

TURKMENISTAN



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Overview



- Despite its vast oil and natural gas resource base, Turkmenistan is not a major player in energy markets because of the lack of infrastructure, limiting its exporting capabilities. In the past few years, the country is increasing investments to develop its reserves and export more natural gas to countries such as China.
- Total primary energy consumption in Turkmenistan was 1.242 quadrillion British thermal units in 2014 and has risen about 60% over the past decade, according to BP's Statistical Review of World Energy. Natural gas consumption accounted for approximately 80%, and consumption of petroleum products represented the remaining 20%.
- Controlled by the Turkmenistan Ministry of Energy and Industry, the electricity sector is fueled almost entirely by natural gas. The country's total installed generation capacity was nearly 4.3 gigawatts in 2014, according to the CIA World Factbook. Domestic electricity consumption falls below the country's gross generation of more than 22 billion kilowatthours, allowing the country to export the remaining production. Turkmenistan is linked

to the Central Asian electricity grid and exports electricity to Afghanistan, Iran, and Turkey among other Central Asian countries.

- In 2013, the government developed a policy of modernizing and expanding its electricity sector by increasing transmission infrastructure and constructing 14 natural gas-fired electric power plants between 2013 and 2020.
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Oil

- Turkmenistan had an estimated 600 million barrels of proven oil reserves as of January 2015. The country's estimated oil production in 2014 is 238,000 barrels per day (b/d), remaining roughly flat compared with 2013, which averaged 229,000 b/d.
 - Foreign companies are allowed to participate in production-sharing agreements or joint ventures with the state-owned Turkmenneft, the largest oil producer in the country, and Turkmengaz, the state-run natural gas company. The main foreign companies participating in Turkmenistan's hydrocarbon sector are the China National Petroleum Corporation (China), Dragon Oil (Dubai), Eni (Italy), and Petronas (Malaysia). The government typically restricts foreign investors from developing onshore projects, with the exception of a few CNPC projects, according to IHS Energy.
 - China is often seen as the most successful foreign investor in Turkmenistan after CNPC began building the Central Asia-China pipeline in 2009. Additionally, China is the only foreign investor that has been given access to a major onshore gas field.
 - At the end of 2014, Eni agreed to extend the length of its production-sharing agreement for the Nebit Dag area until 2032. This 10-year extension demonstrates the company's commitment to Turkmenistan's oil sector.
 - Turkmenistan is one of the five Caspian Sea littoral countries, an area with large volumes of oil and natural gas reserves. These countries have had frequent disputes about where the maritime borders should lie and how to divide the region's wealth of energy supplies. Because of the conflict, it is unlikely that development will take place until an agreement is reached.
 - Turkmenistan has two oil refineries, the Seidi and Turkmenbashi, with a total crude oil distillation capacity of almost 237,000 b/d. According to IHS Energy, the refineries typically operate at around 50% of capacity, with foreign oil companies exporting their share of crude oil.
 - Turkmenistan has a small domestic crude oil pipeline network linking onshore oil fields with the Turkmenbashi refinery and Caspian ports. Turkmenistan has virtually no international oil pipeline infrastructure except a pipeline between the Seidi refinery in northeastern Turkmenistan and the Shymkent refinery in Kazakhstan via Uzbekistan.
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Natural gas

- Turkmenistan had estimated proven natural gas reserves of 265 trillion cubic feet (Tcf) as of January 2015. It is the sixth largest natural gas reserve holder in the world according to the *Oil and Gas Journal*, and was among the top 15 dry natural gas producers in 2014.
- The Galkynysh Natural Gas Field is the world's second largest gas field. In September 2013, Turkmenistan announced the start of commercial production at Galkynysh, which will produce more than 1 Tcf/y after phase 1, with a future second phase adding 1 Tcf/y.
- The hydrocarbon-rich country lacks sufficient pipeline infrastructure to export greater volumes of hydrocarbons. To increase exports, Turkmenistan and foreign partners are investing in pipelines to transport the gas.
- Turkmenistan produced more than 2.5 Tcf of dry natural gas in 2014. The country has several of the world's largest natural gas fields, including 10 with over 3.5 Tcf of reserves located primarily in the Amu Darya basin in the southeast, the Murgab Basin in the south, and the South Caspian basin in the western part of the country. Turkmenistan is developing its gas-based chemical industry, and the government hopes to export products such as ammonia and synthetic gasoline, according to IHS Energy.

- Russia was previously the country's main market for gas exports, but with falling exports to Russia, China became the primary importer of Turkmenistan's gas in 2011 once imports through the recently-built Central Asia-China Gas Pipeline increased. In order to secure more passages for gas exports, Turkmenistan will need to build new infrastructure to transport its product.
- Among the Caspian and Central Asian countries, Turkmenistan has become a leading natural gas exporter. Turkmenistan exported 1.5 Tcf via pipeline in 2014. Over half of exports went to China, with Russia and Iran also importing volumes of Turkmenistan gas. Turkmenistan has signed several natural gas contracts with China, most recently in September 2013, and is slated to supply 2.3 trillion cubic feet (Tcf) of natural gas to China by 2020 through a network of parallel gas pipelines running through Central Asia.