


THEORY AND PRACTICE OF STRATEGY

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The concept of the Russian Far East gas industry strategy: mission and vision

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Abstract. In non-stationary economic conditions, being one of the most promising macroregions of Russia and despite the existing problems, the Far Eastern Federal District possesses all the resource and technology potential essential for a breakthrough in socio-economic development. In the Far East the potential driver of development can be presented by the gas industry on the functioning and development of which is concentrated the entire range of interests (national, public, regional, industrial, corporate and international), and which possesses a number of large-scale strategic opportunities. In case the disclosed opportunities are realized through separate projects the effect may be only of the localized and short-term character. Thus, the approach should be complex and imply the development and further implementation of a full-scale industrial strategy integrated into the general system of strategies. Due to this, the purpose of the article is to systematize the findings of the strategic analysis of the Far East gas industry and using it as the basis for creating the concept of the industrial strategy. According to this, the author builds up the concept of the mission and the vision of the strategy for the gas industry of the Russian Far East and provides a detailed description of the strategic priorities with their resulting objectives and basic effects of the public and economic efficiency of their implementation.


Keywords: gas industry, strategy, industrial strategizing, strategic priorities, social and economic development, the Russian Far East

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Концепция стратегии газовой отрасли Дальнего Востока: миссия и видение

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Аннотация. В нестационарных экономических условиях Дальневосточный федеральный округ, как один из перспективнейших макрорегионов России, несмотря на наличие накопленных проблем, обладает необходимым ресурсным и технологическим потенциалом для осуществления рывка социально-экономического развития. На Даль-

нем Востоке потенциальным драйвером развития может выступать газовая отрасль, на функционировании и развитии которой сконцентрирован весь спектр интересов (национальных, общественных, региональных, отраслевых, корпоративных и международных), и имеющая ряд масштабных стратегических возможностей. Реализация выявленных возможностей отдельными проектами в большинстве случаев принесет лишь точечный и краткосрочный успех, в этой связи необходимым является комплексный подход, предусматривающий разработку и дальнейшую реализацию полноценной отраслевой стратегии, интегрированной в общую систему стратегий. Исходя из этого, целью настоящей статьи является систематизация результатов стратегического анализа газовой отрасли Дальнего Востока и формирование концепции отраслевой стратегии на их основе. В статье формируется концепция миссии и видения стратегии газовой отрасли Дальнего Востока, подробно раскрываются стратегические приоритеты с указанием результирующих целей и основных эффектов общественной и экономической эффективности от их реализации.


Ключевые слова: газовая отрасль, стратегия, отраслевое стратегирование, стратегические приоритеты, социально-экономическое развитие, Дальний Восток России

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远东天然气行业战略构想：使命与愿景

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摘要：在不稳定的经济环境中，远东联邦区作为俄罗斯最有发展前景的宏观区域之一，尽管存在着历史遗留问题，但仍具有实现突破性社会-经济发展的必要资源和技术潜力。在远东，发展的潜在动力是天然气行业，其运作和发展汇集了整个利益范围（国家、公共、区域、部门、公司和国际），而且有许多大的战略机遇。在大多数情况下，通过个别项目来实施已识别的机遇只会带来局部和短期的成功，因此，有必要采取综合措施，包括制定和进一步实施全面的产业战略，并将其纳入整体战略体系。由此出发，本文的目的是将远东地区天然气行业的战略分析结果系统化，并在此基础上形成行业战略构想。据此，文章形成了远东地区天然气行业战略的使命和愿景构想，详细阐述了战略重点，并指出了最终目标及其实施后将产生的社会和经济效益。

关键词：战略、行业战略规划、战略重点、社会 and 经济发展、天然气行业、远东地区

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Introduction

The instability of the global and regional economic systems and the rising unpredictability brought about by the emergence of numerous trends of various types [1–3] are leading to not only structural economic changes, but also social transformation [4, 5].

