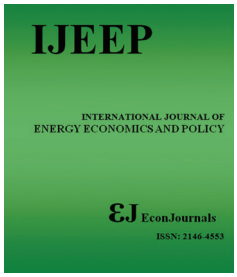

International Journal of Energy Economics and Policy

ISSN: 2146-4553

available at http: www.econjournals.com

International Journal of Energy Economics and Policy, 2017, 7(3), 137-145.

The Role of Small and Medium-sized Innovative Enterprises in the Solution of the Import Substitution Task in Oil and Gas-sector Segment of the Russian Fuel and Energy Complex

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ABSTRACT

Russian Fusion Energy Conference takes leading positions in the field of oil and gas extraction, it is one of five major complexes in coal mining and power generation. Russia's fuel and energy sector is the largest energy complex in the world. This sector employs more than 2 million people, which produce more than 50% of the total gross domestic product of the country. At the same time, small and medium enterprises can play a much more significant role in the development of the Russian economy, especially after the end of the recession and economic restructuring. The government needs to improve approaches in regulation of the sphere of small and medium-sized enterprises to develop their full potential. The authors analyze the measures which should be taken by the Government in order to stimulate the growth of small and medium-sized businesses in Russian fuel and energy complex.

Keywords: Small Innovative Enterprises, Medium Innovative Enterprises, International Sanctions, Import Substitution, Territorial Clusters
JEL Classifications: L53, L95, O31

1. INTRODUCTION

International sanctions, which have become a reaction of the West to Russia's principled and sovereign position on a number of topical issues of international relations and world politics, have actualized the task of import substitution. First of all, this concerns industries that are of strategic importance to the national security of the Russian Federation, as well as industries whose production and technological progress are most vulnerable to international sanctions.

In general, the package of sanctions against the Russian fuel and energy complex can be divided into three parts:

- A ban on investment in oil and gas production on the territory of the Russian Federation;
- A ban on the sale of equipment and technologies for exploration and development of deposits to Russian Companies;
- A ban on the performance of oilfield services for Russian Companies.

Obviously, a significant part of the sanctions has affected the oil and gas industry, a strategically important sector of the Russian fuel and energy complex.

The mechanism of import substitution, with superficial consideration, seems simple and understandable: The more technologies and equipment produced in Russia, the less oil and gas enterprises rely on the risks associated with restricting and prohibiting the supply of equipment and technology transfer from foreign countries.

However, in practice, it is extremely difficult to solve this task, especially in the shortest time possible.

As a result, in the Russian oil and gas sector, the task of replacing imports of technologies and equipment, access to which is closed or may be closed due to new sanctions, has been actualized. Not only the successful implementation of current programs of operation and development of oil and gas enterprises depends on the solution of this task, but also the strategic security of the industry and the Russian energy industry as a whole.

2. MATERIALS AND METHODS

International sanctions as a factor of tasks' actualization in the Russian oil and gas industry have raised a number of problems. Thus, US companies are prohibited from providing oilfield services for the oil fields' development and production in the Arctic, in deep water and shale deposits. The West blocked the participation of its companies in Russian investment projects in the industry. In addition, US and EU companies are prohibited from providing technologiesy and supplying equipment used to develop the shelf.

Transneft and Gazpromneft are also subject to financial sanctions - A ban on any transactions, financing and other operations with new debt obligations for more than 30 days in the EU and 90 days in the US. From the EU side, this restriction also extends to Rosneft.

Joint projects in the oil and gas industry have suffered from the sanctions most of all - Western companies refuse "dangerous" cooperation. Sanctions, for example, backlashed on the largest oil company Exxon Mobil - it had to withdraw from a joint project with Rosneft to extract oil in the Arctic Ocean. Suppliers of oil equipment, Baker Hughes and Schlumberger, are also ready to abandon projects with Russian companies (Simakova, 2016).

The problem of limited access to financing is obvious: Until now, the main source of loans for Russian companies were banks from developed countries. This played a negative role after the ruble devaluation - for example, Rosneft had a debt of $30 billion, which was to be paid in 2015 (Lukyanenko, 2016); In the end, the problem was solved by issuing domestic bonds and increasing prepaid contracts from abroad. But this case is an exception. Access to financing for complex facilities was closed, in fact, in 2015. Novatek was unable to get the expected $27 billion loan in the US to finance development of the Yamal deposit (Dolgikh and Fedotova, 2016). The expectations placed on the Asian financial markets were not justified as well - Gazprom managed to get a Chinese loan of $2.2 billion, but this is an exception. The sale of Russian deposits to Asian investors goes badly; firstly, Asians are not in a hurry to spend money, and secondly, they have big problems with technology and technical qualifications.

