# THE PROBLEMS OF RATIONALIZING THE CHOICE AND MAKING DECISIONS IN THE ENERGY CONSUMPTION OF THE FIRM

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#### ABSTRACT

In the modern era, any action of the entrepreneur must be rational. This is an axiom. Especially if its concern the use of energy resources. In this article, some behavioral aspects of this action are examined. It also focuses on the disclosure of the essence and place of contractual relations in energy consumption; classification of contracts; the selection of possible options for the behavior of the entrepreneur depending on the objectives of the firm.

The theoretical part of the work is based on the provisions of the energy-consuming theory of the firm (Burganov and Yudina, 2018), and in the research methodology, generalization and comparison, abstraction and systematization of data on the behavior of the entrepreneur in the use of various types of energy are used.

The main conclusion is that an entrepreneur should rationally approach the selection and solution of problems in the field of energy consumption and energy efficiency.

**Keywords:** Energy Theory of the Firm, Power Consumption, Behavior of the Entrepreneur, Contracts, Alternative to the Entrepreneur's Actions.

#### **INTRODUCTION**

#### **Relevance of the Research Topic**

When carrying out energy-saving measures, entrepreneurs solve problems related to rational choice and decision-making. This complex process ultimately affects the financial and economic performance of the firm due to optimization of management, energy and general economic costs.

Essential is the choice, procedure and price of concluding contracts with other contractors regarding the provision of the firm's energy resources. Each contract has its own characteristics of compilation and implementation. In this aspect, it is necessary to analyze the firm's behavior in the process of concluding and implementing contacts more deeply.

#### Methodology of the Study

Certain aspects of the methodological approach to the rationality of choice were considered by the author of this article within the framework of the company's theory of energy consumption, which is defined as a set of concepts and provisions that describe the decisionmaking process in the field of energy consumption and energy saving at different levels of management, including households (Burganov et al., 2016).

#### **Literature Review**

Well-known scientists such as Chen and Ravallion (2008), Kilian (2008) made a significant contribution to the theory of considering the company's behavior in the sphere of energy saving and energy efficiency.

The need for a multifaceted study of problems of this perspective in innovative activities is highlighted in Pittaway and Cope (2007) and Pittaway et al. (2005), which notes:

#### "The need for interdisciplinary research".

And the Centobelli et al. (2016) studies on the importance of engineering management can be used to understand the essence of technical changes to improve the energy efficiency of production.

#### MAIN PART

Business requires energy (atomic, thermal, electrical, electromagnetic, etc.). In addition, the company's activities in any field of management uses the energy potential of biological resources (energy muscle, employee of the brain). As you know, the energy of an employee consists of physical, mental and nervous energy. Efficient use of energy of the employee affects the terminal results of the firm. In particular, without a full-fledged high-calorie supply, the employee's receipt of a certain result will be problematic. Even, the intensity of labor as an indicator of the effectiveness of labor depends on the amount of energy that the worker spends in a unit of working time.

In the current economic conditions, especially during the onset of the digital economy, any management action does not take place without considering the peculiarities of energy accounting in various forms (Burganov, 2015). And in the world science in search of ways of obtaining and storing energy in different forms, large financial and material resources are being spent.

In economic science and practice, the rational behavior of the entrepreneur can be viewed from different perspectives. For example, in the theoretical basis of management is the teaching of Coase (1937) on the creation and functioning of firms. As he writes:

"The activity of the company is the conclusion and execution of contracts between the company and its internal (employees) and external (partners) contractors, as well as monitor and control the execution of these contracts"

Jensen and Meckling (1976) draw attention to the analysis of the relationship between managers and business owners based on contracting.

"The enterprise conducts economic activities under the direction of the manager, whose interests and risk appetite is different from the corresponding characteristics of shareholders and awareness of the conditions and nature of this activity is higher than that of shareholders". This exercise can be used to analyze the behavior of the manager and the owner in the energy companies.

In the theory of Porter (2001), the article deals with the relationship between the enterprise and the local or federal administration. As a rule, an energy company is a monopolist in regional entities, and it can dictate certain conditions to state and municipal government bodies. Accordingly, the range of the rational choice of the entrepreneur's behavior is narrowed.

