

OIL TRANSPORTATION

KMG completed the construction of an oil transportation infrastructure to supply hydrocarbons to export markets. Medium-term priorities:

- ◆ Increase existing capacity utilisation by making KMG's oil transportation systems more attractive and competitive
- ◆ Improved operating-cost control

The two oil transportation modes at KMG are trunk pipelines and the marine fleet

Indicator	Trunk pipeline transportation				Marine fleet transportation	
	Management company	KazTransOil (KTO)	Kazakhstan–China Pipeline (KCP)	MunayTas (MT)	Caspian Pipeline Consortium (CPC)	Kazmortransflot (KMTF)
Interest		KMG: 90% ¹	KTO: 50%	KTO: 51%	KMG: 20.75%	KMG: 100%
Key destinations		Exports to Europe and China, domestic market	Exports to China, domestic market	Exports to China, domestic market	Exports to Europe	Exports to Europe
Key routes		Kazakhstan's refineries Uzen–Atyrau–Samara Port of Aktau Oil transshipment to the CPC and Atasu–Alashankou pipelines	Atasu–Alashankou Kenkiyak–Kumkol	Kenkiyak–Atyrau	Tengiz–Novorossiysk	Black Sea Mediterranean Sea Caspian Sea
Total length, km		5,372	1,759	449	1,510	n/a
Capacity, mtpa		17.5 ² 5.2 ³	20	6	67	n/a

¹ 10% of shares are owned by minority shareholders who acquired them under the People's IPO programme.

² Capacity of the Atyrau–Samara section.

³ Capacity of the Port of Aktau (large-capacity vessel berths, oil loading).

PIPELINE INFRASTRUCTURE

Kazakhstan's pipeline infrastructure is owned by JSC KazTransOil – the national oil pipeline operator, its two joint ventures (Kazakhstan–China Pipeline LLP and MunayTas North-West Pipeline Company LLP) and Caspian Pipeline Consortium. The existing pipeline infrastructure in Kazakhstan has adequate potential to support increased oil transportation volumes from promising projects.