Sanctions closed access to 68% of imported technologies for the Russian industry. This is an important factor - technologies from developed countries are absolutely necessary for extracting hard-to-recover oil; local companies in such cases require up to 50% of equipment and up to 80% of software from abroad (Krotova, 2015).

The role of small and medium-sized businesses in solving the import substitution problem. The openness of the Russian economy predetermined its active integration into the international labor division, the objective result of which was the import of technologies and equipment for the oil and gas sector to Russia. The development of such technologies was carried out by the world's largest oil and gas corporations and their cooperation partners for decades, billions of dollars were invested in the relevant processes.

Technologies and equipment import was objectively necessary given the known technological backwardness of the domestic oil and gas sector. This was, to a certain extent, due to the closed nature of the Soviet economy and the lack of market incentives to increase innovativeness and cost-effectiveness of R and D. However, the strong dependence of the strategically important sphere of the economy, which is the oil and gas industry, on imports, carries significant threats to national security in itself. Those can be leveled by organizing part of the imported equipment production in their country, and actively developing national scientific research in the high-tech industry.

Overnight, this task is impossible to solve, moreover, strategic projects for the development of advanced equipment and technologies' domestic production in the fuel and energy complex are hampered by the need to promptly replace those retired as a result of sanctions, which are given priority in existing import substitution programs.

As a result, the solution to the problem of import substitution, in particular in the oil and gas sector, is seen exclusively through the search for all possible internal reserves. Therefore it requires the involvement of absolutely all economic agents capable of contributing to the import substitution problem solution.

Among such agents, a special place is occupied by small and medium-sized businesses. High level of intellectualization of a number of small entrepreneurial undertakings, organizational freedom that stimulates creativity, leads to the fact that in most countries a significant proportion of small and medium-sized businesses are innovative enterprises. Given the leveling of objective obstacles for the development of such enterprises (for example, the traditional financing gap), small and medium-sized enterprises can make a huge contribution to innovative development and economic growth. This circumstance attracts attention in the aspect of using small business for solving the problem of import substitution in our country.

The problem of attracting small and medium-sized businesses to the task of import substitution is also becoming increasingly important in those areas where, traditionally, the role and influence of small and medium-sized enterprises are extremely negligeable. One of such industries is energy, and the oil and gas industry.

In 2015, the number of small enterprises in the fuel and energy sector, including the extraction of fuel and energy minerals, amounted to 3.724 units (1.4% of the total number of small enterprises registered in the Russian Federation). These enterprises involve 129 thousand employees, their turnover amounted to 147.7 million rubles. Turnover of medium-sized enterprises in the Fusion Energy Conference (FEC) amounted to 103.3 billion

rubles in 2015, or 2.2% of the total turnover of medium-sized enterprises in Russia as a whole. Given that the annual enterprises' turnover in the fuel and energy sector in 2014 (the latest actual data of Rosstat, does not take the turnover of small enterprises into account) amounted to about 16.56 trillion rubles, then the share of small and medium-sized businesses in the fuel and energy sector accounts for about 0.63% of the gross industrial product of the FEC (Official Statistics, 2016).

Extreme complexity of the technological cycle, which predetermines the considerable duration and high risks of investing in the oil and gas sector; high labor intensity and cost-intensive work on exploration and initial development of deposits; risks of investors and a deficit of starting capital for launching the oil and gas business - all of those reasons predetermined the advantages of big business in the oil and gas sector.

The said, to an even greater degree, actualizes the task of attracting small and medium-sized businesses to the problem solution of import substitution in the Russian oil and gas sector - it is obvious that the potential of small business in this area is not fully disclosed.

Potential and current activities of small and medium-sized innovative enterprises.

Foreign experience proves that small and medium business can become an active driver of the oil and gas industry development through innovative service companies first of all.

In the Russian Federation, small and medium-sized businesses also play a significant role in the service segment of the oil and gas market. Similar situation has been inherited from the Soviet times, when design institutes and specialized enterprises for the development and implementation of service solutions were not integrated into production associations of oil and gas producing (transporting) enterprises.

