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CONNECTING THE DOTS

Logistics of Egypt's Petroleum Transportation

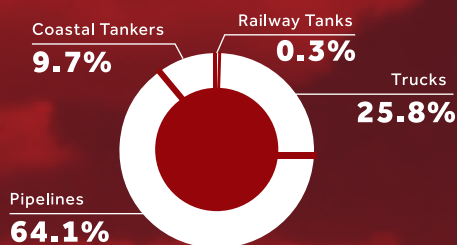
CONNECTING THE DOTS

Logistics of Egypt's Petroleum Transportation

BY JOLLY MONSEF, MARIAM AHMED & ALAA AL MASRY

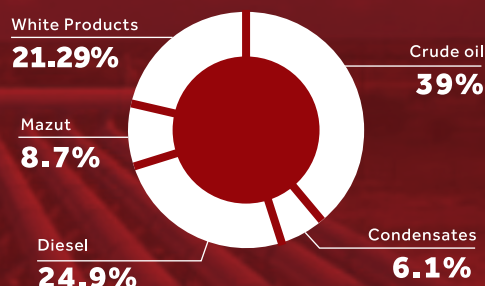
Key Takeaways

Petroleum Transportation Breakdown*



*Over FYs (2021/22-2022/23)

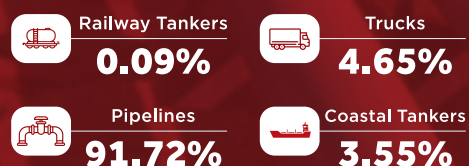
Average * Share of Transported Petroleum Products by Pipelines



*Over FYs (2021/22-2022/23)

47.5% Oil Tankers Passing through the Suez Canal in FY 2022/23

Transportation Cost Per Channel*



*Over FYs (2021/22-2022/23)

Egypt holds a prominent position in the global petroleum industry, with significant crude oil and natural gas reserves, the country makes the best use of its different channels to serve its users and meet the domestic demand.

Moreover, Egypt is in a strategic location along the Mediterranean Sea and the Red Sea, with several key ports, including the Alexandria and Damietta

ports on the Mediterranean coast, as well as the Port Said and Suez ports along the Suez Canal. These ports serve as important hubs for importing and exporting petroleum products that facilitate international trade, which supports the growth and stability of the petroleum industry.

This report tackles the quantities of petroleum products transported through a range of

different means during fiscal year (FY) 2021/22 and FY 2022/23. These means include railway tanks, petroleum pipelines, trucks, and water transport units.

They all facilitate the efficient and reliable transfer of crude oil and refined petroleum products across different regions of Egypt. Moreover, the report emphasizes the importance of Suez Canal navigation as a key global trade route.

PETROLEUM TRANSPORTATION TRENDS

Total Transported Quantities

In FY 2022/23, the total transported petroleum quantities by all means of transportation witnessed a slight decline of around 4%, compared to that in FY 2021/22 to record 101.87 million tons (mmt). This decline was driven by the decrease in quantities transported via trucks, pipelines, and coastal tankers by around 6%, 3%, and 3%, respectively, according to the Central Agency for Public Mobilization and Statistics (CAPMAS).

Petroleum Products Transported Quantities (mmt)

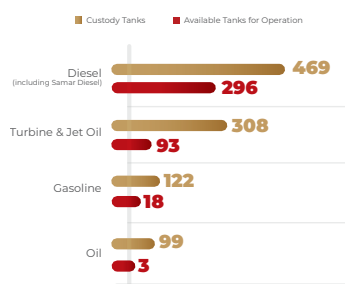


Main Means of Transportation

Railway Tanks

Around half of Egypt's railway tanks are diesel (including Samar diesel), followed by turbine and jet oil that constitute the third, then gasoline and oil respectively. Egypt's total number of railway tanks in FY 2022/23 recorded 1,000 tanks. Of which only 465 tanks are available for operation, with a 32.4% increase compared to that in FY 2021/22, according to the CAPMAS.

Average* Number of Tanks



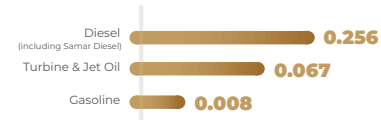
*Over FYs (2021/22-2022/23)

Actual Transported Quantities

The actual movable capacity transported of petroleum products by railway tanks in FY 2023/22 reached 0.353 mmt, up from 0.31 mmt in FY 2021/22, with a 14% increase.

In FYs 2021/22 and 2022/23, Diesel (including Samar Diesel) was the largest amount transported with a share of 78% of the total capacity transported, followed by turbine and jet oil, then gasoline, according to the CAPMAS.