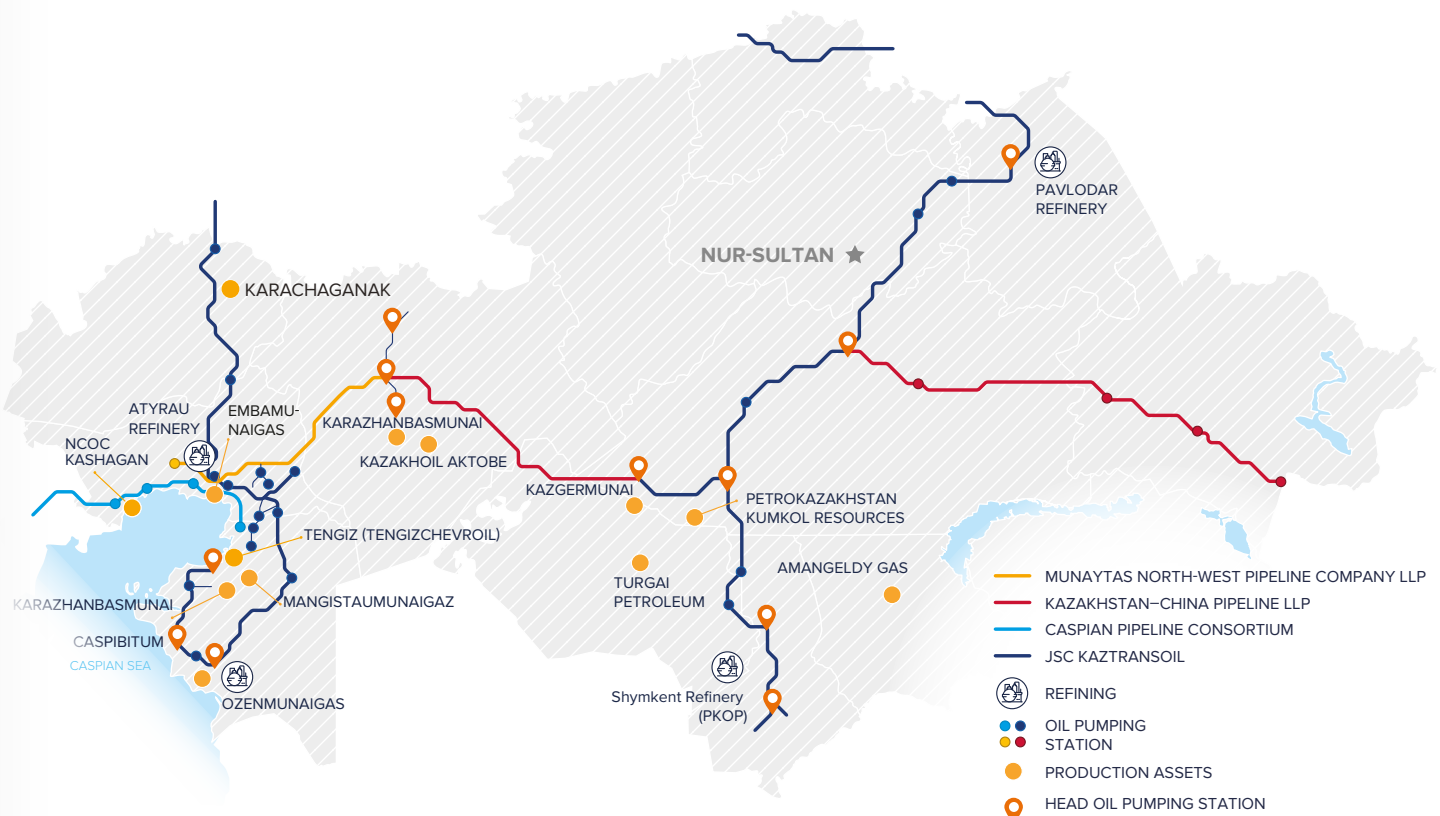
JSC KazTransOil (KTO) is the national oil pipeline operator of the Republic of Kazakhstan. The company owns an extensive network of trunk oil pipelines with a total length of 5,372 km, to which virtually all oil fields in Kazakhstan are connected. The Company transports oil to Kazakhstan's four major refineries, pumps oil for export via the Atyrau–Samara pipeline, transships oil to the CPC and Atasu–Alashankou export pipelines, and ships oil to tankers in the Port of Aktau and by rail. Oil transportation via trunk oil pipelines is supported by 36 oil pumping stations, 67 heaters, and a tank farm for oil storage with a total capacity of 1.4 mln m³. JSC KazTransOil also provides operation and maintenance services for the trunk oil pipelines of Kazakhstan–China Pipeline LLP, MunayTas North-West Pipeline Company LLP, Karachaganak Petroleum Operating B.V., JSC Caspian Pipeline Consortium-K, and JSC Turgai Petroleum, as well as for the trunk water line of Main Waterline LLP.

Kazakhstan–China Pipeline LLP is the owner of the Atasu–Alashankou (965 km) and Kenkiyak–Kumkol (794 km) oil pipelines. The company transports Kazakhstan's oil and transit Russian oil to China and to the domestic market.

MunayTas North-West Pipeline Company LLP (MT) is the owner of the 449 km Kenkiyak–Atyrau oil trunk pipeline. In 2018, the company started implementing the Kenkiyak–Atyrau pipeline reverse project to support supplies of West Kazakhstan's oil to domestic refineries and to compensate production declines in the Aktobe and Kyzylorda Regions, as well as to support exports to China totalling up to 6 mtpa. The project cost is KZT 28.6 bln. Within the project, the first start-up complex has been commissioned, and the construction

of the second start-up complex is now complete. The project's completion is slated for Q2 2021.

Caspian Pipeline Consortium (CPC) is an international oil transportation project involving Russia, Kazakhstan and the world's leading industry players. It was established for the construction and operation of a 1,510 km trunk pipeline (452 km are within Kazakhstan). The CPC oil pipeline is a priority export route for Kazakhstan's oil supplies, connecting Kazakhstan's Tengiz oil field with the Yuzhnaya Ozereyevka oil terminal on the Black Sea (near the Port of Novorossiysk). Oil transportation via the CPC pipeline is supported by 15 oil pumping stations, an oil storage tank farm with a total capacity of 1.3 mln m³ and three single-point moorings.



In view of the anticipated increases in oil production from Tengiz and Kashagan, in 2019 CPC shareholders resolved to launch a debottlenecking project for the pipeline system, which is expected to increase the volume of Kazakhstan's oil transportation to 72.5 mtpa. The project timeframe is 2019–2023, and its cost is USD 600 mln. The project will be financed using CPC's own funds.

