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Designing economic and legal mechanism of land management in oil and gas companies

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Abstract. The article deals with the problem of economic and legal relationship in the sphere of land management provided by Russian government. The gas pipeline construction serves as an example to analyze the problems connected with leasing of both federal and privately owned lands. Comparative analysis of costs made by Gazprom to lease the lands at the stage of construction has been conducted. It has been concluded that the government should regulate relationships within the land sector to harmonize the interests of the Federation and private landowners.

1. Introduction

Sustainable land-use management is a significant socio-economic factor, which influences the development of all industries.

Today, deficiencies in legal framework inevitably lead to the situation when economic and legal mechanism of land management is based on economic interests of legal entities involved in the use of lands.

The government is concerned about sustainable and efficient use of all lands to meet the interests of national economy. As a result, the government aims to act on the principle of optimality which implies that every decision on land use made under the given circumstances is the best one among all possible. The difficulty is to delimit federal lands within the land fund of the country [1].

Today, the major part of land fund is federally owned, i.e. owned by the Russian Federation (745.4 million ha). A comparatively small part of lands is owned by federal subjects of the Russian Federation and municipal structures (12.7 million ha). The rest part is used by economic entities of private sector (133.1 million ha).

2. Materials and Methods

As an example of economic and legal mechanism intended to develop the system of land management, Gazprom activities within Eastern Gas Program have been analyzed (Development Program for an integrated gas production, transportation and supply system in Eastern Siberia and the Far East, taking into account potential gas exports to China and other Asia-Pacific countries) [2].

One of the program's priority is to design and enhance gas transmission system (GTS) "Sakhalin-Khabarovsk-Vladivostok".

Besides the free data of Gazprom, informational resources from The National Report on Characteristics and Use of Lands within Explored Areas and the data of Federal State Statistics Service were used.

3. Results and Discussion

The gas pipeline stretches for more than 1,800 kilometers. With 14 compressor stations being operated, the system will annually transport 30 billion cubic meters of Sakhalin gas [3].

The system includes "Komsomolsk-na-Amure" gas pipeline, 472 kilometers long, which is currently being operated.

Gas pipeline "Sakhalin-Khabarovsk-Vladivostok" runs through the territories of Sakhalin Oblast, Khabarovsky Krai and Primorsky Krai. The length of the gas pipeline is 133.9 km in Sakhalin, 777.4 km in Khabarovsky Krai and 438,7 km in Primorsky Krai. Within the investment project, land resources of various land cover including forests and woodlands were used, which caused significant land leasing costs for Gazprom. By January 01, 2012 the total land fund of Primorsky Krai, Khabarovsky Krai and Sakhalin Oblast was 103940.7 thousand ha. The information on lands owned by federal subjects of the Russian Federation, which the gas pipeline stretches through, is represented in table 1 [4, 5, 6].

Table 1. Land areas within federal subjects of the Russian Federation, thousand ha

Land use / total	Primorsky Krai	Khabarovsky Krai	Sakhalin oblast
Agricultural land	1 872.4	375.0	168.8
Residential land	245.2	421.2	86.1
Industrial lands and lands for other purposes	386.2	268.8	324.6
Lands of specially protected sites	841.8	1646.2	124.1
Forest land	12 140.6	73 707.2	6 959.4
Water	323.3	961.4	46.8
Reserve lands	657.8	1 383.5	1 000.3
Total	16 467.3	78 763.3	8 710.1

The structure and dynamics of land use by the constituent entities of the Russian Federation having been analyzed, one can make a conclusion that forest land occupies the largest territory and is predominant in percentage. It makes up from 74% in Primorsky Krai to 80% in Sakhalin Oblast and 93.6% in Khabarovsky Krai. Residential land accounts for 11% in Primorsky Krai, 1% in Sakhalin oblast and 0.5% in Khabarovsky Krai.

Investment project "Gas transmission system "Sakhalin-Khabarovsk-Vladivostok" being implemented, Gazprom bore significant costs to lease the lands located in Khabarovsky Krai and Primorsky Krai, as well as in Sakhalin Oblast.

