

INFLUENCE FACTORS ON ENERGY INTENSITY AGRICULTURAL PRODUCTS

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Abstract - Energy intensity of final products regardless of their destination becomes a more significant indicator in production. This indicator takes on significance a special role to produce agricultural products. Given article is devoted to the determination and group decision makers influencing the creation and formation energy intensity of agricultural products.

Keywords - Energy intensity, influence factors, agricultural products

1. INTRODUCTION

Since the Republic of Moldova is a country where agriculture is one of the basic branches creating the national budget and energy resources are imported almost 96%, then cheltuielelor energy analysis to final agricultural production is a very current problem.

The notion of energy intensity of the agricultural product is meant the ratio between the gross and final product cost energy spent in producing this product. It can be concluded that the energy intensity of agricultural products is a function determined, which depends on a number of random factors

Determination of energy intensity in production of agricultural products and minimizing their ability to create competition in agricultural products on the market for selling both internal and external.

2. DEPLOYMENT PROBLEM

Develop a methodology for determining the energy efficiency of enterprises production of agricultural products and minimize the energy intensity

Increasing the energy efficiency of enterprises producing agricultural products (reducing energy intensity of final product) requires each enterprise manager to develop and respect the decisions necessary for the rational use of energy resources.

At the first stage of making the analysis of energy consumption in order to increase energy efficiency necessary to perform auditory energy.

Auditory energy needed to be conducted by experts external to the auditory to be quite objective.:

a) the auditory making it necessary to include the following steps) determining and diversion of energy flows based on the technological processes;

b) the composition scheme of use of electricity, which includes the total consumption of energy and their differentiation based on the technological processes;

c) analyzing the energy balance in the company;

d) determining the energy share in total financial enterprise;

d) determining places where technology can be reduced energy consumption;

e) determining technology, which can give the effect of lowering energy consumption.

Analysis and differentiation of energy sources used which includes as components>

a) determining the composition of energy sources in relation to the amount of energy used in the enterprise;

b) determining the energy losses;

c) analyze energy usage charts (chart by day, season, year);

d) analyze the probability of reducing the energy consumption and using renewable energy sources, which may include:

- Saving energy sources in heating technology processes;

- Economy (reducing energy consumption and increase power factor) of electricity by reactive power compensation;

- Energy saving lighting sources;

- Optimizing the use of equipment technological regimes technological processes.

- Conduct energy management

Energy management is about a system to manage energy consumption, based on typical performance measurement and verification of results obtained with the standard, which can be:

- Energy management of any company is a management tool with the consumption of energy sources, which makes it possible to determine and specify the quality of energy consumption from that undertaking.

Simultaneously power management allows to perform a behavior of the energy efficiency of every enterprise, compared with similar companies and technical measurements and technological development to increase the effectiveness of electricity (reducing energy intensity of final product).

In the process of making the enterprise energy management, particular attention will be given to the series of issues related to energy consumption as follows:

- Composition of subunits Charter energy component of the undertaking;

- Accumulation of static data on energy consumption;

- Endowment plan composition control equipment and control energy consumption;

- Analytical calculation of the effectiveness of preventive use of energy resources;
- Drafting measurements with destination Reduce energy intensity;
- Assessment and measurement of destination location to reduce energy intensity of final products;
- Calculation of energy cost in prime cost final product of the enterprise;

In making the measurements mentioned above often may need to perform some calculations that consider operational energy consumption and compare the specific consumption and the total for a period of time to appreciate the changes that occurred in technological processes.

3. ASSESSING OPPORTUNITIES FOR SAVING ENERGY IN THE COMPANY

Power saving mode to any enterprise in manufacturing is a function carrying a determined character and is a feature that bears a character is determined by several factors and indefinite.

This phenomenon depends on how the best use of technological equipment used. All technological processes in production plants and improvement of wine can be derived:

- Direct processing technology of wine products;
- Additional technologies that are specifically intended to provide direct technology.

For any industrial enterprise the power savings and lower energy intensity in the center of the final process of undertaking. Thorough analysis of the problems of electricity consumption and saving mode makes it possible to solve these problems and allow to reduce the energy intensity of final product. In the process of saving electricity, it is impossible to using disconnection processes.

Each position must be reached based on the following conditions:

- Volume production technology should be maximized;
- The right choice of technological equipment, to achieve technologies that have increased energy intensity;
- Low level of losses in power systems and power distribution;
- Installation of reactive power compensation;
- Analysis of electric drives and motors replace electric motors that have less power and operating mode can be replaced with a similar scheme but optimal. Necessary expenses in this case the economy will recover electricity used.

Equivalent replacement of electric motors is recommended if his load is not more than 50%.

In the replacement of electric motors is recommended to take into account the particular construction of electric motors. Thus the basic recommendations of the energy savings from use of electric drives are - Appropriate choice of electric motors based on the task will be running the machine press work;

- Electrical drives routing schemes needed to be automated under load and time;

- If the machine work has several operating modes is necessary that electric motors have speeds frequency variation.

Another significant consumer electricity to primary processors of grapes is lighting.

Lighting to deviate in the following types:

- Production lighting, lighting technology, lighting communal street lighting.

Total electricity consumption for lighting is about (12-16)% of total electricity consumption.

For these conditions energy saving lighting processes can be quite significant.

To reduce electricity consumption in lighting technology companies are recommended contemporary (modern) as follows:

- Use lamps contemporary lighting increased flow;
- Use of equipment and fixtures
- Use zoning schemes in various rooms lighting technology;
- Use ballast resistors with a low level of loss of electricity consumption;
- Use of automatic process control systems for lighting, which is back for one year. It is worth mentioning that modern systems used in lighting technology can reduce energy consumption from 20 to 30% of the total. Primary processing enterprises grapes can divert energy used in the following way.

4. CONCLUSION

The analysis of statistical material (from several areas of the Republic of Moldova where vines are grown) and technical, we can state that were argued and determined energy costs destined for planting and processing grapes as required by current technology for each year until the first harvest technology.

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