Trunk pipeline oil transportation

Volume of oil transportation, ths tonnes¹

Company	2018	2019	2020
KazTransOil (100%)	45,309	44,463	42,298
export	19,135	17,591	16,699
transit	10,025	9,989	9,989
domestic market	16,149	16,883	15,610
Kazakhstan–China Pipeline (100%)	15,997	16,200	15,883
export	1,506	859	571
transit	9,979	9,979	9,979
domestic market	4,512	5,362	5,333
MunayTas (100%)	3,878	3,232	3,321
export	2,697	1,998	1,595
domestic market	1,181	1,234	1,726
Caspian Pipeline Consortium (100%), export	61,084	63,256	59,027

Oil transportation turnover, mt*km

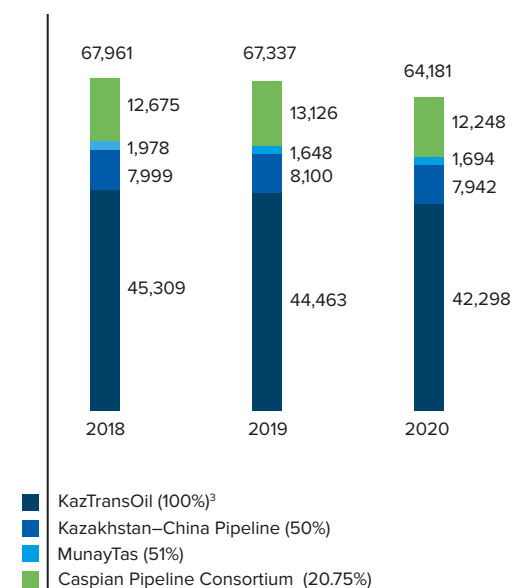
Company	2018	2019	2020
KazTransOil (100%)	38,040	37,658	35,899
Kazakhstan–China Pipeline (100%)	14,607	14,590	14,368
MunayTas (100%)	1,522	1,232	1,322
Caspian Pipeline Consortium (100%)	80,549	82,997	77,207

Oil transportation turnover (net to KMG), mt*km

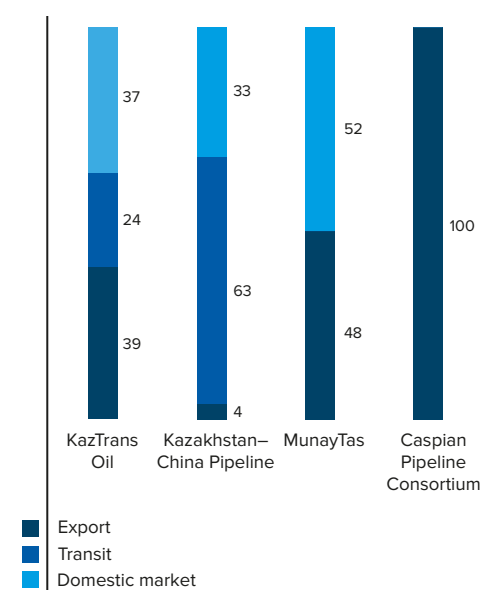
Company	2018	2019	2020
KazTransOil (100%)	38,040	37,658	35,899
Kazakhstan–China Pipeline (50%)	7,304	7,296	7,185
MunayTas (51%)	776	628	674
Caspian Pipeline Consortium (20.75%)	16,714	17,222	16,020

In 2020, KMG's share in the consolidated volume of trunk pipeline oil transportation was down by 3,156 ths tonnes to 64,181 ths tonnes. The decline was driven by the limited oil supply from JSC CNPC International Aktobe Petroleum, after a critical excess of organochlorine compounds was discovered in their oil supply in January 2020, compounded by an overall decline in oil supply amid a drop in oil production from other companies due to natural decline in production from the Kumkol group of fields and OPEC+ restrictions.

Volume of oil transportation (net to KMG), ths tonnes²



Structure of oil transportation by destination in 2020, %



- Consolidated volume of oil transported includes the transportation volume of each individual pipeline company, including the operating share of KMG (excluding KTO). Part of the oil volumes can be transported by two or three pipeline companies, and these volumes are accordingly counted more than once in the consolidated volume of oil transportation.
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- Since KTO is fully operated by KMG, transportation volumes are reported as 100%.

