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KEY TO THE REAL ENERGY SAVING IN PUBLIC UTILITIES SECTOR

The article proves the reasonability of creating energy savings responsibility centres at the enterprises of public utilities sector. Such centres must operate on the basis of theoretical principles of contemporary management and use the best world practice in the field of organization of managerial accounting.

Keywords: enterprises of public utilities services; energy saving; responsibility centre; managerial accounting; efficiency; incentives.

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КЛЮЧ ДО РЕАЛЬНОГО ЕНЕРГОЗБЕРЕЖЕННЯ У ЖИТЛОВО-КОМУНАЛЬНІЙ СФЕРІ

У статті доведено доцільність створення на підприємствах житлово-комунальної сфери центрів відповідальності енергозбереження. Такі центри мають діяти на основі теоретичних засад сучасного менеджменту та використання найкращої світової практики організації на підприємствах системи управлінського обліку.

Ключові слова: житлово-комунальні підприємства, енергозбереження, центр відповідальності, управлінський облік, ефективність, стимули.

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КЛЮЧ К РЕАЛЬНОМУ ЭНЕРГОСБЕРЕЖЕНИЮ В ЖИЛИЩНО-КОММУНАЛЬНОЙ СФЕРЕ

В статье доказывается целесообразность создания на предприятиях жилищно-коммунальной сферы центров ответственности энергосбережения. Такие центры должны действовать на основе теоретических принципов современного менеджмента и использования лучшей мировой практики организации на предприятиях системы управленческого учета.

Ключевые слова: жилищно-коммунальные предприятия, энергосбережение, центр ответственности, управленческий учет, эффективность, стимулы.

Definition of the problem. The need for radical improvement in energy savings in the housing and communal services sector has become of state importance now. There are 2 main reasons for this: the first, permanent increase of energy capacity of housing and communal services, and the second, energy consumption of enterprises in this sector is extremely wasteful.

The housing and communal services sector is one of the most energy consuming among all the sectors of Ukrainian economy. The sector consumes 30% of energy resources. Specific energy resources expenses for unit of made product and provided services are 2–3 times more than on average in Europe. Only maintenance of houses alone requires 10 ths mln of kilowatt-hour of electric power annually (State Agency on Energy Efficiency and Energy Saving of Ukraine, 2011).

The reasons for high energy capacity of the housing and communal services are that substantial technological falling behind the level of developed countries and high degree of the capital assets wearing (57–65%). For example, as a result of the unsatis-

factory technical state of the water supply networks, the drinking water losses in city water pipes are 35–40%, and the heat carrier losses in heating networks have increased up to 38–47% (State Agency on Energy Efficiency and Energy Saving of Ukraine, 2011). Same situation is in other subsectors of the housing and communal services.

With the purpose of radical decrease of energy expenses in Ukraine as well as in the housing and communal services sector the number of legislative acts have been accepted at the state level. From one side, they provide the increase of responsibility and administrative proceedings against the overabundant energy consumption, and from the other – stimulate energy savings by means of introducing favorable tax rules. However, the uncertainties of the whole spectrum of management in organizational structures, responsible for energy savings at enterprises, have detained the proper program realization.

The analysis of the recent researches and publications. The problems of stimulating energy saving in different sectors of Ukraine's economy have been discussed in the studies by T. Ageeva (2012), V. Rozen (2007), G. Sudakov (2006), O. Sukhodolya (2006), M. Tkachenko (2009). The methodical aspects of the development and using of management accounts system and the modern management features in the energy savings sphere have been considered in the studies by I. Avrova (2003), A. Apcherch (2002), G. Kasyanova (1999), O. Karpash (2008), O. Krasova (2006), L. Napadovska (2000), T. Skoun (1997), R. Khensen (2002). The analysis of the purpose and general features of managerial accounting as well as functioning of the centres responsible for income, expenses and investments at enterprises has allowed making a logical conclusion that it is reasonable to create the energy savings responsibility centres (ESRC) at enterprises of housing and communal services.

Parts of the general problem not considered before. The energy savings management and increasing of energy efficiency at enterprises of housing and communal services are the main problems, which if solved successfully, would promote the achievement of social and economic aims of the market reforms in the sector of public utilities supply. Looking for ways for radical energy savings improvement has been proceeded during the last 20 years. However, the quality of the organization process management in this important sector is unsatisfactory. The energy efficiency of operating objects at the enterprises of housing and communal services of Ukraine is 2–3 time worse as compared with the same objects in Germany, England, Sweden, Canada etc.

