

Implementation of the Concept of Sustainable Development in Russian Oil and Gas Companies

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Abstract: The major issues of oil and gas companies at the present stage of their development, consisting in the deterioration of raw materials, which requires increasing the cost of maintaining and increasing the volume of oil production, high oil and gas business, environmental pressures on the environment and social responsibility of large oil and gas companies. The necessity of implementation in these circumstances the concept of sustainable development. That is ambiguous role of the government in improving the stability of the oil and gas business. The variants of the concept, as well as the ability to use in the field of international experience in countries such as Iraq and Norway. Justified by the author's vision of the future developments in the Russian oil and gas business. The necessity of improving the theoretical and methodological basis for decision-making with regard to the requirements of sustainable development business. In connection with this proposed use of program-oriented approach with an integrated tool solutions of multiobjective problems. Recommended author's model for assessing the sustainability of development and selection of specific measures in the program of development of the organization, including a comprehensive assessment criteria of economic, environmental and social performance management decisions in the Russian oil and gas companies

Key words: Stability % Development % Oil and gas business % Economic efficiency % Environmental performance % Social performance

INTRODUCTION

Currently, the oil and gas business is a major source of tax revenue budgets of different levels. In addition, the operation of a large part of the problems of oil businesses remains unresolved. In particular, the deterioration of raw materials, which requires all the high cost of maintaining and increasing the volume of hydrocarbon raw materials, coupled with a high environmental pressure on the environment of oil and gas production and the growing social problems within companies require transformation approaches to decision-making. Thus, it becomes difficult in the high oil and gas business social responsibility to take decisions based solely on economic criteria of their effectiveness [1]. For example, in a high depletion and low (and in some cases negative) profitability of oil and gas development can be difficult to implement strategies to reduce or eliminate the presence of mind in the area of ??the corresponding social infrastructure. This also explains the problematic use of efficient outsourcing

schemes oil and gas companies to individual local areas. In these circumstances, some business entities to oil and gas continue to function, with similar loss-making assets in corporate portfolios [2]. In some cases, attempts are made to establish on the basis of existing cities and gradually shift camps to overcome such problems. However, you must not fragmented implementation of management actions, and the change in the overall management paradigm, suggesting a systemic solutions to the problem, taking into account economic, environmental and social aspects [3,4]. In this regard, the need to implement updated on oil and gas companies the concept of sustainable development.

There are also a point of view, according to which at present do not need to pay much attention to the stability of the existing oil and gas structures, and focuses on the development of alternative energy. Give reason for such statements constraints (non-renewable) hydrocarbons and progressive appreciation of its production. The urgency to find alternative energy resources is

indisputable. However, there is development, and including local scientists, for doubting the non-renewable oil and gas reserves. And the cost of development of these resources, as noted above, the serious influence current policy of the state [5]. In addition, there is a question about the future of the currently existing assets in the oil and gas sector and infrastructure (including social) accompanying this business. We would like to focus on the role of government in improving the sustainability of oil and gas companies. You may disagree, but we believe that oil and gas companies are now the tool of the multiple functions of the state. As previously mentioned, they bring a significant amount of money to the treasury through tax deductions. The tax burden imposed by the state on these organizations is considerable. This is demonstrated by the fact that the cost structure of oil production is about 70% tax on mining. And when you consider all of the tax payments committed by vertically integrated oil and gas companies across the value chain of the final value, the values are obtained quite impressive. At the same irrational and distribution of the tax burden on the parts of the technological chain - the main part of it falls on the most technologically advanced and expensive units - mining and processing [6,7]. A similar situation is observed in relation to exports of oil and oil products, where a significant proportion of the value added by the state withdraws export duties.

It is noteworthy that with all this trying to become more active government intervention in the regulation of the prices of petroleum products, are increasingly published information about the next "incrimination" oil companies colluding or otherwise violating antitrust laws [8]. So much attention to the state of pricing in the oil market is clear and easily understandable, especially for gasoline market, which are the main energy sources, rising which leads to the acceleration of "fuel" of inflation. However, knowing the laws of pricing, it should still indicate that the lower limit is determined by the price level of production costs, which, as already noted, is also of considerable influence state. In this situation, there is a certain paradox. On the one hand, the government uses the oil and gas companies as a major "donors" of the Russian economy by imposing their significant tax burden on the entire production chain. On the other hand, the government attempts to regulate the value and volume of sales of these companies to end markets (especially in certain market segments - the army, the Northern delivery, seeding, etc.). In all of this today

updated implementation within oil and gas entities triune concept of sustainable development, according to which the company should be guided not only economic but also environmental and social performance criteria [9,10]. That is part of the functions that are often alien to the commercial entities from other activities, and is traditionally considered to be public, in this case, the "shifted" to the oil and gas companies.

