

The Role of Nonprofit Organizations in Alignment of Environmental Interests of Energy Companies and National Economic Security

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ABSTRACT

The article attempts to study the role of ecological safety from the perspective of the national security. This paper aims at finding the main patterns that stipulate and restrict the use of nonprofit organizations (NPOs) as an institutional element promoting ecological and energy security. World experience proves high potential of these organizations from both political and economic perspectives. Different forms of nonprofit organizations make it possible not only to concentrate economic power and to boost management efficiency, but to change the business ideology and the staff competence system as well. This work analyzes the possible use of the potential of these organizations for enterprise management, first of all in the energy sector, and their leadership in pricing “in a chain” - “pollutant - natural monopolist - consumer”. The NPO can be a supervisory institutional establishment based on commercial principles. The main conclusions of this article can be structured as follows:

- In the process of establishing the ecologization mechanism, it is rational to use provisions of the interdisciplinary concept of social management and the system-structural approach;
- The content of the national security concept and its element, ecological safety, has changed greatly. NPOs participation in ecological safety makes it possible, on the one hand, to make “vertical” power more efficient, on the other hand, to develop innovation activity of energy companies and can be a barrier for non-ecologic behavior; their functioning squares with a long-term development of the country;
- NPOs can successfully keep the balance of interests of the country, energy companies and consumers due to peculiarities of their organizational structure, management system, variety of legal and economic forms of operation;
- NPOs can be an instrument transforming the management model of economic agents on me-so- and macro-level.

KEYWORDS

national security, ecological safety, nonprofit organization, energy company, resource-saving, management, competence, endowment.

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Introduction

In the last decade, the problem of ensuring economic security was almost excluded from the regulatory framework in many countries. But the crisis, its multi-industry negative influence on the world economy brought this issue up to date. A new strategy of ensuring economic security is focused on both practical current tasks and forecasts. The list of national security elements includes different types of security provided in such fundamental document as the Constitution of the country. National security means a specific state of safety characterized by the exercise of constitutional rights and freedoms, quality of life, etc. Each type of security is described by law. For example, the energy security of Russia is provided in the decree of the Russian Government “On the Energy Strategy of Russia 2030” (Constitution of the Russian Federation, 1993). Beside national defense, national security includes the following types of security: state, public, information, economic, transport, energy, ecological, etc. Matching of personal, public and national security not only in terms of internal and external threats, but in ensuring ecological safety as well, can be considered as a benchmark. The content of the ecological safety concept, determined by the Club of Rome, the Kyoto Protocol, the United Nations Framework Convention on Climate Change, and the IFC, did not undergo substantial changes. According to the new conceptual approach, one may talk of renewed ideas of national interests. If before they were traditionally determined as total national needs, in the revised version they are economically important personal, public and national needs. That is, the change of imperatives is demonstrated once more. At that, the needs prescribed by national interests, for example, stable development, are determined.

Ecological problems have moved beyond environmental groups and different environmental protection communities long ago. All these factors had a direct influence on the development of such element as “ecological safety”, and in future this component will be developed intensively. Table 1 shows its characteristics.

Table 1. Ecological safety criteria (by the authors)

National security criteria	Strategic national interests	Aim of strategic national interests	National security indicators
Ecological safety	Ecology of living systems and nature management. Economic mechanism of “ecological safety” is a system of interdependent methods, instruments and conditions to achieve ecologic-and-economic objectives of stable nature management. The structure of the economic mechanism of ecological management includes relatively independent, but interrelated subsystems: organizational and financial-economic mechanisms.	Ecosystem conservation and restoration, assurance of environmental quality needed for human life and stable economic development; actions to remedy ecological damage by economic operations under growing economic activity and global climate changes.	Share of the country territory failing to meet ecological standards.



Methods

This article studies the evolution of the ecological safety concept in the light of changing trends in the management system on meso- and macro-levels and the use of NPOs capabilities applying the interdisciplinary concept of social management and the system-structural approach. Institutional transformations acted as a catalyst for new professional competences of ecological management. The ecologization mechanism is to be relied on: the process approach providing for the formation of the mechanism based on interdependent managerial functions; the system approach providing for the formation of the assembly of interdependent elements such as people, structure, tasks and technology; the contingency approach focused on the idea that applicability of different managerial mechanisms and methods is determined by the contingency.

