

Directions of management for the development of fuel-and-energy complex as the key driver of the social-and-economic development of regions

Asiiat Mottaeva¹

¹Moscow State University of Civil Engineering, Yaroslavskoe shosse, 26, Moscow, 129337, Russia

E-mail: asya@front.ru

Abstract. The article is dedicated to the problems of the participation of the energy enterprises in the social-and-economic development of the regions and municipalities. The complex of mechanisms of the implementation of the Energy strategy in the form of strategic initiatives of the development of the energy industry representing the complex inter-industry state-private long-term projects is presented in the article. The author considers the development of the energy industry to be the key driver of the social-and-economic development of regions. The author proves, that the increase in competitiveness of Russian energy, geographical and grocery diversification of export and improvement of quality of export products might allow to solve some problems of the development of national economy.

1. Introduction

Fuel-and-energy complexes act as locomotives of the regional and national economies, in the special literature still there is no their conventional definition. The circle of works in which the attention is paid by the terminological aspect of the matter [1] is narrow. According to the key role of the energy industry in the national economy interest of researchers in problems of its development is high. In the scientific publications various aspects of the formation and development of the energy enterprises, its branch components in the complex in general are investigated. At the same time, the number of the works devoted to territorial aspects of the development of energy corporations, their influence on the development of the regions and municipalities is small [2]. As a rule, the concept "fuel and energy complex" is not defined as a category of scientific research, but, in most cases, the structure of energy industry is considered and defined.

The new legislation on the energy saving creates conditions for essential decrease in energy consumption, stimulates the creation of new technologies, the markets and jobs, makes its contribution to the solution of the problems of climate change. Regions and municipalities obtain subsidies for the implementation of programmes of the increase in energy efficiency of the regional economy. Along with the measures for economic incentives and joint financing of programmes of energy saving, an administrative ban on the use of the power wasteful equipment is imposed.

The solution of these problems is connected with the revision of the concept of competitiveness of regional energy industries, its criteria and indicators, the mechanism of pricing and stimulation of energy saving which has to become the basis of economic strategy in the context of social-and-economic development of the regions. It defines relevance of a subject of this research.



The regional problems of the development of the energy industry since 2000 and till present are investigated in N. M. Baykov, M. D. Belonin, S. A. Voronin, V. G. Gridin, Efremov E. I. works., A. P. Kulikova, Loginov E. L., etc.

At the same time, the problems of participation of the energy industries enterprises in the social-and-economic development of regions and municipalities in the conditions of economic recession, definition of priorities of their formation and development in the context of development of territories are insufficiently investigated.

2. Standards and Regulations

The actions aimed on the development of the energy industry are put into the programme document, regulating the development of the complex for the long-term period – the draft of the energy strategy of the country for the period till 2035 [3], and also the Resolution of the Government of the Russian Federation No. 321 "About the approval of the state program of the Russian Federation "Energy efficiency and development of power" [4]. These documents are specified and concretized in the relation to the changed external and internal political-and-economic conditions of the development of national economy of the purpose, the task, the priorities, resources and mechanisms of the development of energy industry of the country, fixed in the existing earlier Energy strategy of the country for the period till 2030. In Table 1 the internal and external factors, recorded in the Energy strategy-2035, which taking into account is necessary at the development of the energy industry are generalized.

Table 1. Factors of the development of energy industry of Russia

External factor	Internal factor
Strengthening of the competition in the foreign fuel and energy markets	Delay of rates of economic growth of the country
Shift from resource globalization to regional resource to providing	Technological lag of the energy industry of Russia from the technological level of the energy industry of the developed countries
Discrimination of the countries of EC, USA, Canada, Australia concerning Russia (it is added by the author)	Imbalance of investments in the industry, regional, functional aspects

The purposes and tasks of the Energy strategy - 2035, do not quite provide the opposition to the aforesaid factors, even in case of full realization of tasks and achievement of the objectives.

3. Results

Offers on the formation of the strategic reference points of the Energy strategy - 2035 in the regions presented in the figure 1.

The reasonable combination of centralization and decentralization is considered to be a factor of the energy security and that is an essentially right decision in the conditions of rigid centralization of management in Russia and high instability of world political and economic systems. The direction of diversification of management, accepted in the Energy strategy-2035, [5, 6] is methodologically true.

Adjustable decentralization will allow to increase, in our opinion, and at such approach to reduce the responsibility of regional administrations for energy security of regions risks of increase of disproportions in power supply of social and economic system – the region.