In these conditions, as we see it, perhaps, a few scenarios (including hypothetical choices): 1. Weakening of "control" of the state and leaving most of the existing tax deductions for companies to finance their environmental and social programs, raise the level of innovativeness of the projects, cost reduction target of production, etc. 2. "Nationalization" of the oil and gas business, which involves the abolition of private ownership of oil and gas assets and the establishment of state ownership in the industry. 3. Preservation of the existing situation. The first of the options can be described as "optimistic" for oil and gas companies, but unfortunately for them, unlikely. A lot of research is being devoted to changing the existing tax system in favor of the oil and gas business. However, in our opinion, they are fragmentary affect the characteristics of the tax base or differentiation in tax rates on individual taxes, depending on the individual characteristics of oil and gas facilities. Here, as we see it, more drastic measures are needed, up to a total paradigm shift. As an example, in this case, I would like to cite the experience of Norway, one of the largest producers of oil and gas in Western Europe, one of the principles of state policy which is "the economy needs to be effective and without oil" [11,12]. Despite the high dependence of the country's budget on exports of oil and gas (in some sources indicated that this dependence is even higher than in Russia), a large part of the added value created by the oil and gas business in the camp, sent to the "Fund for Future Generations", thereby increasing the stability of not only the oil and gas business, but also the economy as a whole. Since 2009, there has been a reduction of state participation in oil and gas projects. In all of this country over the last few years has been the leader in terms of living standards in the world. The complexity of implementing this option in Russia due to the high level of dependence on the national government budget from tax revenues generated from oil and gas companies (large share of these revenues in the total value of replenishment of the budget) and the complexity of the further diversification of sources of budgetary resources.

The second option is also difficult to implement in our country, although some preconditions for its implementation are available. It is appropriate to recall the experience of Iraq. In this country, state participation in the oil and gas business is considerable. Large state-owned oil and gas companies have a monopoly on the development of local deposits. It was only in 2009 the Iraqi government held a major sale of mineral rights [13]. In the tender was attended by major companies from around the world. The Ministry of Oil of Iraq provided for abandonment in each project 25% share of the Iraqi state. It is noteworthy that the proceeds from the sale of oil and gas projects distributed between the provinces of the country in proportion to their population, due to which solved many social problems (such as poverty) [14]. In our country, the government has shown itself, unfortunately, is not very effective owner when owning oil and gas assets, continued to use them as sources to replenish the treasury or to apply non-market methods in competition with private oil and gas companies. Therefore, as we see it, most likely will continue to implement the third option, under which will further worsen the situation with physical and obsolescence of technologies and assets in the oil and gas field on a background of progressive appreciation of the target companies' products in all parts of the technological chain. Against the background of these trends will continue to actualize the need for a sustainable development programs and mechanisms to motivate commercial oil and gas companies to implement them. Likely fragmented decision on easing the tax burden in some cases (for further differentiation in tax rates), which may give an opportunity to implement some innovative projects. However, dramatic changes, as we see it, is unlikely to occur. In this regard, further research on the

development of theoretical and methodological tools in the field of sustainable development of oil and gas companies will be very timely and relevant. Despite the fact that most of the recent oil companies have been paying attention to the concept of marked and regularly publish reports on sustainable development, there are problems of insufficient elaboration of theoretical and methodological foundations. In particular, the adoption of such multiple criteria decision under conditions of high uncertainty requires the formation of an integrated indicator for assessing sustainability, as well as carry out the selection of specific measures in the program development. For this, as we see it, a possible use of performance-oriented approach with an integrated toolkit of multi-criteria decision problems [15]. The task of decision-making in this approach is: First, finding a balance in emphasis on various activities (economic, social, environmental) of the oil company in terms of time and resource constraints, and second, the formation of such a decision-making model that will clearly identify priority areas of the company management and shift the emphasis in their direction, and thirdly, the determination of such a combination of efforts in the directions of the company, which would result from their implementation was optimal.

Table 1 shows the direction in which it is advisable to develop related software, targeted plans and the criteria for their evaluation

Similar trends can be formed with any degree of detail depending on the scale of tasks. For each direction need to build their "tree of goals", to develop appropriate programs to achieve them. In forming the program means the search of various economic and technical solutions that ensure optimal implementation tasks [16].