Tasks

Resource-saving and nature management have turned into the administrative imperative long ago, gradually penetrating into all spheres of economic activity, for example, by taxation. With that, from the organization view, national security is ensured by the governmental bodies in cooperation with the civil society institutions by implementing different anti-threat projects. Instruments offered by Pigou, Coase and others are used traditionally to neutralize the ecological damage. Thus, resource taxes were first evaluated in the European Union, as well as the majority of ecological standards. As is known, British Standards BS 7750, published in 1992, served as a model for standards. The first ISO 14000 standards were published in 1996.

But, in Russia and in some other countries with strong natural monopolies outdated standards create such situation, when they (taxes, payments, administrative penalties) do not form a serious barrier and cannot hold a company owner or even a common man. Sums are trivial in total and financial sanctions are irrational. When comparing damage and budget payments, one can see a recognized imbalance in both. For example, Norilsk is the largest air pollutant in Russia. At that, emissions of this city with two hundred thousand population are more than twice higher comparing to multimillion Moscow – 1959.5 thousand tons vs 995.4 thousand tons per year. Norilsk leadership is distinguished by one more fact that its emissions are mainly of industrial origin, while engine emissions amount to 0.5%. Moscow, ranking the second, has a direct opposite structure – here engine emissions amount to 92.8%. The second capital St. Petersburg is also awash with cars, which share in air pollution amounts to 85.9% (Rosstat, 2015).

If we compare this ranking with budget payments and respondents, we can see another sequence: St. Petersburg, Krasnoyarsk, Norilsk, and Moscow. Moscow is an ecologically unstable city. And situation in Moscow and across Russia is slipping. Budget compensations cannot neutralize the damage. Within Moscow there are 209 industrial areas covering 7.8 thousand ha that amounts app. to 16% of the Moscow territory. In view of the above, the main task for the analysts is to make a statistical analysis of payments received for different emissions and their forecast. Historical data are presented in Table 2.

Table 2. Payments for permissible and excess emissions in Moscow 2000-2012 (Rosstat, 2015).

Years	Revenues, thousand RUB	Total increase, thousandRUB	Growth rate, %	Rate of increase, %
2005	51,892.40	-55,590.20	48.28	-51.72
...
2010	367,210.60	41,478.80	112.73	12.73
...	
2015	680,477	219,931.00	147.75	47.75

While analyzing situation in the cities, they distinguish two main sources of pollutions and emissions. They are: industry and vehicles. According to statistics, for the last two years situation with pollution in 31 cities of 100 becomes more serious in average by 10%. Engine emissions in megalopolises: Moscow – 93%, St. Petersburg – 86%. The quality of urban atmosphere has decreased by 4.4% in the capital and 14% in St. Petersburg for two years. Besides, the ecological effect of urbanization and expansion of ecologic vandalism are important to note (The Official Site of the Ministry of Economic Development, n.d.). A notorious way of fishing valuable species is well known: not even by an electric fishing rod, but by a bag with bleaching powder. It is popular in the Caucasus. One bag of bleaching powder kills a headwater fauna. As is known, neither fisherman with such accessories has been punished in any way (Apazhevet *al.*, 2015;Guchapshevaet *al.*,2015).

Taxes cannot ensure ecological safety to the full extent. Communities of people facing different natural “responses” to negligence, carelessness and sometimes simple greed formed the basis for a new worldview and the control and ecologization mechanism.

The ecologization mechanism structure is still being formed. The authors think that NPOs, playing an increasingly important part and having ecology protection powers more often, are to become a component of the ecologization mechanism. A special civil institute can level the legal deficit in practice. NPOs are to take interference in ecologically dangerous processes on themselves. These organizations have a considerable experience in solving political problems. It is known that the Kyoto Protocol extended to 2020 at Doha Conference unfortunately was not upheld by many countries, Russia inclusive, due to objective causes (Kyoto Protocol Extended Crushing the Russian Revolt, 2012). It is common knowledge that the NPO is a structure, which activity does not aim at extracting and distributing profit, excluding some business forms.

Results

Beside the key strategic threats, the national security strategy is focused on the increase in the energy security level. This problem is connected with destabilization of heat and energy supply to economic entities, and it is adherent to energy security and ecological safety. The energy complex influences the economy, its movement towards innovative transformations. It is obvious that for successful economic development the managerial system of energy companies



is to be restructured by implementing innovations – ecological NPOs. Management modelling, NPOs inclusive, will result in an independent “protection” from escalation of price on social services, for example, tariffs. The authors think that the ecologization mechanism is to have matrix management, due to which it will be possible to exercise powers not considered in official competences. A well-known drawback of matrix management is that it creates dual subordination. This drawback can be eliminated, if yearly based on the results to determine “a dominant force”, that is, who will be the chief – a functional worker or a NPO representative. The principles of NPO operation differ from the activity of government agencies and commercial organizations. They are realized in two ways: core and entrepreneurial activity. The main resources increasing NPO competitiveness in the innovative social services and technologies market are intellectual potential of an organization, intangible assets and an environmental socially-oriented development goal. The strategy of the innovative development of the energy industry forms new perspective directions for its sectors and contribution of ecological NPOs (Figure 1).

