

## **Achievements and Future Challenges in the Development of the Chemical Industry in Uzbekistan**

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### ***Abstract***

*This article focuses on the issues of further development and diversification of the chemical industry, modernization of existing capacities for the production of chemical products and the construction of new ones, as well as the expansion of exports. It also provides recommendations on the achievements and future tasks in the development of the chemical industry in Uzbekistan.*

**Keywords:** *chemical industry, chemical products, diversification, modernization, investment, export, mineral fertilizers.*

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**Introduction.**

The attention to innovative development in the sectors of our country is growing from year to year, which in many ways is directly related to the development of priority sectors, including chemical, biochemical, gas and petrochemical industries. The foundation created in the field in the following years can provide the potential of the chemical industry with stable growth dynamics for the next 3-5 years. In order to create a solid foundation for the long-term sustainable development of all areas of the chemical industry, it is necessary to accelerate the process of transformation of the industry, based on the best international practices<sup>1</sup>.

**Review of relevant literature**

Today, the introduction of market mechanisms for the sale of mineral fertilizers, measures taken to restructure the debts of chemical enterprises have allowed them to become financially sound and increase the utilization of production capacity. At the same time, there are still systemic problems that hinder the further development and diversification of the chemical industry, the modernization of existing capacities for the production of chemical products and the construction of new ones, as well as the expansion of exports.

The low investment attractiveness of the chemical industry and the lack of own funds for the development of the industry do not allow the introduction of advanced technologies for deep processing of raw materials, resulting in a high share of mineral fertilizers in production<sup>2</sup>.

**Analysis and results**

In order to strategically reshape the development of the chemical industry in the new conditions of reforming the economy of Uzbekistan, the following long-term priorities for the transformation of the chemical industry have been identified:

- Technological transformation - the creation of multi-level value chains from raw materials to finished products on the basis of new capacities for the production of semi-finished products from local raw materials, including through organic synthesis and nanotechnology. At the same time, a gradual reduction of exports of raw materials (natural gas, industrial salts, cotton cellulose, acetic acid, etc.) as raw materials through the organization of deep processing in the country;
- Transformation of the system of economic relations - first of all, the end of government intervention in the field of relations between agricultural producers and enterprises of the chemical industry and the complete abandonment of the old system of planning and distribution;
- Transformation of the system of property relations - a sharp reduction in the state share in chemical enterprises and the privatization of chemical enterprises by attracting private capital, including foreign investment in the creation of new production facilities in the industry, as well as preventing government interference in enterprises;
- Digital transformation - the introduction of modern software systems in the industry to manage the movement of financial, material and human resources, marking products, the

<sup>1</sup> <https://lex.uz/docs>. Resolution of the President of the Republic of Uzbekistan of February 13, 2021 "On measures for further reform and financial rehabilitation of enterprises of the chemical industry, the development of production of high value-added chemicals".

<sup>2</sup> <https://uzkimyosanoat.uz/uz/documents/presidents>.

introduction of accounting systems based on international financial reporting standards;

- Transformation of the relationship between science and industry - the organization of innovation processes, the establishment of a new system of cooperation between science and industry on the basis of advanced foreign experience in the transfer of modern technologies;
- Transformation of the training system - radical improvement of the system of training, retraining and advanced training in the field, as well as the provision of existing and new production facilities with highly qualified local and foreign specialists.

Despite the objective difficulties associated with the ongoing global COVID-19 pandemic, due to the timely and comprehensive state support and fruitful work of the collectives of the enterprises of Uzkimyosanoat JSC in 2020, the growth in the volume of the industry's production compared to the previous year amounted to 8.3 percent. Marketable products worth 7,301 billion soums were produced. Mineral fertilizers were produced 1,181 thousand tons, of which nitrogen fertilizers 859.2 thousand tons, phosphorus 111.6 thousand tons and potash 210.0 thousand tons. Soda ash produced 190.9 thousand tons, polyvinyl chloride 48.7 thousand tons, sodium nitrate 4.8 thousand tons. The production volumes of tire and conveyor products amounted to 417.4 thousand units, respectively. and 43.8 thousand running meters.

At the end of 2020, chemical products were exported in the amount of 189 million dollars, of which 132 million dollars and 57 million dollars fell on mineral fertilizers. for other types of products. Exports grew by 8 percent. For comparison, if in 2019 34 types of products were exported, then in 2020 - 41 items. The export of such new types of products as polyvinyl chloride, hypochlorite, caustic soda, polyethylene film, car tires has begun.

