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### From the History of Development of the Fuel and Energy Industry in Kashkadarya Region (1991-2021)

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**ABSTRACT:** This article is about the fact that the economic changes carried out in the years of independence have turned the Kashkadarya region into a major supplier of industrial products. You can get acquainted with the development of the energy sector, which is considered the main network in the kashkadarya industry, through our article.

**KEYWORDS:** economic, condensate, thermal power plant, production, liquid, absorbents, propane-butane

The economic changes that have taken place during the years of independence have turned Kashkadarya region into a major supplier of industrial products. Much attention has been paid to the development of the fuel and energy sector, which is a key sector in the oasis industry.

Kashkadarya region ranks first in the country in terms of oil and natural gas reserves Kashkadarya region accounts for 70% of the country's natural gas, about 78% of oil and 80% of gas condensate [1 B.313 ] There are oil and gas fields such as Kokdumalak, Mubarak, Pomuq, Shurtan, Zevardi, Guzar, South Pomuq, Kamashi, Alan and Koshkuduk oil fields. [2 P.287] During the years of independence Four large enterprises have been launched in this area, including the Shurtangaz-Kimyo complex, the Kokdumalak gas and Gissar oil and gas Uzbek-Swiss joint ventures, and the first unit of the Talimarjan thermal power plant. [3 B.242]

Mubarek Gas Processing Plant is one of the largest enterprises in the fuel and energy industry of Uzbekistan. Its activities are mainly focused on the production of processed natural gas, solid and liquid sulfur, stabilized gas condensate, liquefied gas (propane and butane fraction). naltized.

By December 1992, gas processing capacity was increased to 25 billion cubic meters per year, the number of gas processing units was increased to 18. In 1997, 24.2 billion cubic meters of gas were processed at the GKIZ, 273,000 tons of sulfur and 524,000 tons of condensate were produced. 225 billion cubic meters of gas were delivered, 24 billion 512 million cubic meters of gas were processed instead of the planned 24 billion 415 million cubic meters in 1998, 22 billion 605 million cubic meters of dry gas instead of the planned 22 billion 555 million cubic meters, 270 thousand tons instead of 260.4 thousand tons of sulfur. [4]

The plant has established cooperation with many countries around the world. For example, the plant imports absorbents, catalysts, chemical reagents and reagents, chemical equipment from the United States, France, Germany, Spain, the Czech Republic, Japan, Russia and Ukraine. As a result, the volume of production increased. In 2000, the production of processed gas amounted to 27,324 million m3, sulfur production - 217.5 thousand tons, stabilized condensate production - 556 thousand tons, liquefied gas production - 13.5 thousand tons. [3 B. 106] Over the past period, 3 new gas processing units of 2 billion cubic meters each were built. In 2002, the plant processed more than 27 billion cubic meters of gas, produced about 557 thousand tons of gas condensate, about 217 thousand tons of sulfur. In 2003, the plant had 16 workshops. [5 P.171] In March 2005, the Mubarek GQIZ was equipped with four large units for gas propane cooling. This new complex has dried up before the delivery of the purified gas, with a capacity of 13.6 billion cubic meters of gas per year. As a result, the foreign currency spent on the import of ammonia has been fully saved and economic efficiency has been achieved. [6]

Mubarak GQIZ products have also been recognized internationally. Under the agreement with the plant, companies from the United States, Great Britain, Finland, Russia and Malaysia have purchased gas condensate. [5 P.159] Due to cooperation with foreign firms and companies, a special block This device, based on advanced technology, allows to process waste gases and extract 18,000 tons of additional sulfur per year. The commissioning of this device also prevented a certain amount of atmospheric pollution. The plant has a capacity of 258.3 thousand tons of compressed gas and 125 thousand tons of gas condensate per year. a propane-butane gas extraction complex has been