The ecological NPO activity is to be considered as an endowment-complex of scientific and technical, financial, analytical and organizational actions resulting in the implementation of innovations in the production and as a barrier for non-corporate behavior. The main aspects of ecological NPOs, built in the business management model of both an energy company and a branch or a region: improvement of the elements of the management theory through the innovative activities; ecologization of the management mechanism; further development of business communication platforms.

Surely, such activity takes significant efforts and costs, but within the first five years the main innovations will assume an aspect of organizational reforms, restructuring. Ecologic efficiency means improved environmental parameters at the operation stage: the decrease in emissions/effluents due to planning and implementation of preventive and remedial accident emission measures; the decrease in production wastes due to implementation of low-waste technologies based on the latest scientific and technical achievements.

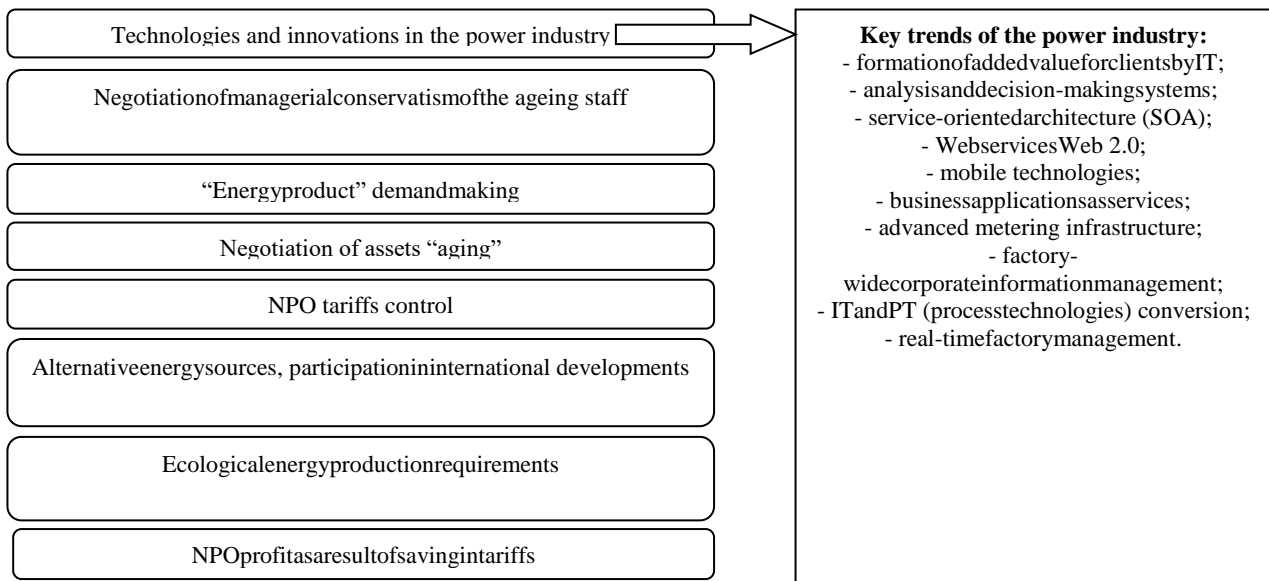


Figure 1. Power industry trends at the global and local level (by the authors)

At the design stage, the performance indicator means the conformity with the legal requirements, including, but not limited to the elaboration of operating documentation according to the environmental requirements. In Russia, ISO 14001 and OHSAS 18001 govern company management with application of all mentioned approaches (Dudinet *al.*, 2016). We offer the following definition of the ecological NPO status – supervision of energy companies providing for environmental changes, creation of comfortable ecological conditions by using scientific research and developments, as well as improvement of consumer services; heat and electricity process improvement with their further supply to consumers and effective domestic sales. For example, Platts Top 250 Energy Companies offers the consumers a wide choice of innovative products and services; it results in a 15-20% decrease of process costs and investments (The Platts Top 250 Global Energy Company Rankings TM Recognize Outstanding Accomplishments of the top Performing Energy Companies around the World, n.d.).