Adjustable decentralization will allow to increase the responsibility of regional administrations for energy security, and in such a way to reduce the regions risks of the growth of the disproportions in the energy supply of the social-and-economic system (the region).

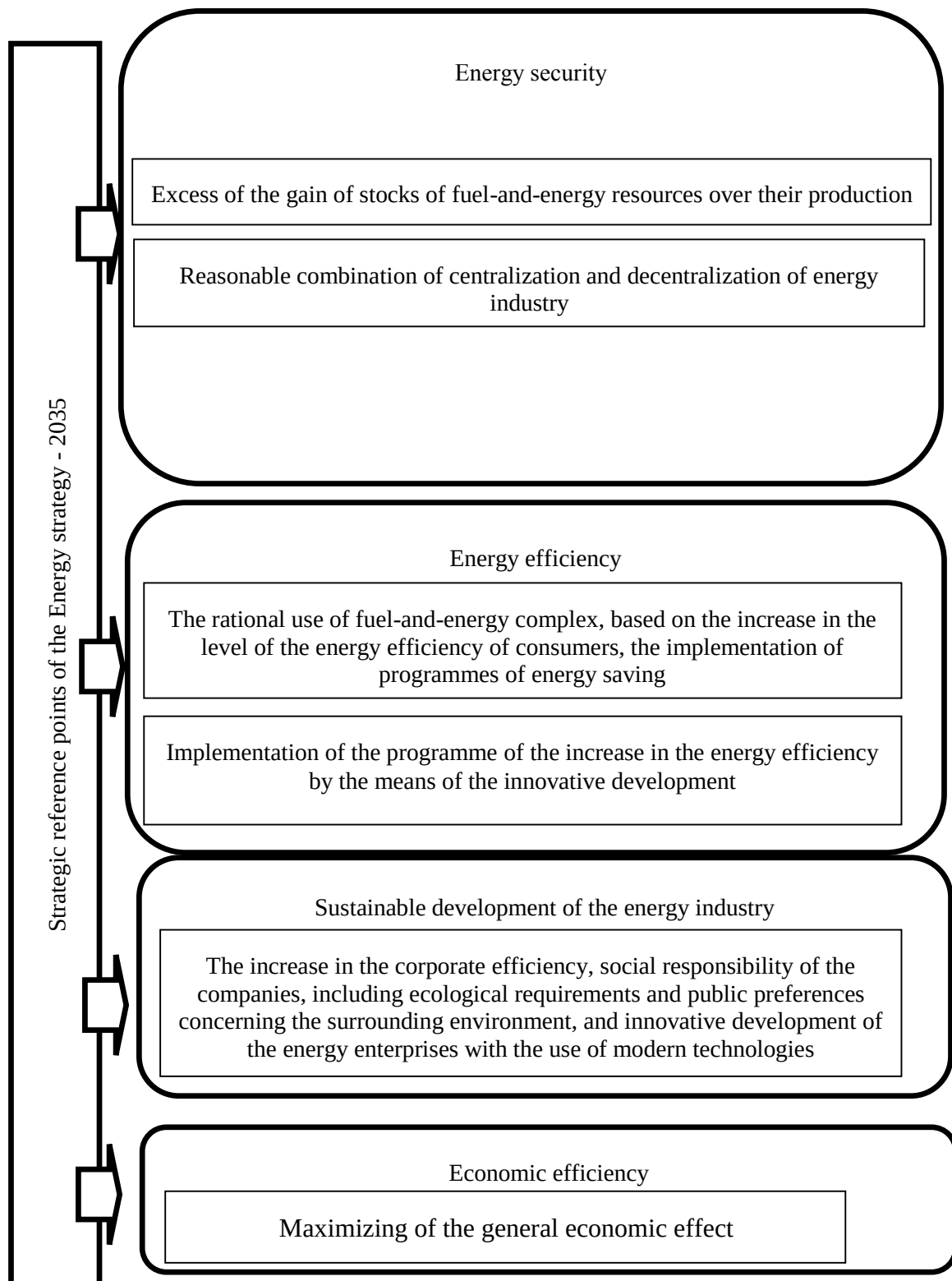


Figure 1. Strategic reference points of the Energy strategy-2035

The strategic reference points presented in the figure 1 set a framework of the development of the competition on the regional and national fuel-and-energy markets, defining limits of the market freedom of participants, and the general management of the development of fuel-and-energy complex of the region.

