

«TATNEFTEKHIMINVEST- HOLDING»

» June 2024

Coordination of the petrochemical complex
of the Republic of Tatarstan since 1994

Oil Production

Oil Refining

Gas Refining

Chemical Industry



Rubber and Plastic Products

Pharmaceuticals

Biotechnology

Ecology

«Tatneftekhiminvest-Holding»

**Coordinates the development
of the petrochemical
complex of the Republic
of Tatarstan**



Attracting Projects

search, evaluation and attraction of technologies and companies for the implementation of projects in the Republic of Tatarstan



Support for Companies

assistance in the implementation of investment and innovation projects



Provision of Raw Materials

assistance in solving issues of raw materials supply



Cooperation

development of cluster connections



Planning

development of strategic documents and strategic decisions



Communications

organization of conferences and round tables

Participating in R&D and innovation projects

Expertise

Technological and economic evaluation of projects
External expertise by the Scientific and Technical Council
of Tatneftekhiminvest-Holding

Consulting

Market research
Search for potential partners
Assistance in concluding a contract

Financing

Financing costs at the laboratory or prototype stage

Piloting

Assistance in pilot implementation on the territory
of the Republic of Tatarstan

Scholarships

Personal scholarships based on the results of the
selection of projects of the republican competition
«Fifty best innovative ideas for the Republic of
Tatarstan»

Promoting Innovations in 2023



11

R&D

received support through assistance in the organization of scientific research and pilot work, co-financing of projects

13

Innovative Proposals

worked out through the search for partners, establishing direct contacts, facilitating the organization of testing products and technologies

42

Market Reviews

conducted to assess the development directions of the petrochemical complex

R&D support in 2023 (Part 1)

Selection of strains

Implementation of applied research on the selection of strains promising as producers of xanthan exopolysaccharide and methylotrophic strains promising as producers of methanol exopolysaccharide

Research Institute of the Russian Academy of Sciences "BIOCENTER- SAS" (Pushchino)

Carbon landfill

Participation as an industrial partner of the carbon landfill «Carbon-Volga region» (Republic of Tatarstan)

Natural zeolites

Research of electron microscopic samples of natural zeolites in the Nanoanalytics Laboratory of the Kazan National Research University

Increasing potato yields

Research work on evaluating the effectiveness of the use of zeolites and superabsorbent polymers of different size fractions in potato growing technology

Federal State Budgetary Institution "FITZ potato named after A.G. Lorkh" (Moscow region)

Production of protein from peas

Development of technological schemes for the production of vegetable and animal protein from peas
NPO Kinematika LLC (Kazan)

R&D support in 2023 (Part 2)

Production of acrylic acid copolymers

Development of technology for the production of acrylic acid copolymers.

Developer — LLC PKF "Singer" (Zelenodolsk)

Wastewater Control

Creation of a system for determining the biochemical oxygen consumption in wastewater. The project has been implemented since 2019.

Project participants — Kinematika LLC, NPP Ecoenergomash LLC (Kazan)

Refinement of the sulfur formulation

Supervising work on refining the sulfur formulation used in the tire industry.

Developer — Kazan National Research Technological University

Oil sludge processing

Creation of a pilot plant of Industrial Ecology LLC in the village Karabash (Republic of Tatarstan)

Cleaning of Wastewater

Development and selection of new colonies of bacteria that make up activated sludge for wastewater treatment.

The project has been supported since 2019. The initiator of the project is Kinematika LLC (Kazan)

Hydrogen production

Creation of hydrogen production technology for new energy.