Taken together, this only reinforces the complexity and importance of the strategic objectives that must be met to ensure the social and economic development of Russia's regions and the nation as a whole. That said, the complexity of achieving the goals is largely determined by the shrinkage of resource opportunities, limited

access to advanced technical and technological support, and escalating interregional competition for economic factors [6]. Some of them become strategically significant for the innovative development of the economy [7, 8].

Even under the conditions described above, as one of the most promising macroregions of Russia, the Far Eastern Federal District (FEFD) possesses the technological and resource potential to make a breakthrough in social and economic development [11, 12], even despite the presence of the accumulated problems [9, 10]. It has been repeatedly noted that this breakthrough can be achieved through implementing large-scale projects and cardinal transformations [13, 14]. In this context, particular attention should be paid to the formation of sectoral drivers [15], which imply the implementation of existing regional and industrial potential for the multiplicative stimulation of long-term social and economic development.

Strategic analysis has shown that the gas industry [16], which offers a number of significant strategic opportunities [18–20], can act as a potential driver in the Russian Far East, on the functioning and development of which the entire spectrum of interests (national, public, regional, industrial, corporate, and international) is concentrated [17].

Nevertheless, the author believes that implementation of the identified opportunities in individual projects will, in the majority of cases, bring only isolated and short-lived success. In this regard, an integrated approach providing for the development and further implementation of a full-fledged sectoral strategy integrated into the overall strategy system [21] is required.

Theoretical and Methodological Basis of the Study

The decision to use the Russian school of strategy developed by Professor V.L. Kvint [22, 23] as the methodological approach to the study was not random. Built on the fundamental principles of strategic thinking [24], important philosophical aspects, and the incorporation of many years of scientific and practical experience [25–27], the methodology has repeatedly demonstrated its consistency and effectiveness in strategy development for entirely different areas and objects [28]. Industrial strategizing is one of these areas that

the author of this article developed and personally tested taking into account its peculiarities, and that possesses methodological tools in addition to the primary one¹.

The industrial strategy is a complex document that includes, just like any other strategy, an integral system of interconnected blocks and elements [29]. This study places emphasis on the development of the Russian Far East gas industry strategy concept, considering this core block of elements as decisive throughout the entire stage of strategy development up to its full implementation. In turn, the industrial strategy *concept* should include two interrelated components: mission and vision [29].

The mission of the strategy for the Russian Far East gas industry should establish not only strategically significant information on the object of industrial strategy development (causes of occurrence, feasibility, and development), but also set a general objective and determine the usefulness of the strategy being developed in the context of implementing the diversity of interest groups included in the development and operation of the object [30]. In addition, the mission should help the population of subjects of the Far Eastern Federal District develop confidence in implementing their long-term interests and identify areas that are attractive to potential investors, which is not only one of the guiding principles for the effective implementation of the future strategy, but also one of the most crucial factors in the economic development of the entire region [21, 31].

According to the strategizing methodology, the *vision* of the Russian Far East gas industry strategy should regulate a system of strategic principles ensuring the effectiveness of its development and implementation [21, 27], contain *strategic priority* concepts developed on the basis

¹ With the author's participation, a number of individual sectors were successfully strategized: "Strategies for the Development of Water Supply and Water Disposal in St. Petersburg for the Period until 2035 and Beyond", "Strategies for Water Supply, Water Disposal, and Water Balance in the Republic of Uzbekistan for the Period until 2035 and Beyond", and "Strategies for the Social and Economic Development of the Kemerovo Region (Kuzbass) for the Period until 2035 and Beyond" (approved as a regional law).

of identified and justified strategic opportunities, and be supported by an appropriate resource base and competitive edge [22]. Additionally, it is important to identify the outcome objective and potential public and economic efficiency for each strategic priority [29, 32], as this will enable future monitoring of the implementation process, for example, through mathematical and economic modeling [33, 34].

Formation of the Strategy Vision Concept

The gas industry is of particular strategic importance for the development of all subjects of the Russian Far East as a macroregion, which primarily entails reliable supply of effective and environmentally friendly energy raw materials to households and industry [16].