To date, according to some estimates, small and medium-sized enterprises in the oil and gas service of the Russian Federation account for up to 15% of the total turnover (Panina, 2016), which, although lower than foreign indicators, significantly exceeds the contribution of small businesses to the FEC as a whole.

Therefore, the main role of small and medium-sized enterprises in oil and gas service is to incorporate them into the value chain in the oil and gas market. Essentially, oil and gas service allows to centre high technology development in the hands of small and medium-sized research teams. And the results of commercialization of the latest developments provide an innovative breakthrough in the oil and gas sector against the backdrop of the innovative inertia of large enterprises.

It should be noted that "today, oil and gas services include: Drilling of wells (operational and exploring), their current and major repairs, seismic studies and geophysical works, construction of infrastructure, application of methods to increase the yield of reservoirs and intensification of production, transportation services, maintenance and repair of field equipment. In a word, all kinds of works that were successfully closed in the Russian market by such world giants as Schlumberger, Halliburton" (Borisov, 2015).

At the current stage, within the framework of solving the problem of import substitution in the oil and gas service, development of programs and lists of import-substituting products, as well as projects' expert evaluation and support, execution of research projects. In line with these projects, profile research teams, scientists of higher technical educational institutions, branch unions and associations are beginning to be widely involved. Was started the attraction stimulation to works on import substitution of small and medium-sized enterprises.

According to the structure of the Russian equipment import for 2013-2015, 67.6% of the number of positions delivered is due to the layout of the bottom of the drill string. A promising area is the substitution sphere of everything related to the software production, monitoring technologies (Koneva, 2016).

Meanwhile, of course, we are talking only about the potential of attracting small and medium-sized businesses to import substitution programs in the Russian oil and gas industry. There are practically no specific examples of the corresponding cooperation actively developed at the current stage (the programs of cooperation of the largest energy corporations with the involvement of affiliated structures, which are discussed below are an exception).

On the other hand, the activities of small and medium-sized innovative enterprises are continuing, and innovations are gradually being brought to the market, intended, among other things, for solving import substitution problems.

In particular, the number of unconditional successes of the oil and gas center of the energy cluster of the Skolkovo Innovation Center in 2015 includes the creation of a strategic alliance between OOO "RRT" and the leading international engineering company KBR in the field of technology commercialization for the production of gasoline components PRIS, developed by OOO "RRT" with the grant support of Skolkovo.

It should be noted that PRIS is a technology for obtaining high-octane gasoline components "Euro-5," and it is an installation for the efficient production of high-octane gasoline.

Competitive advantages of the installation: Reduction of capital costs by 3.2 times; compliance with the norms of EURO-5, MSAT-2; solution of the ballast fraction problem; beduction of operating costs by 5 times. The essence of innovation is the following: The combination of catalytic systems and rectification in a single device; combination of three processes:

a. Isomerization reactor;
b. Hydroisomerization reactor;
c. Rectification system (Project of OOO "RRT," 2016).

The range of participation of small and medium-sized enterprises in the activities of import substitution in oil and gas services

is certainly not limited to the development of monetized technological and (or) product innovations.

Thus, domestic design bureaus and IT companies, most of which belong to small and medium-sized businesses, are now ready to replace import in the areas of software production and monitoring technologies.

For example, the innovative product of Qualitet Systems, a nonseparating moisture meter for continuous measurement of water cut in a two-phase three-component well flow, has only one analogue in the world: It is the red eye moisture meter by the American Wetherford.

The technology of electrophysical control (EPC) is innovative, as its introduction qualitatively changes the principles of technological and production processes management, replacing inertial laboratory control with instant automatic one.

EPC in a liquid flow without sampling with an operational speed of up to 500 measurements per minute allows instant signaling of a change in the complex molecular-ionic composition of a substance and, as a consequence, a change in the quality parameters. The measured electrophysical characteristics are automatically recalculated into the usual physicochemical quality indices according to a technique that establishes their mutual correlation. EPC in combination with the existing laboratory physical and chemical control for signaling the occurring changes with the accumulation of a database of measurements makes it possible to improve the predictive determination of the chemical composition of the aquatic environment. Ultimately, it is possible to completely replace laboratory control with the inclusion of EPC procedures in technical regulations and conditions.

