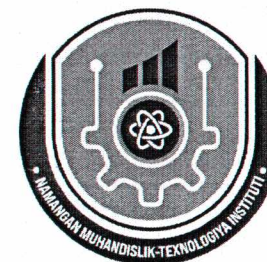


**REPUBLIC OF UZBEKISTAN**  
**MINISTRY OF HIGHER EDUCATION, SCIENCE**  
**AND INNOVATIONS**

**NAMANGAN INSTITUTE OF ENGINEERING -**  
**TECHNOLOGY**



**"ACCOUNTING AND AUDIT" DEPARTMENT**

**SH.SAYIDBOYEV, G'.AKBAROV**

**METHODOLOGICAL GUIDE**

**ON SUBJECT "ENERGY EFFICIENCY AT THE**  
**PRODUCT COST PRICE"**

Namangan - 2023

NamETI Sh.Sayidboyev, G'.Akbarov. The educational and methodological manual on the topic "Energy efficiency at the product cost price" intended for conducting practical training. – Namangan.: NamETI, 2023. - 12 pages.

The educational and methodological manual consists of theoretical and practical skills intended for conducting practical training in economic sciences for students studying economic education in higher educational institutions.

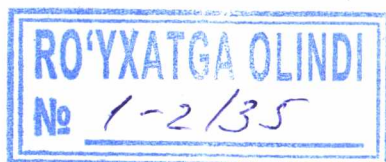
This manual is intended for students of higher education institutions, masters, professors and teachers conducting classes in this subject, and independent learners of the subject.

The educational and methodological manual was discussed at the 1st meeting of the "Accounting and Auditing" department of the Namangan Institute of Engineering and Technology on August 26, 2023 and was recommended to the educational and methodological council of the institute for approval.

The educational and methodological manual was approved and recommended for publication at the meeting No. 1 of the Educational and Methodical Council of NamETI on August 26, 2023.

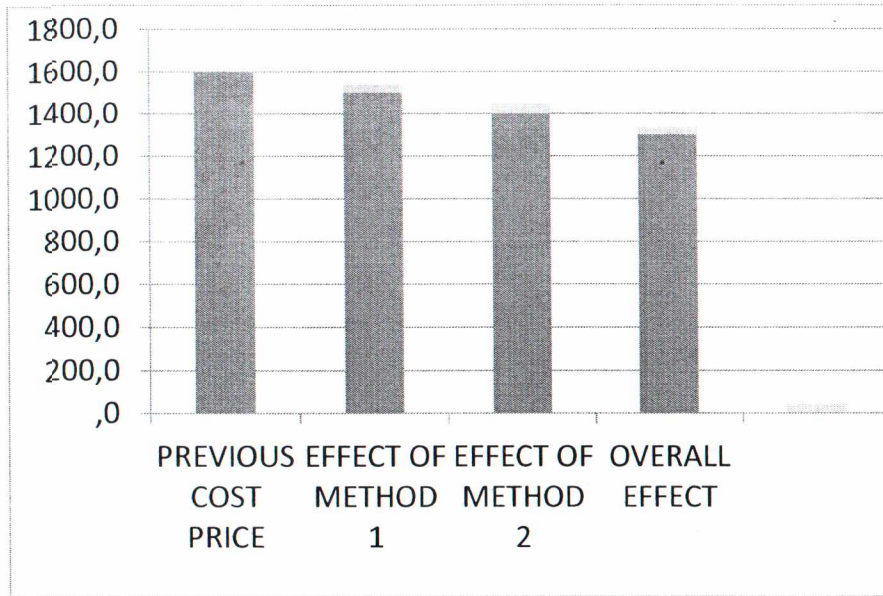
**Reviewer:**

Q.Yuldashev - NamETI associate professor,  
candidate of economic sciences



A handwritten signature in blue ink, consisting of several loops and strokes, located below the stamp.