Strategic diagnostics results revealed [16] that the gas industry of the Far Eastern Federal District actually has a high accumulated scientific, technical, resource, industrial and production development potential. There are three major gas production centers located in the Far East (Yakutia, Sakhalin and Kamchatsky), including both onshore and offshore fields, where more than 5 trillion m³ of natural gas reserves are concentrated. Due to the intensification of geological exploration, an increase in resource opportunities is expected in the long term [35]. In addition, the gas and oil and gas condensate fields of the macroregion have a number of important peculiarities. The Chayandinskoye oil and gas condensate field, for example, contains significant quantities of helium, ethane, propane, and butane, giving an unrivaled competitive advantage. [16].

Unfavorable climatic conditions and the complex mining and geological features of the region have resulted in a high level of conjugation of oil and gas field exploration processes with the development and successful implementation of cutting-edge technologies both within the industry and in related areas [36]. The successful experience of such large-scale projects as an underwater high-tech complex for offshore gas production, the Amur Gas Processing Plant, and minimally manned gas production technology complexes not only confirms the demand for cutting-edge technologies, but also serves as a reference point for innovative growth [16]. The presence of top oil and gas companies such as PJSC Gazprom, PJSC YATEK, LLC Taas-Yuryakh Neftegazodobycha,

PJSC Surgutneftegaz and PJSC Rosneft Oil Company in the region and their active involvement in the industry's development play an important role in this process.

The functioning of the gas industry covers a diverse range of interest groups (national, public, regional, industrial, corporate, and international), as shown by the strategic analysis of interests [17]. The gas industry is a reliable source of energy resources and domestic gas chemical products for both the population and the industry of the region [38]. Each subject of the Far Eastern Federal District fully believes that the gas industry can significantly benefit the social and economic development of the region's subjects and the region as a whole [17, 26]. In addition to contributing to the achievement of the national objective of improving population welfare, the gas industry is regarded as a key player in the environmental development of Russian regions, including the Far East, which implies a significant reduction in pollutant emissions into the atmosphere in the medium term [40].

In turn, the region's deep integration into international economic relations, including the energy sector, with the Asia-Pacific Region (APR) creates long-term channels of investment and technological cooperation [16].

Following the preceding analysis, it is proposed as a mission concept to ensure favorable economic, business, and regulatory conditions for implementing the accumulated scientific, technical, resource, and industrial-and-production potentials of the Russian Far East gas industry in the context of multiplicative stimulation of the social and economic development of each subject of the Far Eastern Federal District and the macroregion as a whole for the period until 2035 and beyond.

The mission statement declares the following *main objective*: achieving multiple improvements in the quality and standard of living of the population of the Russian Far East through building an innovative driver for long-term development based on the gas industry.

The uniqueness of the gas strategy being developed is its orientation towards bringing together all subjects of the Far Eastern Federal District and all the relevant actors (including potential investors) in the context of achieving the general goal, strengthening vertical and horizontal links in the overall system of strategies, and

contributing to the multiplication and scaling of the achieved economic and social benefits of the implementation of strategic opportunities for the development of the Russian Far East gas industry.

Formation of the Strategy Vision Concept

The following system of general methodological and specific strategic principles presented in **Table 1** is used to ensure successful fulfillment of the mission of the Russian Far East gas industry and achieving the main objective.

Six concepts of the main strategic priorities of the Russian Far East gas industry are formulated, with simultaneous implementation, based on the block of comprehensive strategic analysis [3, 17–19], mission concept, and strategic principles. Because of their similar effects, public efficiency and economic efficiency are grouped according to specific strategic priorities.

