EVALUATION OF HEAT OUTPUT FOR THERMAL SECONDARY ENERGY RESOURCES OF THE ENERGY UKRAINE

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Based on the proposed approach to the definition of TSER is estimated output for different energy facilities on the example of Ukraine 2000

Primary energy resources (FER), thermal secondary energy resources (TSER), the output of TSER.

One of the major reserves of energy saving potential of the national economy of Ukraine is using TSER that inevitably arise in various industrial processes. For Ukraine, the shortage of own energy resources, overall output TSER is strategically important. In the second part of the article based on the proposed new approach to determining TSER allocated group of technological objects depending on the direction of transformation defined formula to calculate the output Tver facilities for these groups and made assessment of TSER for different output of the energy Ukraine on the example of 2000

The aim - to obtain more reliable data on the number TSER formed in different sites of power of Ukraine.

Methods of study is to determine the Tver using the proposed approach based on the separation process facilities on specific groups and the use of statistical data on the quantity and quality of SER consumed by each group during the reporting period of time.

This paper, based on the proposed approach [1], the estimation of the thermal output of secondary energy (TSER) for different energy facilities that utilize primary energy resources (PER) for some similar groups and in general in Ukraine on the example of 2000 year. Evaluation exit Tver was based on statistics on the use of FER and workings of useful technological product targets for the considered period of time. Depending on the direction of conversion of thermal energy obtained from fuel combustion were identified and neenerhoheneruyuchi power generating facilities.

Power generation were attributed to such facilities where chemical energy of fuel is converted directly into heat or energy, or by thermal conversion to another form of energy. Useful technology products such as power plants is a particular type of energy produced and therefore making a useful product ratio (ηVKP) can be represented as the ratio of energy produced to heat chemically bound FER spent on its receipt. As power generating facilities that use energy resources, were considered:

Based on the proposed approach to the definition of Tver was evaluated for output Tver technological units using PER throughout the country. It includes the following stages:

1. Separation of energy facilities in the typical group, which implemented various areas of transformation FER - a group of power generating facilities, which produce thermal, mechanical, electrical energy, implementing cogeneration technologies as well as groups neenerhoheneruyuchyh objects, where the heat generated as a result of the direct use of FER is directed to a heat treatment of materials to change their chemical and structural properties.

2. Determination of power equipment for each group based on available statistics on the total volume of the country and FER consumption volumes obtained useful product within a specific group for a certain period of time (eg, year).

3. Identification of specific values of inevitable energy losses for each group considered on the basis of data on energy waste most effective equipment designs for each group considered period of time.

4. Payments Tver output for selected groups of objects on the basis of the data using statistical data on the quantity and quality of FER, which used by each group during the reporting period of time.

5. Evaluation of total output Tver in the whole country for the analyzed time period by summing Tver amounts received for certain groups of power equipment.

Results of experiments to determine the output for various groups of Tver technological units using TPR regarding energy economy Ukraine in 2000 is reflected in the table. Evaluation exit Tver conducted at a lower calorific value.

Findings

1. The approach in the evaluation of TSER exit permits, based on known statistics on the quantity and quality PERs used in manufacturing facilities for the considered period of time, get a fairly complete picture of a quantitative theory suitable for disposal TSER formed at different sites energy economy, subject to a High potential and low potential TSER, which in turn allows quite competently plan their further use.

2. The most appropriate direction utilization should be selected based on exergic analysis processes that occur in typical energy facilities, subject to the availability of consumer energy produced, as well as to the conditions of economic feasibility.