

ABSTRACT

The urgency of the problem

Production of fuel and energy resources in Ukraine is considerably less than their consumption. It means that our country is volatile from suppliers of raw materials for the energy sector and industry. Gas, oil, coal and other energy sources, according to the energy balance of Ukraine for the year 2014 amounts to 76 928 ktoe. And total primary energy supply of is 105 683 ktoe. It is necessary to import energy at a rate of 34437 ktoe.

A promising way out of this situation, in our opinion, is the introduction of renewable energy sources, in particular biomass. According to Institute the Renewable Energy of NAS of Ukraine, the annual volume of savings traditional of fuel and energy resources in Ukraine in 2030 could reach nearly 100 mln. tce, including the greatest potential has bioenergy.

The idea of work is to research the practical possibilities of production and use of biofuels at the local level.

PURPOSE: To investigate and prove the feasibility of partial or complete replacement of traditional fuels at biofuels.

The subject of research is the energy potential of the terrain and the raw materials which can be processed into biofuels.

The object of research of master's degree dissertation is the energy potential Borzna district of Chernihiv region, as well as waste and the products of agriculture and forestry, which could be processed into biofuels.

The methods of research are methods for assessing the energy potential of various types of biomass.

Testing results dissertations

The research results were presented as abstracts and presentations at the following conferences:

1. The efficiency in using biogas installations for heating at the livestock farms // International scientific-technical conference “Energy Efficiency 2013”; Chernukha K.V., Dubrovskaya V.V., Shkliar V.I.; Location - Kyiv; Date: 10/14/2013.

2. Production of briquettes as an alternative fuel. Chernukha K.V., Dubrovskaya V.V., Shkliar V.I. // XII International Scientific Conference for postgraduates, masters, students "Modern problems of scientific support of energy", 22 - 25 April, 2014, Kyiv.

3. Biogas plants for heating livestock farm. Chernukha K.V., Shkliar V.I., Dubrovskaya V.V. // VI International Scientific Conference “Energy. ECOLOGY. MAN” IEE, "KPI", May 2014.

4. Problems of biodiesel in Ukraine. Chernukha K.V., Shkliar V.I., Dubrovskaya V.V. // IX International Conference "Problems of industrial heat" IX INTERNATIONAL CONFERENCE «PROBLEMS OF INDUSTRIAL HEAT ENGINEERING» 20-23 October 2015 Kyiv, Ukraine.

Publications

Waiting to publish an article in the next issue of “POWER ENGINEERING: Economics, Technique, Ecology”, which is considered VAK of Ukraine as specialized edition, entitled "Analysis of the economic feasibility of biomass agricultural enterprise."

Scientific innovation is to determine the energy potential of biomass based on statistics for Borzna district, Chernihiv region.

The work have a practical importance in the practical application of research in the field of energy, which is aimed at the transition to local fuels. The results of the master's thesis will be used to develop local programs of biofuels in Borznyi region .

Master's degree dissertation "Analysis of the potential of biofuels at regional level" includes: the 110 pages, 25 figures, 22 tables and 49 sources in the list of references.

Keywords: renewable energy, biomass, biofuels, energy potential.