Kinematics LLC, Kazan

5 chemical projects received support in finding partners and conducting tests

Air purification

Selection of pilot equipment for air purification from harmful substances produced by the Yatagan/CET Engineering Group of Companies (Moscow) with further delivery to the Fedoseevskaya sewage pumping station (Kazan)

Chemical reagents

Supervising the construction of JSC NPC Khimtechno (Kazan) of a plant for the production of chemical reagents and oilfield chemicals with a capacity of 20 thousand tons in the village. Karabash (Republic of Tatarstan)

Production of textolite

Development of special grades of epoxy resins in cooperation with Attika Group of Companies (St. Petersburg) and D.I. Mendeleev Russian University of Chemical Technology for the production of textolite used in the production of printed circuit boards

Road bitumen

Continuation of supervision of works on the use of sulfur bitumen in road construction, produced at a joint pilot plant of JSC Tatneftekhiminvest-Holding and LLC Bureau of Innovative Chemical Technologies (Kazan)

Hydrogen sulfide absorber

Continuation of work on supervising the issue of selecting a hydrogen sulfide absorber in oils at oil facilities in Russia and the Republic of Kazakhstan, Together with JSC NPC Khimtechno

In 2023, we supervised 8 projects in the field of biotechnology and agrochemistry

Expanding the range of veterinary products

Continuation of work with JSC "NPC "Khimtechno" to expand the range and markets of veterinary products

Production of feed yeast

Continuation of negotiations with the Ministry of Agriculture and Food of the Republic of Tatarstan and JFR Co. Ltd (Japan) for the organization of the production of feed yeast in the territory of the Republic

Processing of chicory and jerusalem artichoke

Study of the possibility of organizing the complex processing of chicory and jerusalem artichoke into inulin and oligofructosans in cooperation with Tatagrobiotech LLC (Kazan)

Testing of the drug on vegetation

Testing of ApaSil drug manufactured by PhosAgro Group of Companies (Moscow) on production crops of Agrobiotechnopark LLC (Kazan State Agrarian University) for the vegetation of spring wheat, peas and potatoes

Bioprotein Testing

Testing of bioprotein (feed protein from methane) produced by BIOPRAKTIKA LLC (Moscow) by agricultural universities of the Republic of Tatarstan

Extraction of biologically active components

Application of the supercritical fluid extraction process for the extraction of biologically active components from the Chaga mushroom. Working together with JSC "Tathimpharmaceuticals" (Kazan)