The table below shows how it influences the price of electricity:



### CONCLUSION

- 1523,78 \$ for 1000 kg of product were used using traditional methods.
- when using the electrical energy saving method 1, this indicator is: 1522,21 \$
- saved electricity 1,57 \$
- using the 2nd method, our company completely covered electricity by itself and the cost was 1519,06 \$.

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#### INTRODUCTION

1. The role of electricity in product costing.
2. Optimization of electricity consumption in product cost price.

#### CONCLUSION

## INTRODUCTION

The number of the population of our country is increasing, the scope of the use of electrical equipment and equipment of our compatriots is expanding year by year, at the same time, small business and entrepreneurship are being given wide opportunities in our republic, large industrial enterprises are being opened due to a number of investment programs - the consumption of electricity is increasing day by day. Therefore, electricity production, transmission and distribution networks should develop consistently, new facilities should be built, and existing ones should be updated.

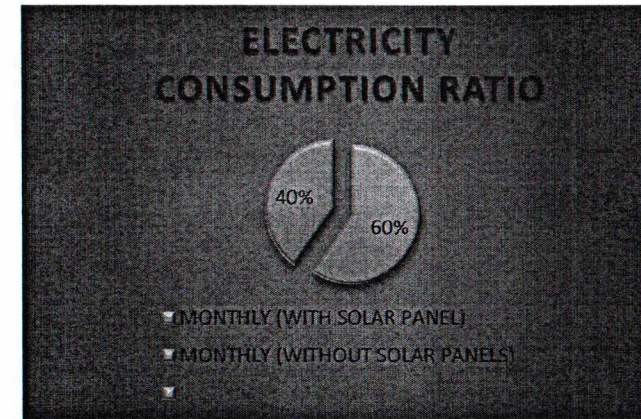
The successful operation of enterprises depends to a large extent on the indicators of product cost, developed on the basis of the results of scientific, in-depth economic analysis.

In the presented educational and methodological manual, the necessity of effective use of energy resources in the evaluation of the cost of the products of various types of economic entities operating in the national economy is highlighted with analysis and examples.

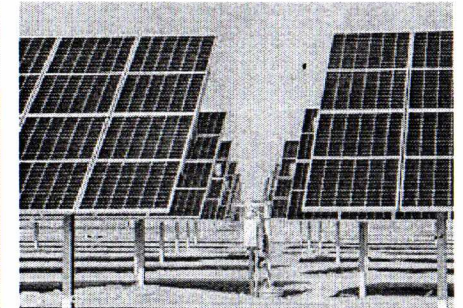
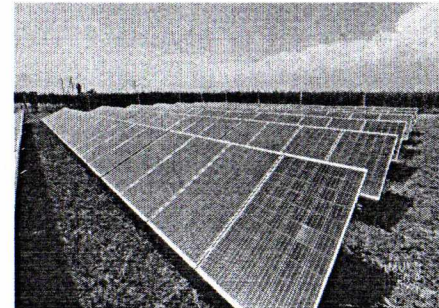
### Method 2. Installation of solar panels:

- Currently the whole world is in the steps of transition to green energy. in our country, such reforms are accelerated day by day. according to the initiative given by the president of our state, sh. mirziyoyev, state organizations are buying 1 kw of electricity from the private sector for 0,08 \$. solar panels are one of the best solutions today. because solar panel manufacturing companies guarantee at least 20 years and recover your money spent in 10 years.

1 day electricity 37 kw, 1 month 925 kw solar panel average  $5\text{kw} \times 25 \text{ day} = 625$  kw this graph shows 10% electricity saving:



- In our country, solar panel installing companies are operating in our country today. when we talked to one of them, he said that a 5 kw solar panel cost 1754,38 \$. it appears that if we buy 1754,38 \$ electricity from the state enterprise, it will be used in 4 years.
- If the solar panel operates for 20 years and the price of electricity is current, we will save 7006,31 \$.