The technology of EPC is distinguished by:
- Complex measurement of the substance composition;
- High efficiency - up to 500 measurements per minute;
- The methodology universality for various substances;
- Obtaining results in the form of ready physical and chemical indicators of environmental quality;
- High level of automation.

The results of liquids' studies conducted in parallel with functional tests of measurement systems show a direct relationship between the specific electro physical characteristics and the molecular ionic composition of the liquid (EPC Technology, 2016).

Finally, the potential for attracting small businesses to import substitution projects in the oil and gas industry in the development of monitoring technologies is high.

So, as specialist of the expert magazine note, as a rule, space survey data were used to monitor the condition of pipelines, pollution levels and other analysis. Prior to the import substitution policy, Russian companies actively purchased data from foreign high and ultra-high resolution spacecraft. However, the sanctions and a jump in the currency value made these purchases extremely expensive, and sometimes completely inaccessible. This gave impetus to the development of the Russian market for manned and unmanned aerial surveys (Koneva, 2016).

Such projects can be implemented using the technologies of the Russian startup. Trace air is being developed by the team of experts which develops a cloud-based web platform for quality control and construction costs using a visual interface and advanced analytical algorithms based on data collected by autonomous unmanned aircraft (Building a future based on data from the air, 2016). Despite the small size of the enterprise and the relatively short period of existence of the start-up, it gained fame far abroad. In 2016 was opened a representative office of a small enterprise in the United States. For Russian oil companies, it would be a big omission not to use trace air's best practices as part of import substitution in pipeline monitoring, pollution levels and other analysis.

In general, the examples cited, clearly demonstrate that small and medium-sized innovative enterprises have a huge potential in the context of solving the import substitution problem in the oil and gas service segment of the FEC of Russia, which would significantly impede the implementation of the priority tasks of the sector development.

2.1. The Practice of Attracting Small and Medium-sized Innovative Enterprises

Domestic and foreign experience shows that a full-fledged disclosure of the innovative potential of small and medium-sized enterprises is possible only in the framework of integrative processes with large companies. Horizontal integration forms that preserve the organizational and creative independence of small innovators are a priority.

In recent years, the largest Russian corporations in the oil and gas sector have begun to involve small businesses in participating in corporate import substitution programs, though, as a rule, within the framework of vertical integration.

Thus, PAO Gazprom implements the Partnership Program With Small And Medium-Sized Business entities designed to ensure the implementation of the state policy for the development of small and medium-sized businesses through procurement activities carried out by PAO Gazprom and that provides for a set of activities aimed at:
- Network formation of qualified and responsible suppliers (contractors, executors) from among small and medium-sized enterprises that supply goods (performing works, providing services) to PAO Gazprom on its own account under direct contracts and subcontracting agreements of the 1st level;
- Active involvement of innovative small and medium-sized business entities in the activities of PAO Gazprom, expansion of interaction between PAO Gazprom and innovative small and medium-sized businesses;
- Providing assistance in the development and support of program participants (14).

Among the activities of the Program:
- Expansion of economic activities, services production, within the framework of which the pilot program of partnership

between PAO Gazprom and small and medium-sized businesses is being implemented. Among the preliminary qualifications outsourced to small and medium-sized enterprises aimed at solving problems of import substitution, one can name such as: Design of gas field facilities and line facilities at the field, provision of services for industrial environmental monitoring during the construction of gas transportation facilities and production facilities of oil and gas at sea, etc.;
- Reduction of the consideration period of applications for accession to the pilot program;
- Conversion into an electronic form of the collecting applications process for joining the pilot partnership program of PAO Gazprom with small and medium-sized business entities using the Automated Electronic Procurement System of PAO Gazprom.

Activities of the Partnership Program with Small and Medium-sized Businesses are gradually being integrated with the program of import substitution of PAO Gazprom. Thus, the company approved a list of the most important types of products for import substitution and production localization. Based on this, an analysis of the possibilities of competitive import substitution has been made, actual directions and possible terms for further reduction of dependence on imports have been determined.

The tasks of import substitution are solved, in particular, through the organization of a technological partnership with Russian enterprises producing oil and gas equipment.

Thus, many years of cooperation links Gazprom with machine-building and pipe-making enterprises. One of the goals of this cooperation is the development of advanced technologies and the organization of analogues production of foreign equipment needed by Gazprom.

