Through an automated system. Analysis of energy consumption

Yo'lchiyev M,E

Shavkatov Muhammadjon Umidjon o 'g 'li

Raxmatullayev Shamsiddin Hakimboy o 'g 'li

Andijan machine building institute

Abstract:*At present, the advantages of using modern elements of the automatic control and measurement system along with the measures of applying innovative projects in the distribution power grids in the calculation of consumption and waste are shown.*

Key words: *Electric energy, counter, concentrator .*

In the development of modern high technologies, the production of electronic information systems is one of the most promising directions. The share of the production of these systems, in the share of the total national production, expressed the level of technical level of the state. This production attracts a lot of financial resources, high-class specialists, technologies that meet new modern world standards, tools and equipment. But the production of large-scale electronic information systems provides the following:

✓ Brings industry in the state to a high professional, intellectual and production level;

✓ Production volume leads to international industry standards. The automated system of accounting and control of electricity consumption is considered an electronic information system in the power system.

One of the most important tasks is the availability of operational and accurate electricity to the enterprise's energy system, as well as the possibility of keeping accounts of consumers. Through the automated system of accounting and control of electricity consumption, it can perform the following tasks:

To the energy supply organization:

✓ exchange of information between subjects in the electricity market;

✓ automation of calculations between entities and consumers;

✓ increase the level of accuracy and operational calculation of electricity;

✓ automation of control of the technical condition of electric power systems;

✓ distributes electricity among consumers through control schemes;

✓ Increases the efficiency of the company's work. To consumers:

✓ Increases operational and accurate calculation of electricity;

✓ Distribution of electricity from various management schemes in order to reduce financial costs;

✓ reduce electricity bills;

✓ Automation of electricity and power supply calculations with the energy supply company.

The general view of the ASKUE system is as follows:

➢ Meters measuring electric energy and power (with digital interface and pulse outputs);

➢ Communication tools (switching telephone communication channels, dedicated telephone channels, GSM, GPRS, radio channels, etc.) and communication equipment (modems, radio modems, multiplexers, etc.)

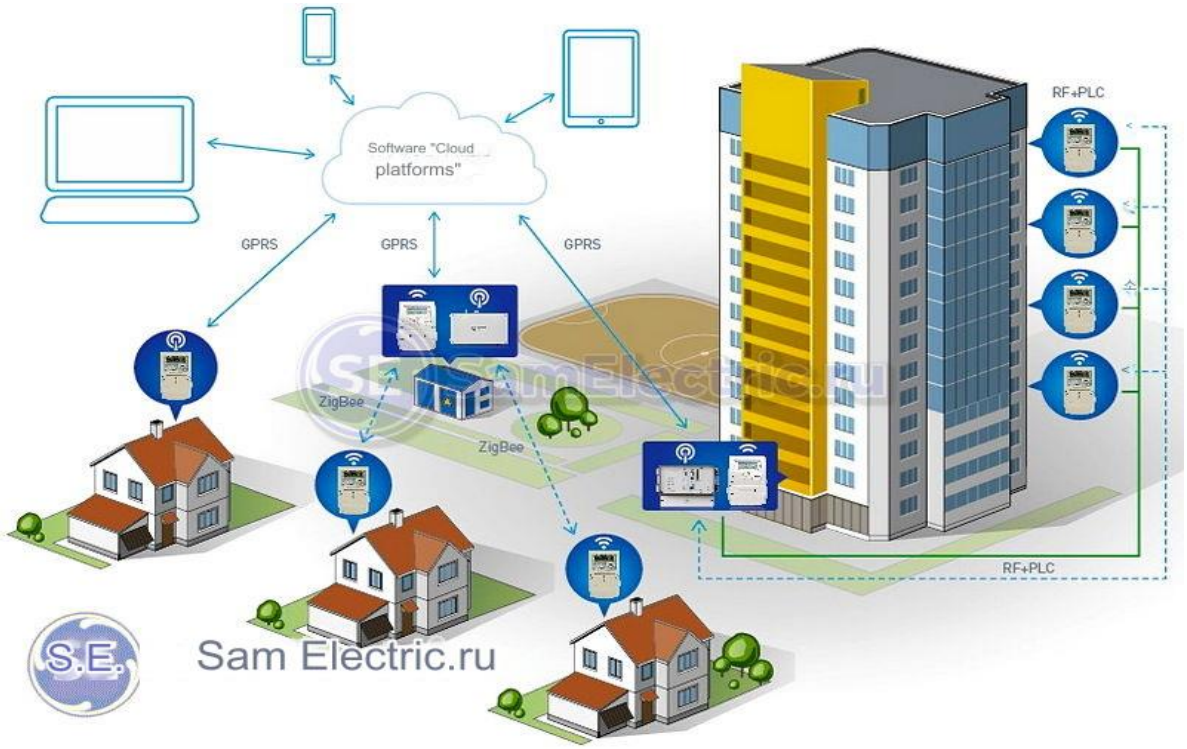
➢ Measured data through a programmed program

the possibility of exchanging information with other enterprises and enterprises providing electricity;