Strategic priority: “Export of Pipeline Gas to the Asia-Pacific Region”. The inter-related global trends “Climate Change” and “Energy Market Transformation” ultimately

Table 1

Strategic principles of strategizing the gas industry of the Far East

Principle name	Principle description
Public utility	The strategy, including all strategic priorities and decisions, must ultimately be human-centered. The primary outcome of the strategy is public utility.
Interests Complementarity	All interest groups without exception that are included in the development stage of the strategy must be fully implemented. Furthermore, a mechanism for engaging newly emerging interest groups in implementing the strategy at various stages is required.
Hierarchy and integration	Vertical and horizontal interconnection of the Far Eastern Federal District gas industry with other objects within the overall system of strategies (including through federal ministries, regional and municipal administrations and departments, corporations, and foreign representative offices) shall be maintained throughout the strategy period. This requires creating the mechanisms and tools that would facilitate such interaction and enable the joint implementation of the common directions of the strategy.
Environmental friendliness	Considering the obvious environmental benefits of natural gas over other types of fossil fuels, the strategy should contribute to environmental improvement in the long term.
Innovation	High priority shall be given to strategic opportunities involving innovative strategic solutions for the development of the gas industry. In this regard, a strategic system of innovation monitoring and implementation at all stages of strategy development shall be built and operated.
Resource availability	All strategic priorities of the gas industry are based on distinct competitive advantages and supported by adequate resources. Only well-founded strategic priorities and decisions should receive resources, avoiding the “scattering” of the resource base. Additionally, it should be possible to build and operate additional mechanisms and tools to expand resource capabilities throughout the entire strategic period.
Consistency and completeness	It is mandatory to follow the established procedure for the development and implementation of the gas industry strategy, as well as the full implementation of the proposed doctrine.
Efficiency and multiplicativity	Implementation of all strategic priorities of the gas industry should generate both public and economic (budgetary and commercial) efficiency. Particular attention should be paid to multiplying and scaling the resulting effects.

Source: compiled by the author using materials from [21, 38]

stimulate a shift away from “dirty” energy sources in favor of environmentally friendly ones [3]. This is especially evident in the Asia-Pacific region, which emits a significant amount of carbon dioxide into the atmosphere (more than 52 % of the global volume) [19].

The emerging *environmental window of opportunity*, supported by relevant national strategic documents, primarily in China² and India³ (the Asia-Pacific region’s largest issuers), as well as the existing energy window of opportunity associated with *the shift of industrial centers to the Asia-Pacific region* and the concurrent increase in primary energy consumption in rapidly developing Asian countries [19] determine the strategic possibility of a marked increase in Russian exports of pipeline natural gas from the Russian Far East to the Asia-Pacific markets. China is the most promising market, with the projected demand for natural gas exceeding the domestic supply by more than 2.1 times by 2050 [19].

In this regard, the main objective of this priority is to organize long-term large-scale pipeline natural gas supplies. The gas and gas condensate fields of the Yakutia Gas Production Center are assumed to be the priority’s primary resource base. The strategic proximity of the main gas fields of the Far Eastern Federal District to key external sales markets give the ultimate competitive advantage.

Strategic priority: “Development of large-scale liquefied natural gas production in the Russian Far East”. Together with the above global trends related to climate change and the subsequent energy market transformation, another trend – “*Formation of the Global Natural Gas Market*” associated with a rapid growth in demand for liquefied natural gas in interregional trade [3, 41] provides a strategic opportunity to increase LNG production in the Russian Far East on a large scale and expand its exports to the major markets, primarily in the Asia-Pacific region. This priority is

supported at the national level by active state incentives and substantial support, including the provision of a number of tax breaks and benefits aimed at the comprehensive development of LNG projects.

When considered collectively, these factors determine the ultimate objective of the priority, which is establishing a large-scale cluster for large-tonnage LNG production and organizing its export to end users in the emerging global natural gas market.