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launched. [7] The first phase of the complex was launched in November 2010, and the second and third phases were launched in March and August 2013. The total cost of the project is \$ 244 million, which will be financed by Uzbekneftegaz. The National Holding Company's own funds, as well as loans from the Fund for Reconstruction and Development of Uzbekistan, the National Bank for Foreign Economic Activity and the Development Bank of China were attracted. The volume of production increased to 33.5 billion cubic meters in 2016. meters of purified and dried natural gas, 417 thousand tons of technical sulfur, 186 thousand tons of gas condensate, 258 thousand tons of liquefied hydrocarbon liquefied gas. [8] The launch of new industrial facilities in the oil and gas sector means not only new technologies aimed at high efficiency, but also energy saving and minimal impact on the environment. For the same purpose, on August 28, 2020, Mubarek GQIZ liquefied gas The plant, which took three years to build, has a production capacity of 38.4 thousand tons of liquefied natural gas per year. [9]

Production at the Shurtan oil and gas enterprise, which is 40 years old in 2020, has also expanded. First, when the first gas field was discovered in the Karshi steppe near Guzar, it was 18.5 km long, 17 km wide and 17 km deep. Gas reserves in the unique industrial layer will reach 635 billion cubic meters. In 1996, the Shurtan Gas Production Department launched 13 batteries and completed the reconstruction of 2 units to produce gas. The volume has been increased to 5 million meters per day. [10] In 2019, Shurtanneftegaz will produce 26% of refined gas, 30.6% of oil, 25.5% of condensate, 35.7% of propane-butane and 0.6% of sulfur. In 2020, a liquefied natural gas production unit was launched at the Shurtan oil and gas enterprise. [11] The 140-hectare production and processing plant has three compressor station complexes, gas supply "Shurtan", "Southern Tandircha", "Bozakhor", "Sharqiy Bozakhor", "Chingar". , "Tarnosoy", "Nomozboy", "Zafar", "Aydin", "Torpichoksay", "Yormoq" fields. Equipment with modern gas turbines is supplied by Russia, Ukraine and the USA.

In addition, the company cooperates with Hisorneft-Gas, Epsilon Development and Lukoil. [12] One of the best projects implemented during the years of independence and the product of international cooperation is the Shurtan Gas Chemical Complex. The complex was launched on December 21, 2001, and on August 15, 2002 began production of the first product under the UzClear® brand - polyethylene. It should be noted that the technological part of SHGKM consists of a plant for the production of gas purification equipment, polyethylene granules, which, according to the project capacity, processes up to 4.0 billion cubic meters of gas per year, more than 125 thousand tons of polyethylene granules., Produces more than 110 thousand tons of liquefied gas, 90 thousand tons of gas condensate, more than a thousand tons of granular sulfur, as well as 3.5 billion cubic meters of branded gas (fuel) Production at SHGKM has increased year by year For example, 2006 up to 130,000 tons of polyethylene, 110,000 tons of liquefied gas, 105,000 tons of gas condensate, 3.7 billion cubic meters of commercial gas per year [13.B.13] In 2016, this amount was 138.1 thousand tons of polyethylene, 122.8 thousand tons of liquefied gas, 96.2 thousand tons of gas condensate, 3641.7 cubic meters of commercial gas. Uzbekneftegaz National Holding Company Completes Development of Existing Capacity Expansion Project As a result, the annual capacity of the polyethylene plant has increased from the current 140,000 tons to 200,000 tons. The products of SHGKM have been recognized internationally. In September 2013, he was awarded the Product Quality Award in the United States and the Special Medal for Product Quality and Outstanding Performance in Business in Geneva, Switzerland. [14]

In 2005, with the help of the German certification organization TUV CERT, the company successfully implemented a quality management system in accordance with the requirements of the international standard ISO 9001: 2000 and received a certificate. From 2002 to 2016 did. [15] More than 60% of the products are exported to Ukraine, Russia, Kazakhstan, the Baltics, Poland, Hungary, Austria, Greece, Turkey, Iran, Pakistan, China and other countries.