For 2021, Uzkimyosanoat JSC plans to expand the production of commercial products to 9,291 billion soums, ensuring growth by 21 percent compared to last year. In particular, the production of mineral fertilizers is expected to grow to a total volume of 1,466 thousand tons. It is planned to increase the production volume of nitrogen fertilizers to 1,116 thousand tons, phosphoric fertilizers to 133 thousand tons, and potash fertilizers to 216 thousand tons.

As part of the implementation of localization programs in 2020, 23 projects were implemented in the industry, within the framework of which products were manufactured for 1 343 billion soums, with an increase in comparison with the last year by 66.5 percent. In 2021, it is planned to implement 26 projects with a total production volume of 1 467 billion soums.

Within the framework of the industrial cooperation program, the production of seven types of products in demand by other industrial sectors was mastered for a total amount of 592.5 billion soums. In particular, produced:

- for the mining industry 2 thousand tons of thiourea (worth 56.4 billion soums); 37.1 thousand tons of sodium cyanide salt in the amount of 399 billion soums; 5.2 thousand tons of porous nitrate in the amount of 12.4 billion soums;
- for the glass industry 4.7 thousand tons of sodium nitrate in the amount of 12.9 billion soums;
- 800 tons of ethyl acetate for the paint and varnish industry in the amount of 13.4 billion soums;
- for the automotive industry 417.4 thousand units of tires for the amount of 97.6 billion soums.

In the area of industrial cooperation in 2021, the volume of production is expected to grow by 13 percent.

In accordance with the investment program in 2020 in the industry within the framework of 14 projects, 389 million dollars were spent, the program was implemented by 102 percent. Of this amount, 48.3 million dollars. within the framework of 7 projects, foreign direct investment is accounted for. Under the guarantees of the state within the framework of one project, investments in the amount of 282 million dollars were spent. From the funds of the enterprises themselves, 29 million dollars were reinvested, from the funds of the Fund for Reconstruction and Development and bank lending, 23.4 and 6.6 million dollars were used, respectively. 7 projects were completed with an investment value of \$ 1.2 billion. Thus, in June, the Navoiyazot JSC launched the production of 500 thousand tons of nitric acid; in December, the same enterprise launched a complex for the production of 660 thousand tons of ammonia and 577.5 thousand tons of carbamide. In December, the first stage of modernization of Kokand Superphosphate Zavod JSC was completed (project cost \$ 30.0 million). In May, a facility with a capacity of 2.0 thousand tons of carboxymethyl cellulose (with a design cost of 4.5 million dollars) was launched in the Yukorichirchik district of the Tashkent region.

Currently, the industry is working on 33 promising projects. Including 5 projects for the production of polymer products, 5 projects for the production of fertilizers, 11 for the production of chemical elements, projects for organic compounds, detergents, protein substances, as well as R&D.

In 2020, the enterprises of Uzkimyosanoat JSC successfully implemented a virtual corporate high-speed data exchange and information storage system, as well as a corporate banking system.

In 2020, the enterprises of the industry paid taxes and compulsory payments in the amount of 803.7 billion soums, of which 669.1 billion soums were paid to the budget and 134.6 billion soums to extra-budgetary funds.

Due to the commissioning of new production facilities in the current year, chemical enterprises are expected to receive net profit in the amount of 503.6 billion soums and pay 850.0 billion soums to the budget and extra-budgetary funds.

### **Conclusion.**

In 2021, within the framework of 16 investment projects, the development of 281.4 million dollars is planned. Of these, 239.1 million dollars. make up foreign direct investment and loans without the involvement of state guarantees. As a result of the launch of three projects with an investment value of \$ 30 million. it is planned to additionally manufacture products for 766.2 billion soums and expand the export volume of the industry by 20 million dollars.

As a result of the targeted measures taken in the industry, a decrease in the cost of production by 4.4 percent was achieved. Particular attention was paid to saving energy resources (electricity, natural gas and other types), as a result of which a decrease in expenses for this item was achieved in the amount of 64.5 billion soums. Thus, in Navoiyazot JSC, through the introduction of modern energy-saving technologies for the production of nitric acid, 41.1 million kWh of electricity was saved in the amount of 18.1 billion soums. At Ferghanaazot JSC, with the commissioning of a modern air separation unit with the decommissioning of two obsolete turbo compressors, 48.6 million kW / h were saved in the amount of 21.4 billion soums.

Due to the savings of 129.6 million cubic meters of natural gas, 477.7 million kWh of electricity, as well as recycled water, in 2021, the cost of production is expected to decrease by 380.2 billion cm. In particular, at Navoiyazot JSC as a result of modernization of production processes, the total savings will amount to 307.7 billion soums, which in physical terms corresponds to 121.1 million cubic meters of natural gas and 475.2 million kWh of electricity. The sale and gratuitous transfer of 14 objects, which are not core assets, should undoubtedly influence the cost reduction of enterprises in the industry.

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