On the basis of the aforesaid reasonings it is offered to understand the process of emergence, growth, regulation and resolution of the conflicts among federal, regional and branch interests of the subjects of the institutional environment of the development of the energy industry (table 2) as management of development of the fuel-and-energy complex of the country.

Table 2. Main participants of the institutional environment of the development of the fuel-and-energy industry

Bodies of federal management	Elaboration of the state policy and legal regulation
Ministry of Energy of the Russian Federation	in the field of activity of branches of the energy industry and also rendering public services and state property management in the sphere of the production and use of fuel-and-energy resources
Ministry of Economic Development of the Russian Federation	in the field of social-and-economic development of the whole country and certain regions, regulation of the business activity
Ministry of Finance of the Russian Federation	in the sphere of the budgetary, tax, insurance, currency, bank activity
Activities	
Bodies of the regional government	executive and administrative activity in the sphere of energy, energy saving, the increase in energy efficiency, implementation of functions of the state regulation of the prices, tariffs and extra charges for goods and services of energy industry and control and supervision of their
Bodies of the self-government	Implementation of actions for the development of the fuel-and-energy infrastructure, including the organization electro-, warm, gas supply of settlements and areas, the approval of master plans of settlements, issue of construction licenses and reconstruction of capital construction projects and other actions according to the current legislation
Enterprises and energy industries organizations	extraction and production of primary fuel-and- energy resources, production from primary fuel and energy resources, rendering services, including transportation and sale

4. Discussion

Divergence of interests and the actions of the listed above subjects generated by these interests generate need of state regulation of development of energy industry [7, 8]. The stability of development is the consequence of coordination of the actions of subjects of the institutional environment of development of energy industry and is shown as the continuous sequence of moment conditions of coherence of interests of these subjects. It should be noted that Power strategy - represents 2035 rather a list of the directions and actions aimed at the development by energy industry, than the macroeconomic mechanism of diversification of development of energy industry as the key driver of social and economic development of regions and municipalities which are sources of cumulative effect of development of national economy. Strategic reference points of the Energy strategy more promote realization of domestic policy that the corresponding and foreign policy calls of the present stage of world political and economic process should not recognize highly [9, 10].

The domestic energy policy is the complex of mechanisms for the implementation of the Energy strategy in the form of strategic initiatives of the development of the energy industry representing complex inter-industry state-private long-term projects which include:

- formation of oil and gas complexes in the east regions of the country that will allow to create a new industry of deep processing of hydro-carbons in Eastern Siberia and in the Far East;
- development of hydro-carbonic capacity of the continental shelf of the Arctic seas and the North of Russia that will allow to stabilize oil and gas production in the country, compensating possible recession of production level in traditional oil and gas extraction areas;
- development of technological energy saving that will allow to involve the unrealized potential of organizational-and-technological energy saving making about one third of the general consumption of energy in the country's economy;
- development of internal energy infrastructure that will give the basis for competitiveness of all the industries of the Russian economy, allowing to limit growth of energy expenses [11-15].

Strategic objective of the foreign energy policy is strengthening of the positions of Russia in the foreign energy markets on the basis of the increase in competitiveness of Russian energy, geographical and grocery diversification of export and improvement of quality of export products [16-19]. Achievement of this purpose assumes the solution of the following matters:

- the accelerated entry into the market of the Pacific Rim which share in the Russian export of oil and oil products will increase by 2035 from 12 up to 23% (crude oil – 32%), and in gas export - from 6 to 31%;
- grocery diversification of export. By 2035 the share dominating nowadays oil and oil products will decrease by 1,3 times in energy equivalent due to the increase by 1.4-1.5 times of a share of the natural network and especially liquefied gas and the electric power;
- providing the stable relations with traditional consumers of the Russian energy resources and formation of so steady relations in the new energy markets. Adaptation of contract system to the current trends of the development of the market, taking into account interests of Russia is necessary [20-22];
- integration of the Russian companies into the international energy markets [23-25], including expansion of exchange of energy assets.