Uzbekistan GTL in partnership with Uzbekneftegaz National Holding Company, Sasol Company of South Africa and Petronas Corporation of Malaysia will produce \$ 4 billion worth of synthetic liquid fuel from purified methane gas from the Shurtan Gas Chemical Complex. The contract for the production of synthetic liquid fuel (GTL) was laid on July 23, 2012. [16] There are few such facilities built around the world, and today similar plants operate in South Africa, Malaysia and Qatar. In the future, not only 1.5 million tons of diesel and jet fuel, but also naphtha (431 thousand tons), liquefied gas (50 thousand tons). [12]

Construction of the Talimarjan TPP, an important part of the country's energy industry, began in 1991 with a total design capacity of 3,200 MW. [17.B.172] Its main fuel is low-sulfur refined As a result of the commissioning of the first unit of Talimarjan TPP with a capacity of 800 MW in November 2004, the largest consumers in the region - oil and gas enterprises, water facilities and other consumers. There is an opportunity to supply electricity to herders in the oasis. [13 P.14]

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At the same time, the costly practice of sending natural gas to the north of the country in exchange for the main fuel needed for thermal power plants, and then transferring the electricity generated there to the south, was curtailed at the Talimarjan TPP from 2004 to 2014. More than 54 billion kWh of electricity was generated. In 2016, steam and gas plants with a total capacity of 900 MW were commissioned. [18 B.337] About 12% of the total electricity generated in the country is accounted for by Talimarjan TPP. With the launch of these steam and gas plants, which provide for the increase of production capacity of the energy system of Uzbekistan and the use of energy-saving technologies, the total capacity of the plant has reached 1,700 MW. kWh of electricity. [19]

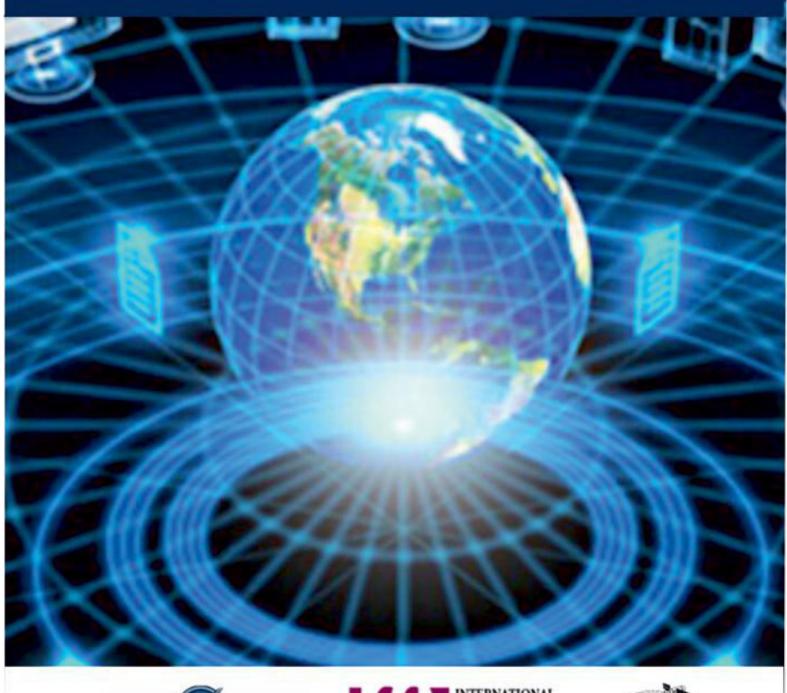
Thus, Kashkadarya has favorable opportunities for large-scale development of the fuel and energy industry. The region is unique in the country in terms of huge mineral resources potential. Currently, this sector accounts for 2/3 of the total industrial output of the region. It can be concluded that the shifts in the fuel industry of the region will have a significant impact on the overall fuel and energy industry of the country.

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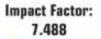
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