Innovations are unpredictable. The arrangement of innovation-friendly conditions is to be spurred both inside and outside the company (Figure 2).

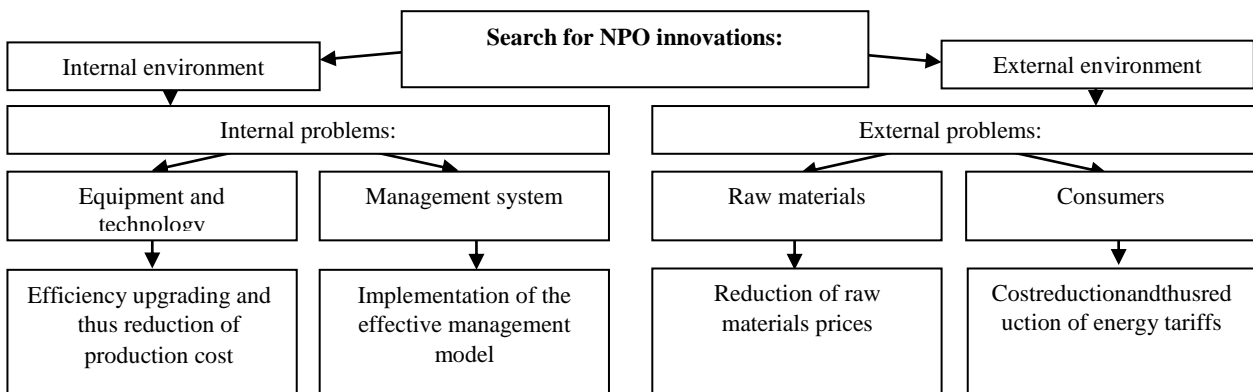


Figure 2. Innovations and NPO (Dudinet *et al.*, 2015)

Ecological organizations are to have an opportunity to replace both the unit managers based on the principle of effective production growth due to new services and the institutional partners. It will promote integration and improvement of connection to the consumer; reduction of production and managerial costs; improvement of management due to arrangement of the optimal innovation and ecologization management model (Figure 3).