In view of the fact that by 2040, China (1.85 times)⁴, India (3.7 times)⁵, Taiwan, Thailand and Bangladesh are expected to be the primary drivers of LNG demand growth, it is proposed to focus primarily on this target group to allow companies to fully enjoy the competitive advantage of strategic proximity to key consumers. Another emerging competitive advantage is Arctic Cascade, a domestic natural gas liquefaction technology currently being developed that implies a significant reduction in the gas liquefaction cost by using Arctic climate⁶, conditions that is expected to open up a strategic opportunity to unlock the resource potential of the Eastern Arctic region. Nevertheless, local natural gas reserves concentrated on macroregional territory in all three gas production centers (Yakutia, Sakhalin and Kamchatsky) can serve as a resource for the implementation of the priority.

Strategic priorities: “Export of Pipeline Gas to the Asia-Pacific Region” and “Development of Large-scale LNG Production in the Russian Far East”. These strategic priorities provide for the achievement of a number of co-targeted effects.

⁴ SHELL LNG OUTLOOK 2021. URL: <https://www.shell.com/energy-and-innovation/natural-gas/liquefied-natural-gas-lng/lng-outlook-2021.html#iframe=L3dlYmFwcHMvTE5HX091dGxvb2svMjAyMS8>

⁵ High LNG prices put spotlight on India’s exposure to global gas market volatility. URL: <https://www.spglobal.com/platts/en/market-insights/latest-news/lng/101521-high-lng-prices-put-spotlight-on-indias-exposure-to-global-gas-market-volatility>

⁶ NOVATEK has patented its own natural gas liquefaction technology “Arctic Cascade”. URL: https://www.novatek.ru/ru/press/releases/index.php?id_4=2302

² The Fourteenth Five-Year Plan for the National Economic and Social Development of the People’s Republic of China and the Outline of the Long-term Goals for 2035. URL: http://www.gov.cn/xinwen/2021-03/13/content_5592681.htm

³ India’s greenhouse gas policy is governed by the Paris Agreement. URL: https://www.ng.ru/energy/2021-09-13/15_8250_india.html

In terms of *public efficiency*, implementing both priorities leads to an increase in the natural gas export volumes, which is viewed as an additional incentive for the development of fields in the areas surrounding the main gas production centers, and the expansion of exploration activities to search for new fields throughout the Far Eastern Federal District. As a result, this will affect the expansion of relevant production capacities and improvements of infrastructure, including main gas pipelines and large-scale LNG plants, and will spur the creation of new jobs and an increase in investment flows to the regions.

Among the main effects on *budgetary (state) efficiency*, it is anticipated that increasing export volumes of pipeline and liquefied natural gas will lead to an expansion of the tax base and will become one of the major channels for accumulating federal budgetary funds and funds from regional budgets of the Far Eastern Federal District, which should be directed toward the development of infrastructure and construction of social facilities in the macroregion.

Furthermore, the establishment of close cooperation between the Far Eastern Federal District, as a gas supplier, and the Asia-Pacific Region, as the gas recipient, will benefit the expansion and strengthening of foreign trade relations with the developing economies of the region, including interregional cooperation in oil and gas equipment and technology. Expansion of foreign trade activity will become one of the factors driving multiplicative economic growth in the regions of the Russian Far East and the macroregion as a whole.

As the main effects of *commercial efficiency*, it is worth highlighting the increase in investment attractiveness in the regions of the Far Eastern Federal District associated with the scaling up of work on the development of oil and gas fields and the building of appropriate infrastructure, which contributes to attracting significant amounts of investment and business activity growth.

Strategic priority: “Ensuring Gasification of the Russian Far East”. The global trend of “*Energy Market Transformation*” [3] is garnering support at both the national level and the intra-regional level, opening up a strategic window of opportunity for natural gas in the Far East, which has a *high potential for region-wide gasification*, as well as a corresponding *environmental de-*

mand (for example, environmental pollution is an acute problem both at the regional and municipal levels) [42].

Over 50% of the electricity in the Far East is generated by thermal power plants, with approximately 70 % of that coming from coal burning⁷. At that, the Far Eastern Federal District is characterized as a macroregion with a relatively low overall level of gasification (~20 % by the end of 2021) that remains at close to zero for some subjects of the Far Eastern Federal District [18]. This necessitates the development of reliable and continuous gas supply in optimal volumes to the population and industry of the subjects of the Far Eastern Federal District. The overall resulting goal is to significantly increase the gasification levels of the subjects of the district by 2035.