Developing cooperation with small and medium-sized businesses in the context of solving the import substitution problem, Gazprom recently signed road maps on expanding the use of technologies, products and services of scientific and technical enterprises with the republics of Bashkortostan, Mordovia and Tatarstan, Vladimir, Voronezh, Irkutsk, Nizhny Novgorod, Omsk, Tomsk and Tyumen regions, Perm Krai, St. Petersburg, the North Caucasus Federal District of the Russian Federation, and also with the Republic of Belarus (Gazprom's Work on Import Substitution Stimulates the Development of Advanced Technologies in Russia, 2016).

In the import substitution programs, medium and small enterprises, controlled by PAO Gazprom, are also being actively involved.

It should be noted that many small innovative enterprises belonging to the Gazprom group were integrated into the corporation at one time, and retain a certain degree of organizational and research independence.

Another major domestic oil and gas corporation, Rosneft, approved the import substitution program in August 2015, starting work with Russian and foreign producers to localize advanced foreign technologies on the territory of the Russian Federation.

The company intends to provide 70% of localization by 2025 for all projects. In particular, in 2016, it is planned to launch the production of catalysts with a capacity of up to 600 tons at the Angarsk petrochemical complex, which "completely closes the needs of Russian oil refining in this component and replaces all imports" (Sechin, 2015).

Rosneft's innovative development strategy, currently integrated with the import substitution program, initially included the active interaction "with industry research institutes, universities, small and medium innovative enterprises of the industry" (Science and Innovations, 2016).

The company is actively replacing imported technologies in the technological chain of production of high-quality petroleum products. To date, all oil refineries of NK "Rosneft" have made a transition to the use of only domestic catalysts in all catalytic cracking units.

Like PAO Gazprom, Rosneft, in the framework of import substitution programs, prefers to focus on products and services of affiliated enterprises - representatives of medium innovative business. One of the forms of horizontal integration within the framework of such cooperation is the creation of their own technology centers on the basis of corporations. Their participants are often organizationally separate companies that perform the role of scientific centers and laboratories of energy corporations and by formal attributes are classified as small and medium-sized enterprises. It is in the active interaction with such companies that energy corporations solve particular problems of import substitution, including in the oil and gas service.

Thus, specialists of the corporate scientific center of OOO RN-CIR in 2015 completed development and production of experimental-industrial batches of domestic catalysts for hydro treatment and isodeparaffination of diesel fractions that ensure the production of high-quality summer, winter and arctic diesel fuels with ultra-low of Euro5 sulfur content. Also of catalysts for gasoline prehydro purification for involving gasoline fractions of secondary thermal processes in a mixture with straight-run raw materials in the process of catalytic reforming. The promising product is characterized by high activity, improved strength characteristics and a long service life.

In general, it is necessary to state that, unfortunately, the practice of attracting small and medium-sized innovative enterprises to cooperation with large corporations in order to solve the import substitution problem in the oil and gas service segment of the fuel and energy complex of Russia is extremely limited and sporadic.

The reports on the successes in attracting small enterprises to import substitution and press releases of the largest energy corporations, primarily state ones, require critical attitude and verification. The review of similar publications conducted by the author of this article led to the conclusion that in the overwhelming

majority of cases, the specific practical results of attracting small businesses to the processes of solving the import substitution problem implemented by corporations are not disclosed, and, in fact, cannot be verified in any way.

Therefore, with a high degree of probability, such cooperation can have a nominal, demonstrative nature.

One of the obstacles to actively attracting small and medium-sized innovative enterprises in the import substitution problem solution in the oil and gas service segment of the FEC of Russia seems to be the misunderstanding by the top managers of large companies in the oil and gas industry of the role of small and medium-sized businesses in achieving goals and objectives of import substitution.

This situation, in many respects, is connected with the general mistrust of large business to small and medium, a lack of economic importance understanding and efficiency of cooperation with them. Domestic market tradition has a little more than 20 years, there is virtually no generation of managers, in front of which small and medium-sized enterprises would function efficiently, or effective ways of integrating enterprises with large businesses would form.

A significant part of small enterprises in the 1990s - were trading stalls and "handicraft" manufactures. Despite the fact that even such primitive forms of business contributed both to saturation of the consumer market and job provision, for a decade, in the eyes of the younger generation of modern leaders, small business played an exclusively autonomous role, and its activities had no points of contact with big business.