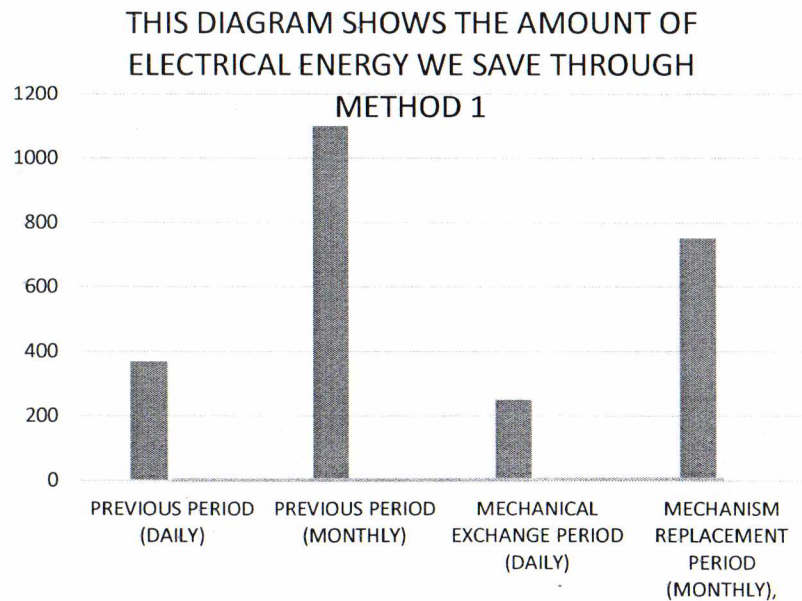
## 2. Optimization of electricity consumption in product cost price.

Below we list the methods of reducing electricity consumption:

1. Replacement of some components of the equipment
2. Installation of solar panels

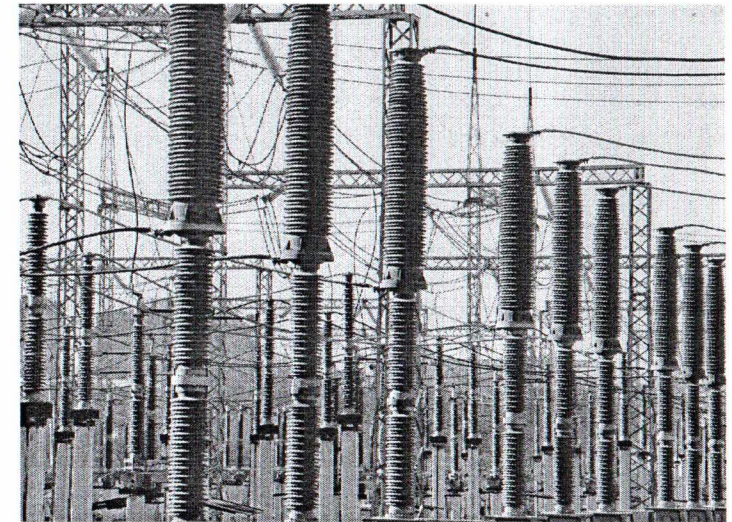
### Method 1. Changing some parts of the equipment:

- Our equipment works on 3 phases. this naturally requires a lot of energy. we could save a lot of electricity and money if we replaced this motor with a new effective one and maintained production volume.
- The motor of our equipment currently consumes 3.7 kw of electrical energy. if we change it to an economical one and keep the volume of production, we can save 1.2 kw.
- Through this exchange we will save 12 kw or 0,47 \$ per hour. the monthly indicator of this is 11,84 \$.



## 1. The role of electricity in product costing.

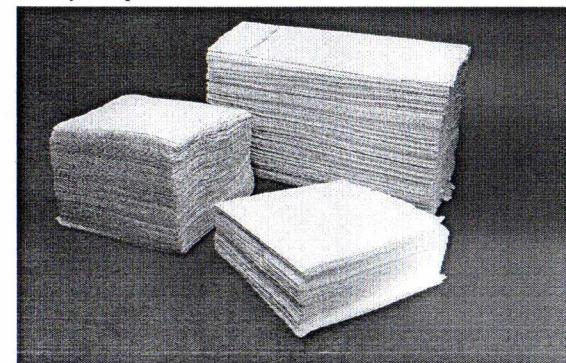
In 2022, approximately 24,398 terawatt-hours (TWh) of electricity were used worldwide. This is almost three times more than the consumption in 1981 (8,132 TWh). China, the US, India and Japan account for more than half of global electricity consumption.