Because of the macroregion’s climatic and relief characteristics, gasification can be carried out in two directions: network and autonomous gas supply.

Strategic priority: “Development of Low-scale LNG Production in the Russian Far East”. Low-scale LNG is regarded as one of the most promising energy sources in the context of a comprehensive approach to ensuring fuel energy efficiency and environmental friendliness [38].

Three major strategic opportunities for using low-scale LNG are emerging in the Russian Far East [20].

First, it is worth mentioning the high potential of using low-scale LNG for autonomous gas supply to places that are located far from gas production facilities and hard-to-reach areas with difficult climatic and geographical conditions. The Far Eastern Federal District is expected to become a key player in the growth in the demand for low-scale LNG for autonomous gas supply by 2035 (55 % of total demand in Russia)⁸.

Another strategic opportunity is associated with the strengthening of regulatory measures for the protection of the environment in navigation waters (emission control zones, including the

⁷ How the Russian energy balance works. URL: <https://rg.ru/2021/03/28/kak-ustroen-rossijskij-energeticheskij-balans.html>

⁸ The government has approved a long-term program for the development of LNG production. URL: <http://government.ru/news/41790/>

Baltic and North Sea areas and Chinese national coastal emission control areas) in response to the global trend of climate change [43], and with the active development of the Northern Sea Route, which implies both an increase in the number of vessels meeting the new environmental standards and an increase in demand for low-scale LNG as one of the most promising and ecological types of maritime fuel.

Against the background of environmental trends, an equally significant strategic opportunity is the partial conversion of motor vehicles in the subjects of the Far Eastern Federal District to run on low-scale LNG.

In this regard, the priority's main objective is establishing a large-scale system of low-scale LNG production in the Far Eastern Federal District and its active use for autonomous gas supply as maritime and gas engine fuel.

The unique technologies available in Russia for low-scale natural gas liquefaction are a clear competitive advantage of the priority. Among them, for example, is a unique technology developed by Gazprom Transgaz Yekaterinburg LLC [38] that is being successfully implemented on gas distribution stations and automobile compressed natural gas fueling stations (NGV filling stations)⁹, allowing such low-scale LNG plants to be placed at gas distribution stations and NGV filling stations in the Far Eastern Federal District.

Strategic priorities: “Ensuring Gasification of the Russian Far Eastern Regions” and “Development of Low-scale LNG Production in the Russian Far East”. These priorities will increase the quality and standard of living of the region's population in the future. This is facilitated by two effects [38]: *environmental* (a significant reduction in pollutant emissions into the environment) [44] and *economical* (providing access to energy resources with a competitive advantage in terms of the energy efficiency/cost ratio compared to diesel fuel, fuel oil, and

coal). Furthermore, expansion of the gas pipeline network and the construction of new gas distribution stations, NGV filling stations, low-scale LNG plants, and other infrastructure will ensure the creation of new jobs in the regions of the Far Eastern Federal District.

In terms of *budgetary (state) efficiency*, improving the environmental situation through gasification of the regions, using LNG as NGV fuel, and greening the energy systems of the Russian Far Eastern regions will ultimately increase the quality of life of the regions' population, which is one of the significant factors in shaping the attractiveness of the Far Eastern Federal District for life that will contribute to both environmental preservation and the growth of the population of the Far Eastern Federal District. Another benefit of improving the environment is the reduction in the cost of repairing environmental damage from the negative anthropogenic impact.

The use of environmentally-friendly maritime fuel (LNG) in the waters of the Northern Sea Route will ensure increased cargo flows, thus contributing to the construction of appropriate infrastructure and the development of coastal areas.

The provision of natural gas to the population and industry generally will result in the multiplicative stimulation of the economic growth of the Far Eastern Federal District's regions against the background of energy and economic efficiency [38, 45].