The costs of the initial stage, when the first pipeline section, 1350 km in length, was built, were 260 372.6 thousand rubles. The distribution of costs paid by Gazprom within the period from 26.10.2009 to 31.12.2011 is represented in table 2.

Table 2. Actual costs paid by Gazprom within constituent entities of the Russian Federation

Costituent entity of the Russian Federation	Costs, thousand rubles	Proportion of costs, %	Number of contracts	Proportion in total number of contracts, %

Primorsky Krai	42 552. 3	16	153	63
Khabarovsky Krai	212 623. 8	82	85	35
Sakhalin oblast	5 196. 5	2	5	2
Total	260 372. 6	100	243	100

At the first stage of the project implementation 243 lease contracts were signed, 63% of which were made in Primorsky Krai. It is noteworthy that costs in different federal subject are not directly proportional to the number of contracts signed. The greatest amount of money Gazprom spent to lease lands in Khabarovsky Krai, while the number of contracts made there is half as many as that in Primorsky Krai. To interpret this fact, particularities of land leasing in these constituent entities should be analyzed.

Forest land leasing is a specific type of land leasing. To calculate the rent, one should take into account different criteria, such as total area, including gross forest land, gross forest cover, characteristics of forest vegetation (intended purpose of use, compartment number, predominant tree species, timber resources, forest resources data). Another particularity of forest land leasing is the term of leasing which can vary from 10 to 49 years. All forest land is controlled by Federal Forestry Agency of the Russian Federation. In accordance with Forest Code of the Russian Federation, the federal subjects are empowered to manage the forest land. Executive power is exercised by Forestry Department of Primorsky Krai, Forestry Administration of the Government of Khabarovsky Krai and Department of Forestry and Hunting of Sakhalin Oblast in Primorsky Krai, Khabarovsky Krai and Sakhalin Oblast respectively.

The distribution of costs paid by Gazprom to lease forest lands at the first stage of set-up complex construction is represented in table 3.

Table 3. Actual costs paid by Gazprom for forest land leasing

Contractor	Area, km	Area length, km	Actual cost, thousand RUB	Proportion in total amount of actual costs, %	Average cost per 1 km, thousand RUB
Department of Forestry and Hunting of Sakhalin Oblast	0.0 – 133.9	133.9	2 354. 9	3	17.6
Forestry Administration of the Government of Khabarovsky Krai	133.9 – 911.3	777.4	68 573. 3	77	88.2
Forestry Department of Primorsky Krai	911.3 – 1350.0	438.7	18 123. 2	20	41.3
Total		1 350	89 051. 4	100	49.0

The largest sum was spent to lease forest lands in Khabarovsky Krai, which is connected with the length of the gas pipeline within the territory of this region. The least amount of costs was spent on lands of Sakhalin Oblast, which is only 3% of total sum. Moreover, average cost spent on construction of 1 km of the gas pipeline in Khabarovsky Krai is twice as high as that in Primorsky Krai and five times higher than that in Sakhalin Oblast.

The rental rate is influenced by different factors, in particular – characteristics of the forest land. The most significant ones are the rental rate for an area unit set in the region, intended purpose of land use, types of areas within the forest land. The rental rate for an area unit of a forest compartment owned by the Federation within the territories mentioned above varies insignificantly (see table 4). It is important that there are no hardwood species and cedars in Sakhalin Oblast because of its geographical position.

Table 4. Rental rate for an area unit of a forest compartment owned by the Federation, in rubles

Forest plant species	Primorsky Krai	Khabarovsky Krai	Sakhalin Oblast
Coniferous trees (except for cedar)	2 978.88	2 931.8	2 970.32
Cedar	3 233.54	3 173.62	–
Hardwood trees	5 598.24	5 638.9	–
Softwood trees	2 871.88	2 835.5	2 865.46

Calculating the rent, one should take into account not only the rental rate for the area unit, but also the correction factor which depends on the intended purpose and varies from 2 (for forests of commercial use) to 6 (for protected lands). The correction factor is also influenced by timber species, the state of the forest fund etc. For example, in Khabarovsky Krai the rented area includes high percentage of lands of rich vegetation cover, so, to calculate the rent, correction factor 4 is applied, whereas in Primorsky Krai correction factors 2 and 3 are used in the majority of cases.