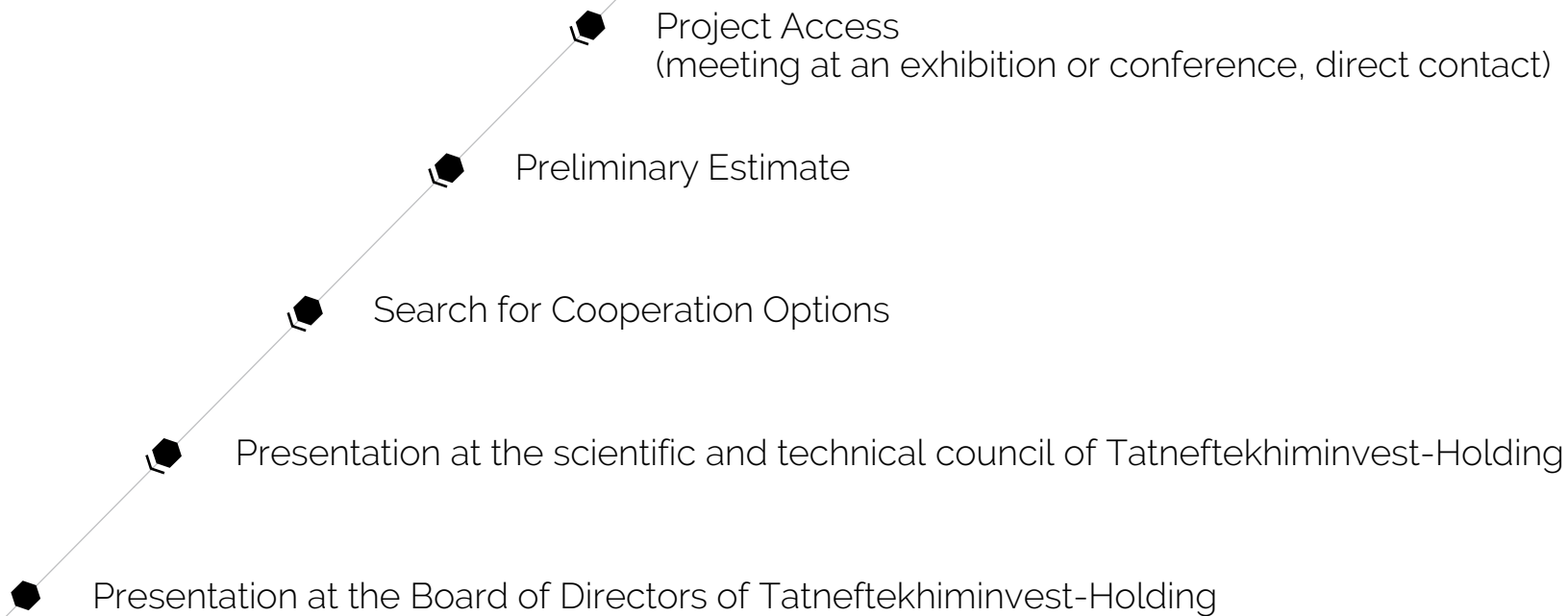
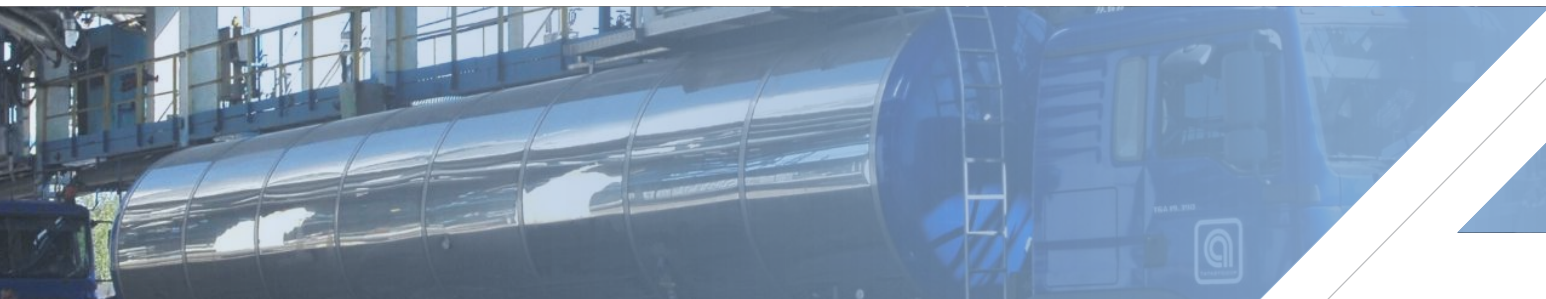
Production of dietary supplements based on amaranth

Consideration and discussion of projects for the production of dietary supplements and functional nutrition products based on amaranth, including squalene and its concentrates

Production of technical cannabis

Work as a member of the interdepartmental working group of the Republic of Tatarstan "Hemp. Flax. Organic farming". Manufacture of fiber processing equipment

Algorithm for working with proposals and projects



At the board of directors, a project can be presented to the heads of authorities and major companies

Chairman of the Board of Directors –
Rais of the Republic of Tatarstan
R.N. Minnikhanov

Ministry of Economics
Ministry of Industry and Trade
Investment Development Agency
Ministry of Construction, Architecture and Housing