5. Conclusions

Having conducted the research of theoretical, analytical and statistical materials, the author proved, that successful realization of the developed directions of the management in the fuel-and-energy complex development as the key factor of social and economic development of regions is to provide the following target results. Successful realization of the developed directions on management of the fuel-and-energy complex development as the key driver of social-and-economic development of regions has to provide the following target results:

- maintenance of the relation of the annual gain of balance stocks of fuel-and-energy resources to volumes of their production at the level of not less than 1;
- maintenance of the steady reserve of the electro-and heat-generating capacities;
- decrease in level of power consumption of GDP twice by 2035 (from the level of 2010);
- restriction of volumes of emission of greenhouse gases by 2035 at the level no more than 85% relatively 1990.

Achievement of the results, the defined strategic reference points of the Energy strategy, taking into account the difficult, badly structured communications between the participants of the institutional environment of development of energy industry will allow to promote increase in controllability of realization of strategy and growth of competitiveness of energy industry of regions at the national and international levels. However, it demands further modernization of mechanisms of ensuring development of a complex.

References

- [1] Gorshkov A S and Vatin N I 2013 *Magazine of Civil Engineering* **40(5)** 5-19 DOI: 10.5862/MCE.40.1
- [2] Murgul V 2016 *MATEC Web of Conferences*, **73**, 02001, DOI: <https://doi.org/10.1051/mateconf/20167302001>

- [3] Isaev S A, Baranov P A, Vatin N I, Zhukova Y V and Sudakov A G 2014 *Technical Physics Letters* **40** (8) 653-6 DOI: 10.1134/S106378501408005
- [4] Turganova of L 2014 *Scientific works of Free economic society of Russia* **150** pp189-199
- [5] Vinogradova A 2013 *Magazine of the economic theory* **4** pp181-186
- [6] Nikolova L et al 2016 *International Journal of Economics and Financial Issues* **6(S3)** pp 1-7
- [7] Grinfeldi G I, Gorshkov A S and Vatin N I 2014 *Advanced Materials Research* **941-944** pp 786-99 DOI: 10.4028/www.scientific.net/AMR.941-944.786
- [8] Panteleeva M and Borozdina S 2017 *MATEC Web of Conferences* **106** 080471
- [9] Meshcheryakova T 2017 *MATEC Web of Conferences* **106** 06021
- [10] Pukhkal V 2015 *Procedia Engineering*, 117, pp 616-623, DOI: <https://doi.org/10.1016/j.proeng.2015.08.222>
- [11] Rozhentsova I and Mottaeva A 2017 Terms of orientation on customer needs in the housing sector, *MATEC Web of Conferences*, 08076, DOI: <https://doi.org/10.1051/mateconf/201710608076>
- [12] Glazkova V 2017 *MATEC Web of Conferences* **106** 08095
- [13] Vasilyeva E and Polyakova I 2017 *MATEC Web of Conferences* **106** 08097
- [14] Pimenova A et al 2016 *MATEC Web of Conferences* **73** 07018
- [15] Sergeev V V and Aleshina A S 2011 *Thermal Engineering* **58** (3) 268-70 DOI: 10.1134/S0040601511030116
- [16] Chibisova E 2008 *Construction - formation of the environment* pp 476-480
- [17] Chibisova E and Zinatullin A 2011 *Strategy of sustainable development of regions of Russia* **5** pp 324-328
- [18] Dražić J, Peško I, Mučenski V, Dejić A and Romanovich M 2016 *Procedia Engineering*, **165**, 898 – 905 doi: 10.1016/j.proeng.2016.11.790
- [19] Chechevichkin V N and Vatin N I 2014 *Magazine of Civil Engineering* **50** (6) 67-74 DOI: 10.5862/MCE.50.7
- [20] Vatin N et al 2015 *Magazine of Civil Engineering* **57** (5) 86-96 and 116-7 DOI: 10.5862/MCE.57.8
- [21] Isaev S et al 2014 *Technical Physics Letters* **40** (8) 653-6 DOI: 10.1134/S1063785014080057
- [22] Vatin N et al 2013 *Magazine of Civil Engineering* **37** (2) 81-8+127-9 DOI: 10.5862/MCE.37.12
- [23] Ognjenovic S, Ishkov A, Cvetkovic D, Peric D and Romanovich M 2016 *Procedia Engineering*, **165**, 954 – 959 doi: 10.1016/j.proeng.2016.11.805
- [24] Nazmeeva T V and Vatin N I 2016 *Magazine of Civil Engineering* **62** (2) 92-101 DOI: 10.5862/MCE.62.9
- [25] Arseniev D et al 2014 *Applied Mechanics and Materials* **635-637** pp 2076-80 DOI: 10.4028/www.scientific.net/AMM.635-637.2076