Besides, about 35% of lands leased in Khabarovsky Krai are not included into the forest fund as they are owned by individuals or legal entities. The costs for land leasing in Primorsky Krai, in their turn, are insignificant and represent only 0.2% of total costs.

If the land is privately owned, procedure, terms and dates of rent payment are defined in the rental contract. The particularity of such contract is not only the price of land use, but also indemnity for losses caused by land use, loss of opportunity and costs for land recovery (biological recultivation) which are included into the rent. The area is delimitated with the cadastral passport and annual lease cost is set by the landowner but not less than the tax on land.

Calculation of losses caused by using land to construct the objects under the implementation of investment project “Gas Pipeline “Sakhalin-Khabarovsk-Vladivostok” was based on the assumption that the lands were used for agricultural purposes. In civil legislation the loss of opportunity means the profit which the owner would get under the ordinary condition of civil circulation. Reimbursement of outlays including indemnity for losses caused by land use, loss of opportunity and costs for land recovery (biological recultivation) is made once a year with a lump-sum payment.

In our work we have analyzed some examples of calculating the rent for private lands. According to particular calculations of the losses of agricultural industry, as well as indemnity for losses including loss of opportunity, the average rent in Khabarovsky Krai is 35,000 RUB per hectare of herbaceous and mixed rangelands. This results in significant economic costs, as well as administrative expenses caused by registration of land rights in privately owned plots. Today, the number of lands owned by individuals or legal entities is constantly increasing and the rent they set is often overpriced, as well as the value of indemnity for losses including loss of opportunity. It is noteworthy that the rental rate over the period of gas pipeline construction varies from three kopecks to 1,200 rubles per square meter. However, in accordance with the laws of the Russian Federation, the rent for federal and municipal lands where gas pipeline objects are located is regulated: its maximum value is set by the government and can not be changed for the purpose of restraining fares.

It is clear that the rent for private lands which gas pipelines go through should be set equal to that for public lands. To regulate the relationships with some of the owners, seizure of lands for federal needs should be implemented.

To reach this goal, the amendments to the laws of the Russian Federation should be made. It is necessary to widen the basis and simplify the procedure of grabbing lands used by natural monopolies entities to operate, reconstruct or repair the objects from private owner for federal and municipal needs. It is important to provide the opportunity to seize the lands at the expenses of the natural monopoly entity so that it gets the right of property to the land.

The suggestions mentioned above might be considered within the follow-up work on draft federal law № 304493-5 "About amendments to the laws of the Russian Federation to enhance the procedure of land seizure", which was approved within the first reading and is being prepared for the second one.

It is important that all the expenses made for land rights registration influence the prices for works and services which are included into the final price for the product. This will inevitably increase the rate of inflation in modern economy, which is under the influence of activities conducted by natural monopoly entities.

4. Conclusion

Servitudes might be a solution for the problem. In this case, there is no need for delimitation of the area, decisions on transferring a plot from one category into another, multiple registrations of land transfers, expensive cadastral works to delimitate the lands which take in different sections of the pipeline.

This suggestion might be taken into account while making amendments to section 23 of Land Code of the Russian Federation, which is about the rights and obligations of land use (servitude).

The experience of foreign countries (USA, Great Britain, Australia, Canada, Germany, Sweden) demonstrates that the servitude is one of the fundamental land rights which allows service and transporting lines to be located: gas, water and other pipelines, tie-lines and power transmission lines. The servitude provides easy access to land resources and causes quick enhancement of the facilities.

Thus, construction of lines might circumscribe the rights of the landowner and probably cause some annoyance but does not prevent him from using the land for a definite purpose. If the line is located under the ground or constructed on poles or in other way, which does not terminate the use of land for a definite purpose, there is no need to seize or buy the land.

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