First, *commercial efficiency* entails providing industry with access to a relatively cheap and more efficient source of energy and LNG-powered NGV fuel, which will together reduce costs and increase the energy efficiency of industries and enterprises, ultimately increasing the competitiveness of the finished products.

Subsequently, increasing the attractiveness of the Northern Sea Route through transitioning to the use of environmentally friendly LNG maritime fuel will open up new strategic opportunities for ramping up business activity in the coastal regions.

Strategic priority: “Development of Gas Processing and Gas Chemical Production in the Russian Far East”. Expansion of the global economy and the regional trend of “*Industrial centers displacement*” not only stimulate a higher demand for primary energy in a number of regions around the world, but also strengthen

⁹ In 2021, Gazprom Transgaz Yekaterinburg LLC produced almost 9.5 thousand tons of LNG. URL: <https://www.interfax-russia.ru/ural/pressrel/v-2021-godu-v-gazprom-transgaz-ekaterinburg-proizvedeno-pochti-9-5-tysyach-tonn-szhizhennogo-prirodnogo-gaza>

the demand for chemical products and composite materials [3]. Natural gas is one of the most promising sources of raw material [46] with the potential to be used to produce a wide range of chemical and gas chemical products with high conversion through gas processing and further gas chemistry.

Given the significant reserves of natural gas with a high content of ethane, butane and propane, as well as one of the world's largest helium reserves (8.3 billion m³, or 50 % of Russian reserves) [16] in the Far Eastern Federal District, a number of strategic opportunities for the integrated development of gas processing and gas chemistry are opening up. This is primarily the production of helium, the global demand for which is expected to increase by more than 21 % in the medium term, as well as the production of highly processed gas chemical products such as ethylene, propylene polymers, etc. (the annual global demand for polymers is expected to reach 5.1 % by 2030) [18].

The objective of the strategic priority is to establish a gas chemical cluster in the Russian Far East capable of meeting both the domestic long-term demand for chemical and gas chemical products and Russia's leading positions in global and regional chemical product markets, including the Asia-Pacific markets.

In accordance with its purpose and national interests, the gas chemical cluster of the Far Eastern Federal District is primarily designed to ensure the substitution of imported chemical products on the national market, where there is still a significant share of dependence on imported products¹⁰. The accumulated domestic experience in gas processing and gas chemistry and the unique domestic technological and technical developments that are successfully implemented in the relevant industries, for example, at the Amur Gas Processing and Gas Chemical Complex [18], provide competitive advantages ensuring the implementation of the strategic

priority. Implementation of large-scale projects for the development of gas processing and gas chemical production in Russian the Far East will, on the one hand, ensure the creation of new jobs for the local population, and, on the other, contribute to an increase in the volume of domestic gas chemistry products and the transition of industries and enterprises to them from imported analogues, thereby increasing the availability of domestic goods for the population and serving as one of the factors of the multiplicative social effect of the development of the Far Eastern Federal District regions [38].

The following main results corresponding to the national strategic priority for the development of gas processing and gas chemistry are planned to be achieved within the framework of *budgetary (state) efficiency* [38]:

- a significant increase in the share of gas processing production and the volume of domestic chemical and gas chemical products, which contributes to strengthening the stability of the regional economies of the Far Eastern Federal District and the Russian economy as a whole in face of external and internal challenges and threats of various nature (economic, energy, political, etc.);

- overall reduction of the reliance of the national economy on imports due to the saturation of the domestic market with cheap domestic chemical and gas chemical products;

- strengthening of interregional cooperation and economic ties between subjects both within the Far Eastern Federal District and in other regions of the Russian Federation;

- expansion and strengthening of foreign trade relations by increasing the export of domestic chemical and gas chemical products, primarily to the Asia-Pacific region.

- stimulation of the multiplier effect on the economic growth of the Far Eastern Federal District regions by switching to affordable and relatively cheap chemical and gas chemical products.