Many specialists have come to the conclusion that one of main obstacles to technological modernizing of the out-of-date energy equipments is of low interest for the communal and house maintenance organizations as well as for population. A lot of actual technical and economic questions have not been resolved in the current legal documents and acts until now. The author considers that providing the personal interest in energy savings and energy efficiency increase at enterprises should be achieved by means of introducing the following:

- automation of the accounting of energy resource losses at all stages of production, transporting and services consumption;
- introduction of the modern management methods of energy savings organization;
- administrative management of all the processes related to energy savings.

Note that the primary objective of the upper listed means must be in achievement of such financial results, which would enable to get facilities after introduction of energy savings project sufficient for financial encouragement of personal and keeping up the interest for realization of energy savings policy.

A research purpose consists in the development of methodical regulations for energy savings management system at the enterprises of housing and communal services. Their introduction is directed on effective use and providing economical expense of fuel and energy resources, improvement of public utilities supply to population and creation of attractive conditions for investments into the energy savings sector.

Key results of the research. The study of the practice of investment program realization on the examples of the enterprises of housing and communal services has shown that existing norms, methods and operating rules for just introduced innovative power equipment usually do not give the expected effect. The reason for this is that management procedures for complex technological systems (to which, surely, the energy supply systems of the housing and communal services sector belong) require conceptually new approaches based on the scientific principles of the modern theory of management.

Unfortunately, the use of former and familiar methods of energy saving management causes sometimes unsystematic governmental or loan costs. Absence of proper technical maintenance and repair of complex equipments brings all the advantages from the use of new energy efficiency equipment to nought.

The imperfection of economic mechanisms of energy efficiency stimulation does not allow refinance a part of costs for energy savings projects at the expense of resource economy.

The author considers that the creation of ESRC at the enterprises of housing and communal services would promote considerable improvement of work organization directed on decrease of unproductive losses of drinking water, heat and electric energy. Unlike the traditional centres of financial responsibility (profits, income, prime cost and investment yield) ideology of centres responsible for energy savings should be directed on the formation and permanent improvement of economic and organizational mechanisms that provide reliable energy supply and rational use of energy resources.

ESRC within the range of their functions must take part in realization of organizational actions related to the following:

- carrying out the energy audit;
- estimating the quality of heat, gas and water supply services given to population;
- register the accidents and losses in heat, electric and water-supply networks;
- optimization of amount of boiler equipments and their rate power taking into account local conditions and fuel types.

In addition to participating in realization of organizational actions the specialists of ESRC should be necessarily and thoroughly acquainted with carrying out the planned technical and technological means related to energy savings and increasing of energy efficiency of enterprise infrastructure. For example, with:

- technical and economic studies on energy savings technology introduction with the purpose of bringing in commercial financing;

- development of heat and electric energy losses norms;
- automation systems for operating the equipments and accounting of heat energy supplied to consumers;
- building heat networks using effective technologies;
- telecommunication means used in central technological control service of heat energy supply systems;
- frequency regulated drives in water supply and water-sewage systems etc.;

One of the important functions of ESRC at the enterprises of housing and communal services is the control over the rational use of costs related to financing capital expenses and energy savings project as a whole.

The ESRC functions listed above are given as an example. Enterprises have possibilities to include or add other means into energy savings programs directed at decreasing of consumption of fuel, energy resources and drinking water.

When examining ESRC functions it should be noted that expedience of such centres creation is determined by estimating the costs needed for an enterprise to achieve its purpose. As well it should be taken into account that incomes and expenses formed as a result of ESRC activity must be a substantial portion in the structure of production income and expenses of enterprise as a whole. These income and expenses should be in an influence zone of ESRC's leader. It is not reasonable to transform the separate administrative management units of an enterprise (departments, sectors etc.) into ESRC because of unsubstantial volume of their expenses. For example, the department of energy supply cannot be ESRC.

The effective functioning of ESRC is financially supported by its budget. When forming the ESRC budget the principle of balanced set of rights and responsibilities must hold. The ESRC budget includes only that indexes the achievement of which depends of efficiency of work of its leader and personnel. The system of financial encouragement for centre's specialists should provide the bonuses calculated by the achieved budget indexes.

Economic reasonability of ESRC existence is determined by the condition of that expenses for its functioning may not exceed the achieved effects in result from its activity.

The suggestions regarding the ESRC creation at the enterprises of housing and communal services are one of the first conceptual attempts to make use of principles of managerial accounting for providing the increase of efficiency of energy saving at the housing and communal services sector.

Conclusions. The practical value of the results of the article is that its conceptual ideas can be used for creation of energy savings management system in the housing and communal services sector. This should provide organizational economic reliability of effective and steady energy savings in communal infrastructure. Application of scientific grounding and practical recommendations would promote the fuel and energy resources savings.

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