

Trans Balkan Pipeline

Current Status – 2022

Introduction:

Crude oil production and pricing have been an everchanging scene for several years now. This together with geo-political events, has prompted AMBO to review and comment on its status and the requirement of a bypass to the Turkish Straits.

Black Sea Crude Oil Exports:

Despite the reduction in world crude oil consumption, (due recently to the Covid pandemic and previously to market downturn coinciding with increased production), Black Sea crude oil exports have remained consistent at around 3 million barrels/day.

While the source of this oil is Russia and the Caspian Region, the loading export ports and pipeline terminals is limited to Russia and Georgia. The Ports of Novorossiysk, CPC Terminal and Tuapse are Russia's major ports; the new Port of Supsa and the rail terminal Port of Batumi are the export terminals in Georgia. The Russian Ports account for well over 90 of all loadings that transit the Turkish Straits.

The capacity of the export pipelines to these terminals is known, we can therefore define clearly the maximum volume of crude oil that can be sent to the Bosphorus. The only proviso to this is Novorossiysk. This major export Port is operating at around 50% capacity due to Russia diverting crude oil to their Baltic Terminals.

Crude Oil Markets:

Baltic and Black Sea crude oil export Ports supply the bulk of Western and Southern Europe crude oil requirements. Russia of course also supplies the World Market, as does Azerbaijan but in the Azeri case this is done through Ceyhan in the Mediterranean, not the Black Sea. European crude oil production in the past mainly came from the North Sea. With the continued decline of this production, Russia and The Caspian Region continue to replace this supply base. Much is spoken of the drop in consumption in the support of climate change. Of course this will happen but perhaps not quite as quick as anticipated. The table below shows the rate of change from 2000 to 2019.

Table 1: European Crude Oil Production & Total Oil Consumption (MTA)

	2000	2010	2018	2019
European Crude Oil Production	335.4	273.4	162.9	170.0
European Oil Consumption	776.1	806.4	722.4	740.0

The latest available figures show Russia and CIS supplying 221MTA or 42% of Europe's Crude Oil Imports in 2019. Of this 221MTA, approximately 150MTA passed through the Turkish Straits. It can be anticipated that Europe's Total Oil Consumption will have fallen through 2020. This is largely due to the pandemic and will surely recover over time.

The Bosphorus Straits:

The Turkish Straits, which include the Bosphorus and Dardanelles waterways, divide Asia from Europe. The Bosphorus is a 17-mile waterway that connects the Black Sea with the Sea of Marmara. The Dardanelles is a 40-mile waterway that links the Sea of Marmara with the Aegean and Mediterranean Seas. Both waterways are located in Turkey and supply Western and Southern Europe with oil from Russia and the Caspian Sea region. Only half a mile wide at the narrowest point, the The Bosphorus is among the world's most difficult waterways to navigate because of its sinuous geography. About 48,000 vessels transit the Turkish Straits each year, making this area one of the world's busiest maritime chokepoints. As much as 25% of the World's grain exports come from Black Sea countries. Only Hong Kong harbor has more active vessels per year. Commercial shipping has the right of free passage through the Turkish Straits in peacetime, although Turkey claims the right to impose regulations for safety and environmental purposes. An estimated 2.4 million b/d of crude oil and petroleum products flowed through the Turkish Straits in 2016, more than 80% of which was crude oil. A new peak was set in 2004 when more than 3.4 million b/d of crude oil transited the Straits, but volumes fell away as Russia shifted crude oil exports away from the Black Sea and toward the Baltic ports. Increased Crude Oil production from Kazhakstan however has since raised throughput tonnage to 3.2 million bbl/day (150 MTA). Tanker delays of 8 and 10 days are not unusual and in fact have become the norm. Delays are considerably increased during winter months.