The corresponding attitude, formed in the specified period, has been preserved up to the present time. Heads of large companies, in general, disdainfully treat small and medium-sized businesses, preferring to form stable economic ties only with trusted counterparts. For example, a situation where a large energy company outsources certain functions to a small or medium enterprise, is possible in general, however, an affiliated person will be chosen as a counterparty in 19 out of 20 cases.

The managers of large corporations will not select counterparties from among the external small enterprises. It is because the entire spectrum of economically active agents, potentially capable of making a significant contribution to the value chain, will be "tied" within vertical integration entities (they will be included in holdings) or simply acquired, creating isolated units of large corporations from yesterday's small enterprises. Deprived of organizational independence, the innovative enterprise ceases to belong to the segment of small and medium-sized businesses, and, most importantly, to "think" and "act" as a small enterprise, transferring the brain control function to a "large" corporation.

The orientation in the implementation of import substitution for affiliated companies, among other things, is characterized by such negative externalities as the complex position of state-owned structures that, although formally independent, are forced to work on unfavorable terms. For example, TNK-BP and Rosneft often establish payment terms for the work performed within import substitution between 60 and 90 days after their completion. This allows companies to use other people's money gratuitously for their own benefit (Mordyushenko, 2014).

In the context of solving the import substitution problem in the Russian oil and gas industry, there is a great temptation to create a large corporation focused on solving this problem. However, in connection with this possibility, it is necessary to critically assess the risks of the subsequent monopolization of not only certain types of work and technologies, but also entire segments of oil and gas service. Consequently, small business, innovative first of all, inevitably must be involved in solving problems of import substitution in the oil and gas industry. Since there are many obstacles to achieve this goal, stimulating and supporting the involvement of small and medium-sized innovative businesses in import substitution in oil and gas services should be carried out using administrative methods, that is, against the background of active state intervention in innovation processes.

State's numerous attempts to stimulate cooperation between large and small (medium) businesses, which have been continuing since the beginning of the 2000s under various programs and strategies for supporting entrepreneurship, have not made significant progress. Large business is still "eyeing" small innovative enterprises, cautiously entering venture capital on various innovative sites. Direct cooperation with small and medium-sized enterprises, while maintaining the administrative independence of the latter, is not practiced, in fact.

In general, the interaction of small (medium) and large businesses in our country as a whole is traditionally supported by administrative methods, by active state intervention, up to quota allocation of the large enterprises' share of orders transferred by outsourcing to small businesses. This situation, of course, is typical for the oil and gas sector as well.

Under conditions of sanctions pressure and actualization of the import substitution task solution, the state strengthens the administrative impact on large business, demanding active cooperation with small and medium-sized enterprises. Under market conditions, such an impact can be exerted on large companies controlled by the state, among which, as is known, are virtually all key players in the oil and gas market - Gazprom, Rosneft, Transneft and others. It should also be noted that the largest Russian oil and gas enterprises - Gazprom and Rosneft - are state-owned, with 50.2% and 69.5% of shares respectively.

The creation and development of small and medium-sized innovative enterprises in the sphere of oil and gas services in the Russian Federation is actively promoted by the state, including the following areas:

- Stimulating the cooperation of vertically-oriented state corporations with small and medium-sized businesses in public procurement and technological platforms' aspects;
- Support for the establishment of commercial enterprises on the basis of higher educational institutions aimed at the commercialization of scientific developments, in accordance

with the Federal Law of 02.08.2009. №217-FL (Federal Law of the Russian Federation of 02.08.2009).

In accordance with the current legislation, the state establishes quotas for purchases from small and medium-sized businesses.

Decree of the Government of the Russian Federation of 11.12.2014. № 1352 (as amended on 02.08.2016) "On the peculiarities of the participation of small and medium-sized businesses in the procurement of goods, works, services by certain types of legal entities" "establishes the specifics of the participation of small and medium-sized enterprises in the procurement of goods, works, services by certain types of legal entities, the annual volume of purchases that such types of legal entities are required to exercise from these entities, as well as the procedure for calculating the annual volume of purchases" (Decree of the Government of the Russian Federation of 11.12.2014). In 2016, the quota for procurement of state corporations for small and medium-sized entrepreneurs is 18%, and the resulting funds, could significantly replenish the working capital of small and medium-sized innovative oil and gas service enterprises involved in the import substitution programs implementation.