In the Namangan region, 200 MVA of additional power was created, and the reliability of electricity supply in Chortoq, Uchkurgan and Norin districts of the region was slightly increased.

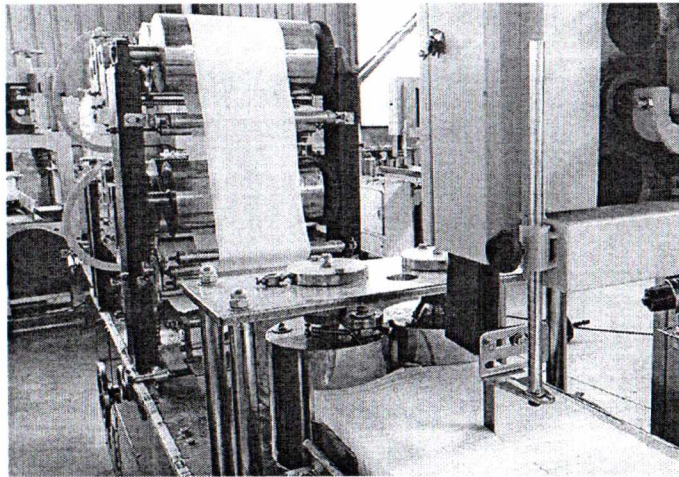
We will consider the demand for electrical energy and methods of saving it in the example of the following enterprise:

- Company name:
- "Card Zone" LLC
- Business activity: Napkin manufacture



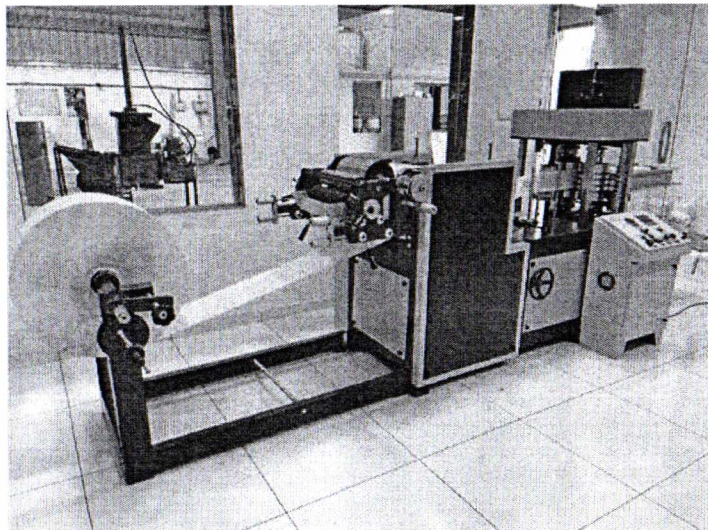
Products to be prepared: Napkin, toilet paper.

Main tools: Automatic paper napkins & serviettes tissue machine (model: CL-NP-7000A), packing equipment (model: GD-NP-25P)



Model name: CL-NP-7000A.

120 kw of electric energy is required to recycle 1000 kg of paper into a ready product.



### Product cost price:

- 1000 kg of paper: 1243.00 \$
- To produce 1000 kg of product, 2 workers should work: 175,43 \$
- Package for packaging: 26,31 \$
- Sale costs: 17,54 \$
- Transportation: 26,31 \$
- Tax and other costs: 35,08 \$
- Electricity: 4,73 \$
- Management expenses: 4,38 \$
- Total: 1523,78 \$

below we can see the power consumption of the equipment:

hourly: 3.7 kw = 0,14 \$

daily: 37 kw = 1,46 \$

monthly: 925 kw = 36,51 \$