Table 1: The system of indicators of sustainable development

Direction (unit)	Criteria	Symbols
Economic and financial (E_1)	С Cost-effective programs	R
	С The financial stability of the enterprise	F
	С The proportion of wound	D
	С Earnings per share	DA
	С Balanced portfolio	S
Social (S_2)	С The number of redundant jobs	K
	С The share of employed workers laid off	Dt
	С The level of welfare of workers	Y
	С Adequacy ratio of normal working conditions	Ko
Environmental (E_3)	С Rate-saving technologies	Rt
	С The ratio of environmental measures	Pm
	С Thermal pollution	Z
	С The ratio of nature intensity	P

In this case, the target-oriented plan is expected to form by sorting the potential impact of alternative activities (combinatorial approach). Option combinations of different alternatives, focused on core activities of oil and gas companies can get the information basis for the calculation of complex criteria. In this case it is understood as a general characteristic of the main qualities of the company, its businesses and industries. In formalized form definition of each component of this result can be represented as a system:

$$\left\{ \begin{array}{l} E_1 = \oint (R, F, D, DA, S) = \\ \sum_{i=1}^n R(i) + \sum_{j=1}^m F(j) + \sum_{k=1}^h D(k) + \sum_{q=1}^v DA(q) + \sum_{b=1}^r S(b) \\ (K, Dt, Y, K_o) = \\ S_2 = \oint \sum_{i(2)=1}^{n(2)} K(i_2) + \sum_{j(2)=1}^{m(2)} Dt(j_2) + \sum_{k(2)=1}^{h(2)} Y(k_2) + \sum_{b(2)=1}^{r(2)} K_o(b_2) \\ (Rt, Pm, Z, P) = \\ E_3 = \oint \sum_{i(3)=1}^{n(3)} Rt(i_3) + \sum_{j(3)=1}^{m(3)} Pm(j_3) + \sum_{k(3)=1}^{h(3)} Z(k_3) + \sum_{b(3)=1}^{r(3)} P(b_3) \end{array} \right. \quad (1)$$

where

- C $R(i)$ - profitability i - of managerial decisions in the field of sustainable development, $i = 1, 2, \dots, n$;
- C $F(j)$ - The financial stability of the enterprise in the implementation of the j -management solutions in the field of sustainable development, $j = 1, 2, \dots, m$;
- C $D(k)$ - the market share in the implementation of k -th managerial decisions in the field of sustainable development, $k = 1, 2, \dots, h$;
- C $DA(q)$ - Earnings per share from the sale of q -management solutions in the field of sustainable development, $q = 1, 2, \dots, v$;
- C $S(b)$ - a balanced portfolio of b - of managerial decisions in the field of sustainable development, $b = 1, 2, \dots, r$;
- C n, m, h, v, r - number of alternative management decisions in the economic and financial unit;
- C $K(i_2)$ - the number of jobs released from the sale of i_2 - of managerial decisions in the field of sustainable development (social unit), $i_2 = 1, 2, \dots, n_2$;

- C $Dt(j_2)$ - the share of employed workers laid off from the sale of j_2 - of managerial decisions in the field of sustainable development (social unit), $j_2 = 1, 2, \dots, m_2$;
- C $Y(k_2)$ - the welfare of workers as a result of k_2 - of managerial decisions in the field of sustainable development (social unit), $k_2 = 1, 2, \dots, h_2$;
- C $K_o(b_2)$ - a ratio of normal working conditions of the implementation of b_2 - of managerial decisions in the field of sustainable development (social unit), $b_2 = 1, 2, \dots, r_2$;
- C n_2, m_2, h_2, r_2 - number of alternative management decisions in a social unit;
- C $Rt(i_3)$ - coefficient of resource-saving technologies after implementing i_3 - of managerial decisions in the field of sustainable development (environmental unit), $i_3 = 1, 2, \dots, n_3$;
- C $Rm(j_3)$ - coefficient of environmental measures after implementation j_3 - of managerial decisions in the field of sustainable development (environmental unit), $j_3 = 1, 2, \dots, m_3$;
- C $Z(k_3)$ - factor of environmental pollution as a result of the implementation of k_3 -management solutions in the field of sustainable development (environmental unit), $k_3 = 1, 2, \dots, h_3$;
- C $P(b_3)$ - nature intensity factor after implementation b_3 - of managerial decisions in the field of sustainable development (environmental unit), $b_3 = 1, 2, \dots, r_3$;
- C n_3, m_3, h_3, r_3 - number of alternative management decisions in the environmental unit.

Thus, the implementation of sustainable development in the oil and gas companies in the current environment is highly relevant, since it allows proactively and comprehensively addresses not only economic but also environmental and social companies and society as a whole.

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