Meanwhile, relatively recently numerous violations and abuses of this norm were revealed during investigations. Moreover, the largest oil and gas companies were among the malicious infringers. It is likely that in practice, large companies continue to transfer orders to affiliated entities, which in no way relate to small and medium-sized businesses.

The possible abuses are indicated by Vedomosti newspaper, referring to the report of the Ministry of Economic Development to the Prime Minister of the Russian Federation. Thus, "more than 96% of purchases pass without competition" (Mereminskaya, 2016). In addition, the Ministry of Economic Development has also discovered multibillion-dollar contracts of state-owned companies with small business.

One of the most revealing examples of possible violations occurred precisely in the oil and gas sector of the economy (a case with OOO Stroygazmontazh, for short, OOO SGM). As Vedomosti notes, in the procurement system there are data on the June contract between SGM (TIN is the same as Rothenberg company) and Gazprom for 6.2 billion rubles on construction and installation works on the Okhansk-Kirov gas pipeline. It is said that "the supplier belongs to the subjects of small and medium-sized business" (Mereminskaya, 2016).

Certainly, such facts discredit the administrative measures taken to attract large businesses to support and develop small and medium-sized businesses by themselves.

Moreover, what is especially important, such cases confirm the conclusion made earlier. That large corporations, in particular in the oil and gas sector, are not ready for equal cooperation with small business, including a strategically important sphere - the import substitution task solution. There is also no understanding of the leadership of big business, of the role of small business in innovation and import substitution, and the relevant experience of its involvement in cooperation, and well-developed mechanisms for such involvement. Finally, there is a lack of goodwill among the leaders of large corporations to develop such cooperation, despite the risks and the "small" scale of counterparties, which causes a huge temptation of "corporate ignoring."

The fact that the state oil and gas corporations superficially and scornfully treat the potential of cooperation with small and medium-sized innovative enterprises in the import substitution task solution seems to raise the problem identified as a real threat to the national security of Russia as a whole, and requires to take immediate measures to resolve it.

It should also be noted that the territorial clusters hold the known potential in the context of stimulating competitive mechanisms for cooperation between large and small enterprises of the oil and gas industry in the solution of the import substitution problem. As has been already noted, with the organization of cooperation between small (medium) and large businesses, horizontal integration forms that prioritize the organizational and creative independence of small innovators are a priority.

Clustering is the most competitive and progressive form of horizontal integration of small innovators and large businesses. The formation and development of clusters is based on the long-term relations, the existence of a system of mutual support, joint learning and a constant striving for something new. As Bubnov states, "special attention is paid to the category of interconnectedness of industries in a cluster, the instrument of which is the compilation of cluster schemes. Many researchers see the only way to preserve small firms in the context of globalization of the economy and increasing international competition - to cluster them. Thus, the main strategic goal of economic development is to maintain and improve the productivity of enterprises" (Borisov, 2015).

At the same time, it should be noted that currently in the sphere of oil and gas production there is only one territorial cluster in Russia, the West Siberian oil-technological cluster, which is at the initial level of development. The cluster members carry out the entire range of geological and geophysical works necessary to successfully solve the problems of geological exploration by oil and gas industry enterprises.

At present, the number of participants in the cluster are 10 entities, including small and medium-sized innovative and production enterprises of the oil and gas industry: OOO "Multiprofile Enterprise GeoInTEK," OOO NPPGM "Geoseis," OOO "Perspektiva."

Thus, the company OOO NPPGM "Geoseis" is working to create and maintain large zonal and areal geological projects in the amount of tens of thousands of running kilometers of seismic profiles and hundreds of exploratory wells. A promising work direction is the formation of a constantly updated, dynamically developing volumetric digital model of the geological structure of cretaceous Jurassic deposits on the vast territory of Western Siberia. The model should reflect, among other things, the

historical aspect of the geological development of the sedimentary strata at the time of build-up and subsequent compaction. Also, it should reflect the formation and destruction of reservoirs, the forecast of oil-source rocks and hydrocarbon migration routes. It must constantly be supplemented with new geological exploration data, advanced ideas and technologies for calculating the spatial distribution of the environmental physical parameters. Such models are used by leading oil companies to plan their activities in large oil and gas provinces. This task is also relevant for forecasting the development of the oil and gas producing industry in Western Siberia (Progressive Technology in Action, 2016).