In general, the rational behavior of an entrepreneur in the field of energy consumption can be understood as the acceptance of managerial decisions in the event of the emergence of alternative energy choices and energy-saving technologies and taking into account exogenous and endogenous circumstances. The management decision itself is a complex process and consists of the stages of analysis, forecasting, planning, control and adjustment. That is, at each stage it is necessary to determine the amount of necessary energy, including the mental and physical energy of workers. Unfortunately, entrepreneurs do not pay enough attention to replenishment of the energy spent by workers.

Also, the rational behavior of the entrepreneur is influenced by the tariff policy of the state, which protects the competitive field and maintains a policy of supporting certain segments of the population. At the same time, it must be borne in mind that electricity tariffs are the subject of energy sales and purchase.

All contracts concluded by an entrepreneur with representatives of the energy sector can be classified as investment contracts and contracts for the provision of energy services. In the field of investments, the customer and the executor are subjects of investment activity. The purpose of the investment is the introduction of energy-saving technologies in the production of specific products. Contracts in the field of energy services include electrical installation, maintenance, operation, repair or maintenance of power equipment and machinery. A broad classification of contractual relations requires the entrepreneur to rationally approach such contracts, which will reduce the risk and loss of commercial benefits.

In the rational model of the choice of the entrepreneur's behavior in the energy sector, the utility (benefits) of the decisions to be made, the likelihood of their implementation under specific conditions and the comparison of different alternative solutions should be taken into account. The entrepreneur's profit includes the difference between the costs associated with the conclusion and implementation of contracts and the revenues derived from the performance of contractual obligations. As a rule, to determine the effectiveness of the concluded energy service contracts, it is necessary to compare the costs associated with their conclusion and maintenance, and the revenues received from them. But, it is difficult to determine the income received from the performance of contractual relations by contractors. Since random events (for example, weather conditions) can neutralize the planned benefits. Various objective and subjective risks and uncertainties constantly accompany the entrepreneur's actions.

In a competitive market, the rational behavior of a firm is influenced by prices and tariffs of other competing companies. At present, companies that provide services in the energy sector are actively developing both in the broad and the deep. Any action by third energy service companies may negatively or positively reflect the company's stable state/

Any entrepreneur carries out some missions and goes to achieve the goal. Moreover, the alternatives of the firm's goals are an inalienable feature of the current stage of development of any national economy. In particular, the active development of the digital economy forces firms to use situational action planning. The manager should see the whole picture of the affairs at the firm, and therefore, is able to determine its purpose. But, the goals can be concomitant or

contradictory. For example, how to deal with the situation when it is necessary to increase production and simultaneously introduce energy-saving technologies. In economic science the most common is the premise of the firm's desire to maximize profits. In this aspect, the profit of the enterprise will fall. The level of introduction of energy-saving technologies leads to the need to search for a minimum profit level.

How to be? In this case, it is impossible to make a rational decision without the help of the state or other investors. It should be noted that the state itself is interested in supporting such firms, as it is interested in receiving taxes and fees from firms, in solving social problems, etc.

Among the alternative solutions for energy efficiency can be pointed out the possibility of dispersal of resources for various activities. At the same time, all energy saving measures can be divided into mandatory and optional, urgent and non-urgent, stopping production or without etc. Free financial resources can be spent on improving the conditions of electricity supply or on the modernization of electrical equipment. The final choice of the priority of measures in their financing will remain with the management.

Solutions to the contradictions in achieving energy conservation goals can be countered by the actions and goals of intra-structural units. So, in providing energy-the production departments are especially interested. Decision-making in the transition to the use of energysaving technologies should be integrated and combined with the objectives of other divisions. Also, the manager should also have an idea of the energy potential of the work collective and, accordingly, create the conditions for raising it.

#### CONCLUSION

In conclusion, we can note the following. In modern conditions, consideration of the problems of the choice by the management of the company of ways of conducting energy-saving measures is objectively caused by the growth of prices for the use of energy resources. This state requires the search for reserves to expand the capacity to realize the potential of various types of energy, including the energy of each employee of the firm.

The entrepreneur needs to include in the planning and forecasting process alternative ways of behavior in energy consumption by creating a rational model of choice and decision-making in using the company's total energy. The variety of directions of energy-saving measures, some of which is of an opposite nature, should be taken into account in the firm's activities when achieving the company's strategic goals.

For practitioners and theoreticians of economic policy, the use of the results of this research will allow us to make an optimal decision and model the future state of the company in the field of energy saving.

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