Because of these escalating delays and increases in general to maritime vessels, the Turkish Government has declared and indeed initiated work to design and construct a canal to bypass The Bosphorus. The costs of this 'canal' will be recovered through transit fees to tankers and large container ships. AMBO understands Turkey's initiative to create a bypass and sees the AMBO Pipeline Project as a support to this objective. Should the passage of crude oil tankers maintain the present throughput at around 150MTA, AMBO will provide a bypass to carry more than 20% of this tonnage. It is now widely accepted

that a bypass is required, in the past however shippers have been reluctant to sponsor a bypass since it is perceived that using a bypass, frees space in The Straits for others and puts bypass users at a cost disadvantage. Additionally, oil producers are using their capital on expanding production and access routes to the Black Sea and thereby are reluctant to invest in a pipeline remote from their producing fields.

In conventional oil field developments, the export pipeline starts at a field location and terminates at an export port. Financing of the export pipeline is on the back of oilfield production; calculations of IRR and netbacks are straightforward. In the case of a bypass of the Turkish Straits, the pipeline is remote from the oilfields and serves producers, shippers and refiners alike. It cannot be regarded as upstream and since it does not directly supply a refinery, it cannot be called downstream. The pipeline becomes a 'midstream' development and needs to seek its own financing on the basis of a stand-alone infrastructure project. It is for this reason that AMBO chose to develop a pipeline with private equity and ownership, debt being raised on the back of oil contracts on a 'take and pay' basis. With shippers having to pay a 'transit fee' for passage through the 'canal', straightforward economic decisions can be made regarding canal or Pipeline. No doubt the answer will be 'both' for most shippers.

Current Status:

AMBO LLC is a U.S. company supported to date by private investors. It is the project initiator and developer with an exclusive mandate from the three host countries. AMBO are pleased to report that the stage has been reached where an investor of substance has declared an interest in advancing the Project. Unfortunately, progress through 2020 and to date has been hampered by the Covid pandemic. Hopefully this will be rectified in 2022.

AMBO adopted a strategy to seek funding in three parts. The first part has been described as 'Pre-FEED' and requires around \$10million USD.

Phase 1 – 'Pre-FEED' activities costing up to \$10million USD are specific to producing sufficient data to attract further funding along with expressions of interest from Shippers. Funding for this Phase and Phase 2 is now secured.

Phase 2 – 'FEED' activities are focused on taking the Project to Financial Closure and the start of construction. Some \$20 to \$30 million USD will be required for FEED. The key objective in this period is to move expressions of interests from Shippers to firm commitments of oil volumes. On the back of these Oil Contracts the final Equity and Debt Funding can be realized.

Phase 3 - Capital Costs of some \$1.5billion to \$2.0 billion USD are likely to be needed to complete this Project for the transport of crude oil from the Bulgarian Black Sea port of Bourgas across Bulgaria, North Macedonia, and Albania to the Adriatic Sea port of Vlore. Oil originating in Southern Russia and Central Asia that has been transported to the Black Sea via pipelines to the Russian ports of CPC Terminal, Novorossiysk and Tuapse; or to the Georgian ports of Supsa and Batumi would be shuttled, via tanker across the Black Sea to the Port of Bourgas. Given the cost of loading and offloading tankers in the Black Sea versus transiting the Bosphorus; the costs of the AMBO pipeline would be more than offset by the economic advantages of secure passage times, eliminating Bosphorus transit and potential delays and provides the opportunity to load VLCC's at Vlore.

Summary:

The 'Right of Way' (ROW) is established with the host countries for the route. This

ROW largely follows the EU's Corridor VIII Transportation Link connecting the three countries together for rail, highway, telecommunications, gas and energy.

Border crossing points are agreed and passed through the respective Parliaments.

Initial environmental assessment has been completed and commented upon by each country. A full Environmental & Social Impact Assessment (ESIA) for the entire project is planned during Phases 1 & 2 and is included in the Development Costs. Port placements have been established and agreed at both ends.

A Memorandum of Understanding (MOU) between the three countries was signed in late 2004, committing the three countries to negotiate a Tripartite Agreement to treat the Pipeline Corporation in a single unitary manner in the three countries for purposes of negotiation and dispute settlement. This Agreement or 'Convention' has been signed and ratified by the respective Governments and Parliaments of the three States, coming 'Into Force' in October 2007. AMBO can at last declare that real progress and support is achieved. It can be anticipated that 2022 will see this important infrastructure project proceed in earnest.