It is too early to talk about specific achievements of the cluster. It was created only in 2015, but the trend towards creating territorial clusters in the oil and gas sector is, of course, positively assessed.

3. RESULTS AND DISCUSSION

The main obstacle for attracting small and medium-sized innovative enterprises to the task of import substitution in the oil and gas industry is the lack of experience in solving large-scale production problems, and a chronic lack of financing. This problem, typical for the functioning of small and medium-sized businesses, regardless of the sector of the economy, seems particularly acute in the context of import substitution projects in the domestic oil and gas industry. So, up to now, most, even large, domestic companies and manufacturers have not encountered today's projects and do not imagine volumes and financing in terms of equipment.

In their totality, these problems lead to objective difficulties in using the potential of participation of small and medium-sized innovative enterprises in solving the import substitution problem in the oil and gas service segment of the FEC of Russia.

The solution of any problem, including the claimed one, seems to be effective only within the framework of the system approach.

It is obvious that the system of measures to increase the participation of small and medium-sized innovative enterprises in the solution of the import substitution task in the oil and gas service segment of the FEC of Russia should, in its essence, continue and improve the policy of supporting and developing small and medium-sized businesses as a whole. While the tasks of small business access to financing will not be solved at the national level, numerous administrative barriers to the development of small business will not be eliminated. The system of informing the market about innovative goods and services of small and medium-sized enterprises will not be established, and we cannot talk about actively attracting entrepreneurs to the task of import substitution in any sector of the economy.

An important aspect of the participation of small and medium-sized innovative enterprises in the solution of the import substitution task in the oil and gas service segment of the FEC of Russia, is the search and selection of promising projects for their further support and financing. To a certain extent, numerous business incubators and technological platforms are designed to solve this problem. However, at the moment it is important to ensure the real functioning of these infrastructural organizations to support innovative entrepreneurship.

It seems unacceptable to support the practice of using the appropriate sites for unreasonable receipt of tax benefits and preferences. As it was already mentioned, to a certain extent the effectiveness of R and D in small business is connected with organizational and creative freedom, therefore it is absolutely unacceptable that the places of small innovators in the relevant platforms should be occupied by the large R and D divisions of large oil and gas companies.

It is also important to improve the processes of selection and financing of promising developments of small innovative oil and gas enterprises, to provide for increased financing of developments that are most promising from the point of solving the import substitution problem. The assessment of developments should involve a broad public, independent experts with the highest level of qualifications.

It is necessary to critically review the system of quota allocation of State Corporations' purchases from small and medium-sized entrepreneurs, to provide for a combination of administrative lending and market incentives for the appropriate participation of state corporations in these processes.

A huge potential in the context of stimulating competitive mechanisms for cooperation between large and small oil and gas enterprises in the import substitution problem solution is made by territorial clusters. In an environment where the experience of clustering is not directly applied in the oil and gas industry, it is advisable to intensify the design of the oil and gas clusters creation in the regions of Russia with the active involvement of small and medium-sized oil and gas service enterprises.

In conclusion, it is also worth noting that the accumulated positive experience of small and medium-sized enterprises participation in the oil and gas service sector, in the solution of import substitution problems, is advisable to be used in the oil and gas industry as a whole. And also it should be actively adopted by other production complexes, sectors and spheres of the economy.

4. CONCLUSION

It is certainly impossible to successfully solve the import substitution problem in the oil and gas service segment of the domestic fuel and energy complex without attracting small and medium-sized innovative enterprises, many of which have accumulated experience of innovative developments in areas relevant to the solution of import substitution problems. The range of participation of small and medium-sized enterprises in import substitution activities in the oil and gas industry is not limited to the development of monetized technological and (or) product innovations, domestic design bureaus and IT companies (most of which belong to small and medium-sized businesses). They are now ready to replace imports in the spheres of software production and monitoring technologies. In order for works and services of such enterprises to help solve the task of import substitution

in the oil and gas industry, it is important to create institutional prerequisites for supporting small businesses as a whole. As it is important to improve the procedures for participation of small and medium-sized enterprises in technological sites, to stimulate the interest of large enterprises in interacting with small innovative businesses in the framework of vertical integration forms. This will help to increase the participation of small and medium-sized innovative enterprises in the task of import substitution in the oil and gas service segment of the FEC of Russia, and, ultimately, make a significant contribution to solving the problem of ensuring the energy security of our country.

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