Average* Actual Capacity Transported (mmt)



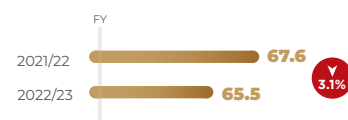
*Over FYs (2021/22-2022/23)

Petroleum Pipelines

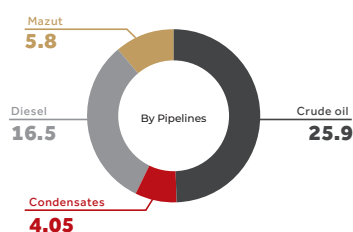
Egypt relies on a network of internal and main pipelines for petroleum transportation. These pipelines efficiently move crude oil, condensates, liquefied petroleum gas (LPG), and other products domestically and internationally.

In FYs 2021/22 and 2022/23, the crude oil and diesel quantities are the largest that are transported by the petroleum pipelines, with an average 64% share of the total quantity transported, followed by mazut, which possesses about 9%, then condensates with 6.1% of the total quantity transported, according to the CAPMAS.

Transported Quantities by Pipelines (mmt)



Average* Actual Capacity Transported (mmt)



*Over FYs (2021/22-2022/23)

Trucks

Trucks are predominantly utilized for the transportation of gasoline, diesel, mazut, and LPG. They hold a significant position as the second most prominent means of transporting petroleum products, accounting for approximately 25.6% of the total transport volumes in FY 2022/23, according to the CAPMAS.

Between FYs 2021/22 and 2022/23, the transported quantities of diesel and gasoline using trucks rose by 6%, and 8%, respectively.

On the contrary, the total transported quantities of Mazut obviously dropped by 71% during the same period.

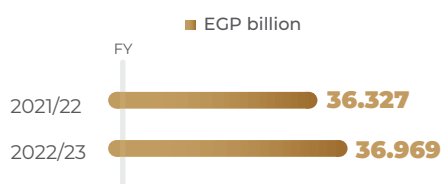
Water Transport Unit

Coastal tankers are ships designed to transport large quantities of crude oil or oil products. They can be divided into crude oil tankers such as Alsharifa (4), Alexia, Album, Chris, and Mariana, and oil product tankers like Alnabila (6) and (5).

The quantities of crude oil and oil products transported by coastal tankers reached 9.9 mmt in FY 2022/23, with an average cost of EGP 161 per ton, according to the CAPMAS.

Transportation Costs

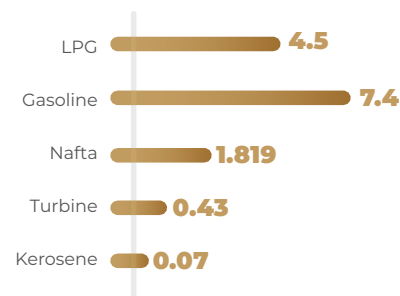
Total petroleum transportation costs in FY 2022/23 experienced a modest increase of approximately 2% when compared to those in FY 2021/22, according to the CAPMAS.



Moving to the white products, there is a range of transported products including LPG, gasoline, Nafta, turbine and Kerosene.

In FYs 2021/22 and 2022/23, gasoline has the biggest share, representing an average of 11.1% share from the total transported quantity, according to the CAPMAS.

Average* Transported Quantities of the White Products (mmt)



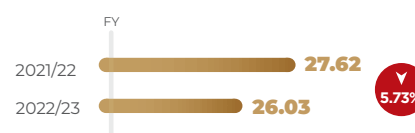
*Over FYs (2021/22-2022/23)

This drop in the transported quantities of mazut using trucks can be partially justified by the significant increase in using pipelines to transport mazut, as it hiked by around 22.3%, according to the CAPMAS.

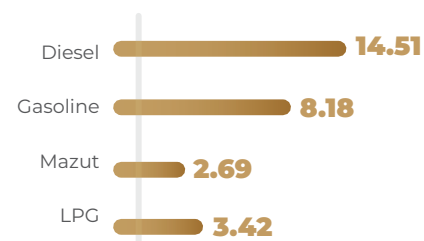
It is worth noting that the average transported quantity of diesel represented half the total transported quantity by trucks between FY 2021/22 and 2022/23.

On the other side, gasoline, LPG, and mazut average transported quantity constituted approximately 28%, 12%, and 9%, respectively, according to the CAPMAS.

