

ENERGY MANAGEMENT

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Formation and development of a civilisation of mankind inseparably linked with growth of consumption of energy resources. By existing expert estimations, the continuous, steady gain of world consumption of fuel and energy resources on the average on 1 - 2 % now is observed annually, and as increase in power dependence on the third countries which under forecasts, by 2020 will reach 70 % from the general consumption.

Fast growth of power consumption is caused, first of all, by constant increase in world production. Therefore by consideration of dynamics of power consumption its level is necessary for correlating to change of the basic indicator characterising a level of development of economic. Such indicator is the volume of a world national produce which is defined by the general market cost of all final goods and the services made in the world within year.

The analysis of experience of countries of Western Europe, the USA, Japan shows that without a state policy and energy savings programs, without creation of system of energy management to leave crisis it is impossible.

Throughout 15 years after oil crisis of 70th as a result energy politicians of an effective utilisation of energy in whom considerable resources of the industrial countries of the West have been involved, the volume of consumption of energy per capita practically stabilised, while the volume of a national product has grown almost on 30 %. Such results have been received thanks to the detailed technical and economic organisation of introduction of a power saving up policy. If energy consumption in these countries remained at level of 1973 power consumption by 1986 would grow on 24 % and would reach 900 million tons of conditional fuel in recalculation on oil.

Energy management it is optimisation of use and efficient control power resources. Technologies of energy savings become claimed in various industries, power, building, housing and communal services. The share of expenses for energy carriers in the cost price of the unit of production which are let out in Russia, reaches now 30 - 40 % that is considerable above, than, for example, in Japan or countries of Western Europe.

The tendency of the last 2 - 3 years on increase in cost of power resources lead to growth of this share. Thus the Russian enterprises spend in 3 - 3,5 times are more than energy resources on release of a unit of production, than similar manufactures in the Western Europe. Principal causes of such essential distinction are: Out-of-date infrastructure of energy supply, actual absence of the account and the control of energy consumption, problem at interaction with suppliers of the energy, historically developed scornful relation to a theme of economy of energy resources in a society.

System energy management of the enterprise it is a complex of management methods consumption of energy resources and introduction of decisions on maintenance of energy efficiency of the enterprise. The purposes of energy management are:

- Detailed elaboration of energy consumption and decrease in expenses for the energy resources used at the enterprise;
- Optimization of technological processes of manufacture from the point of view of energy efficiency;
- Increase of ecological compatibility of the enterprise;
- Increase of competitiveness of production at decrease in its energy consumption;
- Improvement of image of the enterprise and its development.

Energy management is the control system based on carrying out of typical measurements and checks, providing such work of the enterprise at which quantity of energy absolutely necessary for manufacture is consumed only.

At the same time energy management is a tool of operation of business which provides the constant research, allowing to possess knowledge of distribution and consumption levels of energy resources at the enterprise, and also about optimum use of energy resources both for manufacture, and for non-productive needs, for example for a heat supply of buildings and constructions.

By introduction of power management it is possible to receive more detailed picture of consumption of energy, to spend comparison of consumption levels of the given enterprise or an economy with energy consumption at similar other enterprises, to execute more exact estimation of power saving up actions or projects on economy of the energy, planned for introduction at the given enterprise.

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