.

At the same time, BOTAS is reviewing several options for natural gas supplies. One such option is for gas to be supplied from Russia by the Blue Stream pipeline with an annual capacity that is expected to reach 16 bcm by 2010. BOTAS is also reviewing options for gas supplies to Ceyhan from Middle East countries, Iran, and a number of Caspian countries. However, the Caspian countries such as Azerbaijan and Kazakhstan are not contemplating any plans to construct new lines to Ceyhan or to participate in the LNG plant construction. They believe that this issue is within the exceptional competence of BOTAS. Research has shown that its geographical location makes Ceyhan a convenient sea port for transshipping oil and gas from the world producing areas of the Middle East, Caspian region, and perhaps Russia.

It is expected that by 2010, about 100-110 mln t will be transported through this port with the share of Caspian producers reaching approximately 60 percent. Azerbaijan will become a major supplier in this period. With crude production expected to grow in the Caspian countries from 2015-2020, the share of Kazakh and perhaps Turkmenian producers will be growing as well.

It is commonly believed that in addition to increasing crude exports, Caspian producers will also participate in refinery construction and petrochemistry projects. Such participation may consist of constructing new plants or purchasing shares in existing refineries in Turkey.

SOCAR (Azerbaijan) and Kazmunaigaz (Kazakhstan) are the most active companies in this area. Such projects will enable companies to build and expand their businesses in foreign oil product markets like the Mediterranean, and gain additional profits from selling oil products to end users.

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