Transported Quantities by Trucks (mmt)



Average* Transported Quantities by Trucks per Product (mmt)



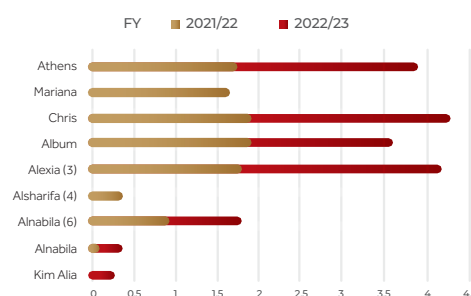
*Over FYs (2021/22-2022/23)

Chris Coastal Tanker held the largest average share of 21% among tankers in both FYs 2021/22 and 2022/23, followed by Alexia (3), Athens, and Album with an average share of 20.8%, 19.4%, and 17.6% over the same period respectively, according to CAPMAS.

Transported Quantities by Coastal Tankers (mmt)



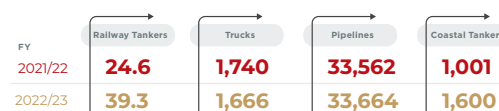
Transported Quantities Per Tanker (mmt)



Transportation Costs Per Channel

In FY 2022/23, petroleum product pipelines incurred the highest transportation costs, which account for about 92% of the total cost. On the other hand, railway tanks are the cheapest means of transporting petroleum products; they contribute 0.09% to the total cost, according to the CAPMAS.

Cost (EGP million)



SUEZ CANAL NAVIGATIONS

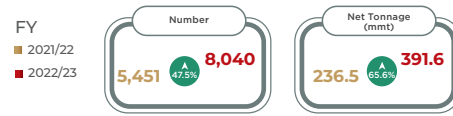
The Suez Canal is seen as the shortened link between the East and West of the world due to its unique geographic location. The Canal with the Suez-Mediterranean (SUMED) pipeline and the Bab el-Mandeb Strait are significant strategic routes for energy and commodities from Asia and the Middle East to Europe and North America. Nearly 12% of the total seaborne crude oil trade and 8% of global Liquefied natural gas (LNG) trade passes through the Suez Canal in the first half (H1) of 2023, according to the US Energy Information Administration (EIA).

Oil Tankers

Oil tankers passing through the Suez Canal witnessed significant growth, as the number of tankers surged by 47.5% in FY 2022/23 compared to FY 2021/22.

The oil tankers represented 31% of the total passed vessels through the Canal in FY 2022/23, according to the Suez Canal Authority (SCA).

Number of Oil Tankers & Net Tonnage



Transit Fees

The Suez Canal imposes transit fees on all vessels passing through it, based on several factors such as the earning capacity, savings achieved, vessel type and size, loading condition, cargo type, market condition, and economic variables. These fees increase the canal revenues, which is a major source of foreign currency inflows contributing to the national economy.

It is worth mentioning that the transit revenues of the canal rose in FY 2022/23 by 25.2% from the previous FY, reaching \$8.8 billion, according to the Central Bank of Egypt (CBE).

Regulations for Petroleum Tankers

Circular	7/2023	14/2022
Issued Date	October 16, 2023	September 18, 2022
Effective Date	January 15, 2024	January 1, 2023
Transit Dues	15%	
Vessel Types	Crude Oil Tankers Petroleum Product Tankers LPG Carriers LNG Carriers	

Circular	5/2021
Issued Date	November 9, 2021
Effective Date	February 1, 2022
Transit Dues	6%
Vessel Types	Crude Oil Tankers Petroleum Product Tankers LPG Carriers

Suez Canal in the Current Red Sea Conflict Shadow

The repercussions of the current Red Sea tensions began to affect the Suez Canal. Major shipments, including oil and LNG vessels, decided to change their route from the Suez Canal to the Cape of Good Hope despite the high cost of this route compared to the canal.

From the start of the conflict until mid-January 2024, there has been a decrease of around 30% in the number of ships passing through the canal, compared to the same period last year. Accordingly, the canal's revenues dropped by 46% in January 2024 compared to January 2023, reaching \$428 million, according to SCA Chairman Osama Rabie's permit to Media in February 2024.

Its significance as a key source of foreign currency for Egypt, the SCA is making all efforts to minimize the potential future impacts of this conflict. The Authority is establishing direct communications with all major clients to identify their needs and discuss proposed recommendations to enhance cooperation by offering a bundle of navigational and maritime services under normal and urgent conditions.



Egypt's oil and gas sector pushes great attention toward fulfilling the local market needs through efficiently utilizing the different means of transportation and distribution of crude oil and petroleum products.

Furthermore, there are continuous endeavors to upgrade the petroleum transportation network to strengthen Egypt's role as a key regional energy trade hub and take the opportunity to distribute and market all petroleum products to all stakeholders.



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