Tariff policy

Tariffs for oil transportation to the domestic market, KZT per tonne per 1,000 km

Company	2018	2019	2020
KazTransOil	4,292	4,722 (01.01.2019– 31.08.2019) 4,717 (01.09.2019– 31.12.2019)	4,110
Kazakhstan– China Pipeline	6,507	7,158	6,456 (01.01.2020– 31.01.2020) 7,158 (01.02.2020– 31.12.2020)
MunayTas	5,698 (01.01.2018– 30.06.2018) 5,724 (01.07.2018– 31.12.2018)	5,724 (01.01.2019– 30.06.2019) 5,912 (01.07.2019– 24.12.2019) 5,457 (25.12.2019– 31.12.2019)	5,457 (c 01.01.2020– 24.12.2020) 5,912 (c 25.12.2020– 31.12.2020)

The tariffs for crude oil transportation to Kazakhstan's domestic market are regulated by the government.

According to Law of the Republic of Kazakhstan No. 204-VI on Natural Monopolies dated 27 December 2018, oil transportation services to support transit via the territory of the Republic of Kazakhstan and exports outside the Republic of Kazakhstan are beyond the scope of natural monopolies.

Tariffs for oil transportation for export

Company	2018	2019	2020
KazTransOil, KZT per tonne per 1,000 km	6,399	6,399	6,399 (01.01.2020– 29.02.2020) 7,359 (01.03.2020– 31.12.2020)
Kazakhstan–China Pipeline, KZT per tonne per 1,000 km	6,799	6,799	6,799
MunayTas, KZT per tonne per 1,000 km	5,912	5,912	5,912
Caspian Pipeline Consortium, USD per tonne	38	38	38

Tariffs for transit to China, USD per tonne

Company	2018	2019	2020
KazTransOil	3.11	4.23	4.23
Kazakhstan–China Pipeline	8.25	10.77	10.77

OIL TRANSPORTATION BY SEA

Transport assets

NMSC Kazmortransflot LLP (KMTF) is the National Sea Carrier. Its assets include:

- ♦ merchant fleet: owned oil tankers: Astana, Almaty and Aktau, each with a deadweight of 12,000 tonnes; and Aframax oil tankers – Alatau and Altai, each with a deadweight of 115,000 tonnes
- ♦ marine support fleet: 8 barge platforms of KMG series with a capacity of 3,600 tonnes each
- ♦ fleet to support Tengizchevroil's Future Growth Project: 3 Caspian-class barges (MCV) – Barys, Berkut and Sunkar with a capacity of 5,200 tonnes each, and 3 tugboats – Talas, Emba and Irgiz with a bollard pull of 40 tonnes-force each.

The main current routes for oil transportation by sea:

- ♦ Routes in the Caspian Sea waters
- ♦ Routes in the Black Sea and Mediterranean Sea waters

Performance highlights

In 2020, the total volume of oil transportation by sea decreased significantly by 16.2% year-on-year to 8,990 ths tonnes, mainly due to lower volumes of transportation in the Mediterranean Sea as a result of downtime while waiting for loading, as well as unfavourable weather conditions.

In March 2020, KMG provided support to KMTF in concluding an agreement with COSCO Shipping for transporting outsized cargoes from South-East Asia to Kazakhstan.

From April to June 2020, a total of 25 outsized cargoes weighing about 3,600 tonnes in total were successfully transported from the Port of Constanța in Romania to the Port of Atyrau in Kazakhstan for KPI Inc.'s petrochemical project under construction in Atyrau. KMTF engaged a total of 42 vessels (both owned and leased), including 6 barges, 24 river and 12 sea tugboats.

Under Tengizchevroil's Future Growth Project (FGP), KMTF transported about 90 outsized cargoes (57,000 tonnes in total) during the navigation seasons of 2018–2020. With KMTF's withdrawal from the project in 2020, an MCV ship Barys will be converted into a container ship. The conversion started in Q3 2020; the ship is planned to be used for container shipping services along the Aktau–Baku–Aktau feeder line.

Transportation volumes, ths tonnes

Sea	2018	2019	2020
Black Sea and Mediterranean Sea	4,339	10,186	8,361
Caspian Sea	2,738	543	629
Total	7,077	10,729	8,990

Oil transportation turnover, mt*km

Sea	2018	2019	2020
Black Sea and Mediterranean Sea	4,122	9,676	7,942
Caspian Sea	887	165	197