In addition to increasing investment attractiveness through implementing large-scale projects to establish a gas chemical cluster in the Russian Far East, the key commercial effect will be the provision of access to cheap raw materials for industries and enterprises, which will open up strategic opportunities for industrial development in the regions.

¹⁰ The current state of gas chemistry: the energy crisis is not a hindrance there will be problems, but not for everyone URL: <https://oilcapital.ru/article/general/15-10-2021/sostoyanie-gazohimii-energokrizis-ne-pomeha-problemy-budut-no-ne-u-vseh>

Strategic priority: “Technological and Technical Testing Ground of the Oil and Gas Industry in the Russian Far East”. Against the backdrop of the strengthening of sanctioned sectoral measures and restrictions levied on Russia’s fuel and energy sector, in addition to the emerging strategic threat that is hindering its long-term development, the need for import substitution of fuel and energy sector equipment and the transition of oil and gas companies to technological independence [3, 47] have emerged. Simultaneously, *the implementation of a diversification turnaround* activating the development of oil and gas fields in the eastern part of Russia, including the Russian Far East [3], generates a demand from oil and gas projects for modern domestic technologies and equipment. Only the Chayandinskoye oil and gas condensate field, for example, can be regarded as a project capable of implementing technologies in the widest range of areas [48].

Taking into account such a demand, and considering the other five strategic priorities developed and presented above involving the implementation of large-scale projects with the application of unique and advanced solutions, there is a need and a strategic opportunity for the formation of a technological and technical testing ground for the gas industry in the Far Eastern Federal District.

The primary objective of the strategic priority is the formation of an oil and gas scientific, technical and innovative cluster that can act as a long-term technological and technical testing ground providing for both the internal needs of the industry and the possibility of exporting technologies and equipment.

It is worth noting as a competitive advantage not only the presence of top oil and gas companies in the Far Eastern Federal District and their active participation in the development of the industry, but also their accumulated experience in cooperating with other leading companies (Atomenergomash, HMS Group, Severgroup, Tyazhmash, Rosatom, Roscosmos, Rostec, the Almaz-Antey Corporation, etc.) and the joint solution of the most important scientific and technological tasks [3]. In addition, special importance in the implementation of the strategic priority should be given to international cooperation.

Implementation of this strategic priority will lead to the achievement of the most important *public effect* associated with the development of

human potential in the Far Eastern Federal District [14] that is primarily associated with the establishment of an oil and gas scientific, technical, and innovative cluster that includes building an effective scientific and educational system contributing to the formation of the knowledge economy [49].

From the point of view of *budgetary (state) efficiency*, the most important factor is providing strategic security in the field of oil and gas equipment, technologies, and software by reducing the dependence on imports. An oil and gas scientific, technical, and innovative cluster in the Russian Far East will ensure the generation of innovative technological and technical developments, with their distribution and implementation guaranteed to drive a multiplicative stimulation of the regions’ economic growth. Operation of a technological and technical testing ground in the Far Eastern Federal District will strengthen interregional and international cooperation in technological and technical development. The emerging technological and technical testing ground will provide an efficient platform for the interaction of participants of various levels (national, regional, industrial, corporate, and international) to solve shared scientific and technological problems in the oil and gas and related industries.

Most notable among the commercial benefits is the growth of investment attractiveness associated with an increase in innovative activity in the Far Eastern Federal District regions, as well as the operation of the oil and gas scientific, technical, and innovation cluster contributing to the development of highly qualified oil and gas industry experts.

Conclusion

The strategy concept of the Far East gas industry that includes its mission and vision was developed through systematization of the findings of a comprehensive strategic analysis. Six concepts of the main strategic priorities of the gas industry are presented in detail, the synchronous and full implementation of which will result in the gas industry becoming one of the long-term drivers of the social and economic development of the Far Eastern Federal District, serving a diverse range of interests (national, public, regional, sectoral, corporate, and international) and generating a diverse range of social and economic multiplicative effects.

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