12

meetings
of the board of directors
are held annually



58

projects and companies
were presented in 2023

Participating in the Formation of Feed Stream

Conclusion of Contracts

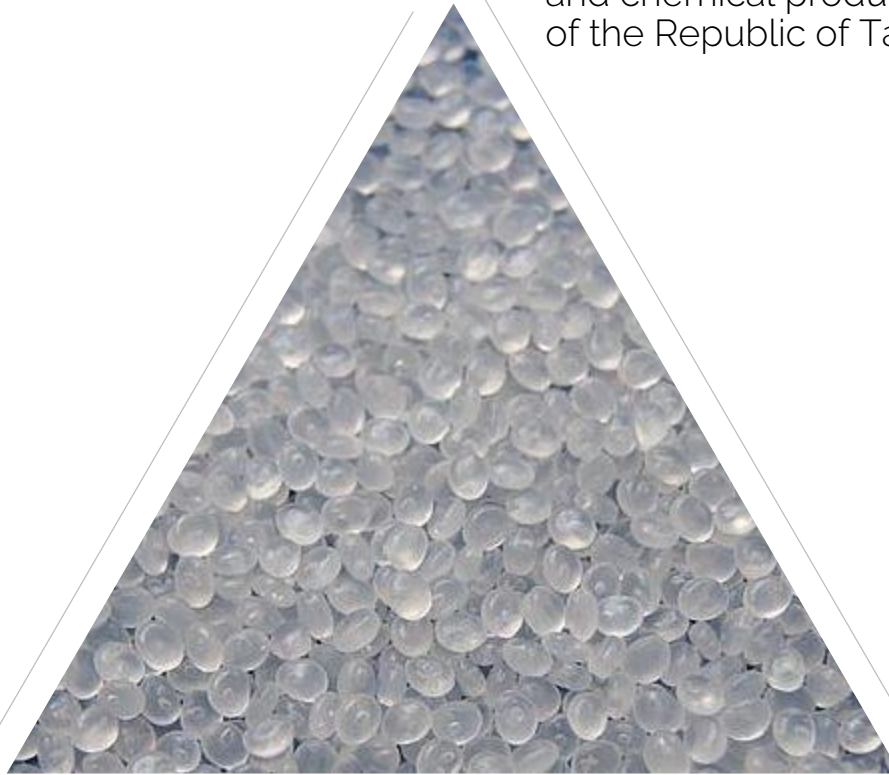
Assistance in concluding direct contracts for the supply of hydrocarbon raw materials and chemical products between companies of the Republic of Tatarstan

Discussion of Issues

Organization of meetings of enterprises - producers of hydrocarbon raw materials with consumers to solve problems

Demand Forecast

Formation of the current and strategic balance of raw materials for the petrochemical complex of Tatarstan



Forming strategic decisions

5th

program developed by us for the development of the petrochemical complex is being implemented in Tatarstan



Industry Programs

Developed programs for the development of the petrochemical complex of the Republic of Tatarstan

- ▷ for 1999-2003
- ▷ for 2004-2008
- ▷ for 2010-2014
- ▷ for 2015-2019
- ▶ for 2020-2024

Target Program for the Development of Biotechnology for 2010-2020

Target Program for the Development of the Pharmaceutical Industry of the Republic of Tatarstan for 2011-2020



Regional Documents

Participation in the development of regional strategic documents



Corporate Plans

Assistance in the development of strategic documents for manufacturing companies, educational organizations



Current Analysis

Quarterly analysis of the results of the development of the petrochemical complex of the Republic of Tatarstan

Organizing Events

Annual Conference

Annual International scientific and practical conference on advanced technologies of petrochemistry and oil refining within the framework of the Tatarstan Petrochemical Forum (held in late August or early September)



Thematic round tables at republican events



TATARSTAN PETROCHEMICAL FORUM

Held annually

Publishing Information Materials



Analytics and catalogs

Catalog of manufacturers
of materials for construction
and road purposes,
produced on the basis
of chemical products

Analytical materials
on the development
of the petrochemical
complex



Information for Investors

Presentation materials

Scheme of cluster
development
of hydrocarbon
processing



Articles

Publications
in newspapers
and magazines

Posting industry news
on the company's
website

Formation of digests
for ministries
and departments

Contact us to start cooperation



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