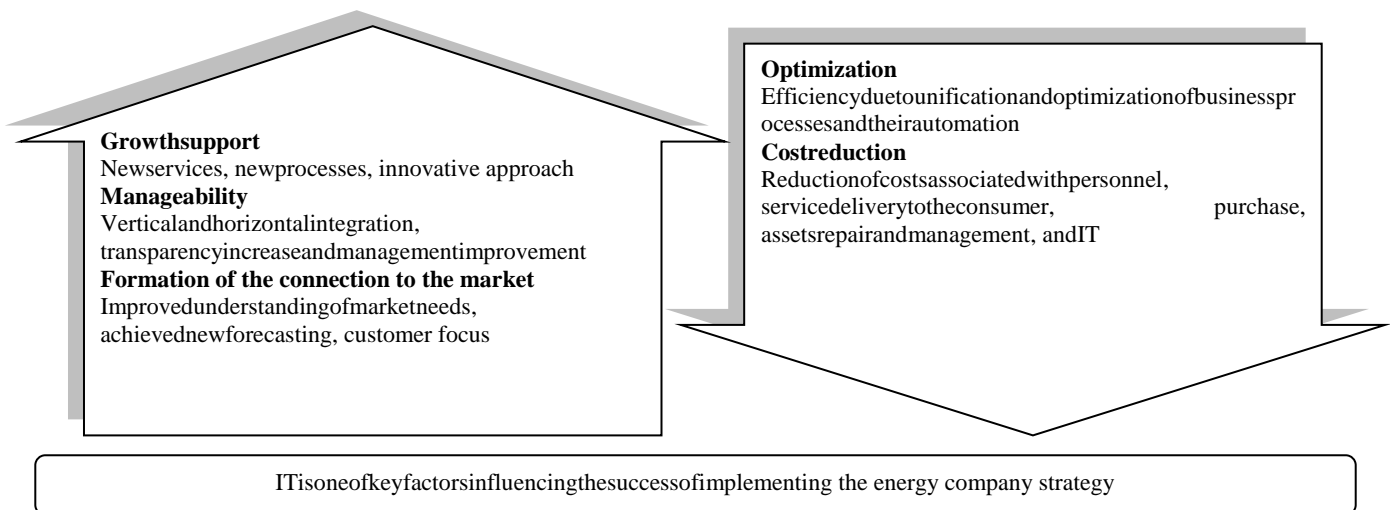


Figure 3. The main requirements to the IT-related innovations

Discussions

Many economists covered the functioning of the third sector in their works. Ben-Ner (Ben-Ner, 1986, 2002, 2003) have described NPO evolution and changing relations between the commercial, nonprofit organizations and the authorities more than once. The authors (Ben-Ner, &Gui, 2003), while comparing market efficiency of the commercial and nonprofit organizations, often gave the palm to the latter. The researchers underline that NPOs ensure “vertical power” better than the other forms of entity (Ben-Ner, &Anheier, 2003). That’s why many researchers recommend developing special tax regulations for NPOs (Ben-Ner, &Clotfelter, 1994). The nonprofit sector exists, because it can better than commercial companies solve problems associated with provision of goods with publicity characteristics or with exclusive attributes, or with asymmetric information for different market segments (Ben-Ner, 2002). Many authors considered the NPO as an intermediary that ensures suboptimal control of complex associations, providing the typology of different management models from the state-centered model to the ones “where control is exercised without the authority model” (Peters, & Guy, 2000).

Obvious opportunities of intertwining of the administrative-control and economic instruments with regard to new ecological challenges are refracted in search of the relevant management mechanisms (Eckersley, 1992, 2005). Environmental voluntary agreements (EVA) may serve as a prototype. They represent cooperation agreements between the environmental regulation bodies

and the companies, making addendum to the command-and-control and market-oriented instruments of the ecological policy. In practice, EVAs can use different forms. And EU is the leader on variety thereof, where it is conditioned by aims diversity. But, the main forms were agreements resulting from negotiations or voluntary programs (Hanks, 2002; Delmas, & Terlaak, 2001).

These problems receive wide coverage by the Russian scientists: Belyaeva, Gordina, Khoreva, Shekova, Shukshunova, Yuryeva, and Yakimets.

It is a popular conception that NPOs result from imperfection of market, but in the context of ecological problems this fact has a big positive potential. Many economists and politicians evaluated opportunities to balance the authorities by NPOs. But these organizations can be used both to improve ecological situation in the country and to support the national security strategy. Now, the number of NPOs is greater and they are financially stronger than the antimonopoly service, which fails before discounters and oil producers. That is why the power can be delegated to the stronger player putting the NPO in a chain “pollutant – natural monopolist – consumer” as a supervisory structural element commercially operated on the principles of self-repayment. The Russian Federation created constitutional-legal foundations for the NPOs ecological activity (art. 39, 42) (Constitution of the Russian Federation, 1993).

Shtokman Development AG and Gazprom created a positive experience with regard to this process in Russia. These organizations used RAM (Responsibility Assignment Matrix) (A Guide to the Project Management Body of Knowledge (PMBOK Guide), 2010; Jacka, & Keller, 2012; Cleland, 2006) and its extended version RASCI (Responsible, Accountable, Support, Consulted, Informed) (Hightower, 2008; Baker, 2009).

It should be mentioned that NPOs activity enables to realize interests of some general public groups. Nowadays, state support of “the third sector” in Russia falls behind the mature economies (Table 3).

Table 3. NPO-GDP ratio, % (Ministry of Economic Development of the Russian Federation, n.d.; Federal State Statistics Service of the Russian Federation, n.d.)

Denomination	Russia	G7
NPO-GDP ratio	0.9	6.5
Population employed in “the third sector” – labour force ratio	1.1	7.1
Socially-oriented NPOs – total number ratio	13.5	60-70

The interest in NPOs and their opportunities is continuously growing. Group rights take pride of place among the collection of rights and freedoms. Even in the periods of individualism domination, the core values of civilization are in the focus. “In order to effect purposes a man desires not only to content himself with acknowledgement of his rights in personal inviolability, economic and spiritual interests, he desires to have acknowledged his rights to join the other people free for achieving different public goals. It can be called a public freedom”, wrote a famous Russian jurist Sveshnikov.

Conclusions

In the frames of the interdisciplinary concept of social management, the authors offer to realize “ecological safety” in three stages:

1. Innovation management. NPOs participate in project selection.



2. Ecologization management by the formation of innovation “chains” and project portfolio at cooperation of NPOs and institutional structures.

3. Ecological and organizational innovation management ensuring the fixation and reduction of energy tariffs.

The authors’ approach to solving the ecological safety tasks allows for elimination of internal problems between structural units and improvement of their efficiency and manageability as both the market forces and the state regulation will have effect.

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