➢ "UZBEKENERGO" DAK in cooperation with specialists and "HOLLEY METERING LIMITED" (KNR) specialists has been developing ASKUE system and dispatch control system

➢ The possibility of using the ASKUE system is very wide - whether it is a multi-storey house, a neighborhood, or even a regional distribution energy company - there is a possibility of using it in everything.

Structure diagram of the ASKUE system.



The ASKUE system has the following functions:

➢ Has the ability to write information on the used electric energy;

➢ It is possible to store and control archival written data on the consumer's counter and to check the system itself;

➢ It is possible to set indicators of concentrators, terminators and counters;

➢ It is possible to remotely collect data, turn it on and off and control;

➢ Automatic and manual interrogation is possible;

➢ Reduces loss and theft of electricity;

➢ Reduces the powers of the operator;

➢ It is possible to issue a report of normal working conditions;

➢ It is possible to display distribution schemes;

➢ There is an opportunity to collect information on each phase and to identify deficiencies in each phase;

➢ The possibility of introducing a multi-tariff system;

➢ Automatic reporting of any events;

➢ It is possible to provide information about the level of power consumption and power;

➢ Ability to search and retrieve all information.

Advanced trading of energy resources requires the use of reliable, accurate and concise automated system energy calculation, which minimizes human intervention at the stages of data measurement, collection and processing, and is reliable, accurate and compactly adapted to various tariff systems by both the supplier and the consumer of energy resources. requires the implementation of based systems. For this purpose, consumers and supply enterprises are in their facilities

They organize ENHAT.

ENHAT is control-measuring devices, communications

(data transmission network), is a set of technical and software tools designed for automatic management of the energy consumption process and automatic accounting, consisting of EHM and software (DT).

ENHAT enables:

- Automation of data exchange with electricity market subjects;

-Automation of calculations with subjects and consumers of the electricity market;

-Achieving increase in reliability and speed of electricity accounting;

- Ensuring automatic control of technical conditions of electric power systems;

- use of various management schemes of energy and power distribution among consumers;

ENHAT's DTI consists of the following systems:

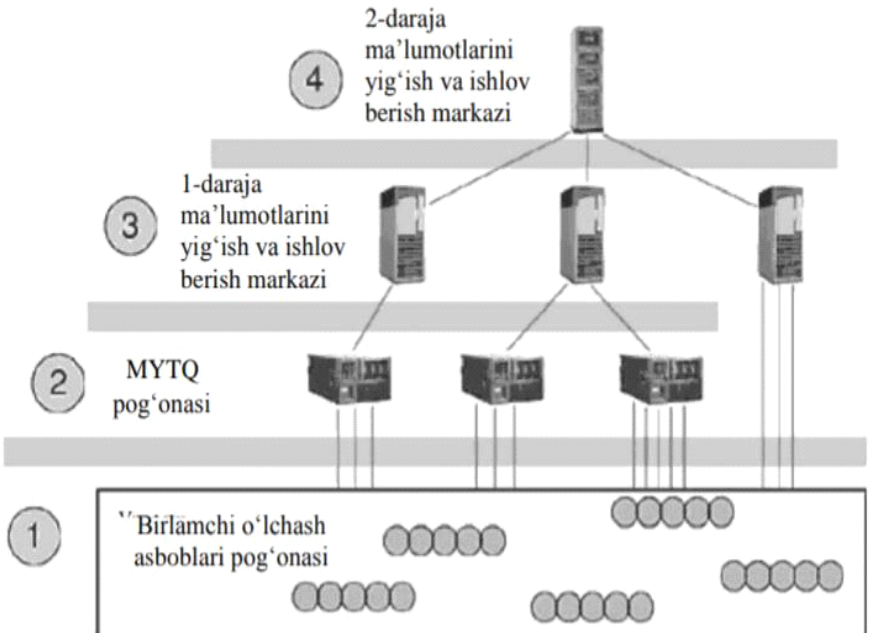
- database (MB) and meter reading management system;

- automatic request system of meters on the line of communication and power consumers;

- a system of displaying the parameters of electric meters in a graphic form;

- data analysis system;

- automated system of complex database.



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