

Received: 04.11.2022; Revised: 23.11.2022, Accepted: 02.12.2022, Published Online: 24.12.2022

DOI: 04.36299/oeco.584826

## AN ECONOMETRIC MODEL FOR DETERMINING TRENDS IN THE SUSTAINABLE DEVELOPMENT OF THE ELECTRIC POWER INDUSTRY IN UZBEKISTAN

**Saitkamolov Muhammadkhujja Sobirkhujja Ugli**

Doctor of Philosophy in Economic Sciences (PhD), Tashkent State Technical University

**Abstract.** The article written about building an econometric model of sustainable development in energy system of Uzbekistan. The concepts of the features of the organizational and economic mechanism by various authors. The place of the mechanism of sustainable development in the system of functioning of an industrial enterprise in the modern conditions of the digital economy is given. Partial analysis of the “Concept provision of the Republic of Uzbekistan with electric energy for 2020-2030” and adopted legislative acts of the country. The problems that complicate the implementation of the main provisions after the global coronavirus crisis for the development of industrial organizations are identified and recommendations for their solution. In the article was given directions for sustainable developing energy system of Uzbekistan in period of 2022-2026 years.

**Keywords:** sustainability, an econometric model, development, energy system, competitiveness, electric power.

### Introduction

Analysis of the problem of sustainability of an industrial enterprise showed that research in this area is being conducted quite intensively, but the attention of researchers is focused mainly on its financial and economic aspects. Although sustainability is a complex category that cannot be a reflection of only one of the aspects of an enterprise's activities. In recent years, the problems of the mechanism of sustainability have been dealt with by economists. However, many issues remain systematically unresolved in domestic science, and Western experience requires careful rethinking and analysis and in most cases does not correspond to the conditions of a transitional economy.

Many problems remained outside the scope of research: there is no consensus on such categories as “sustainability”, “sustainable operation”, “sustainable development” of the enterprise, the issue of the correctness of the use of the static term “stability” to dynamic systems, conditions and models that allow predicting stable functioning and, moreover, sustainable development of an enterprise have not

been considered.

The category “sustainability” is interdisciplinary, it is used in various sciences and studies, changing the meaning over time. The word “sustainability” is derived from the word “abutment”, which means “a firmly rooted tradition, a fundamental principle, the basis of something” [1].

In industrialized countries, the problems of sustainability of an industrial enterprise are considered in connection with the possible avoidance of bankruptcy and competitiveness.

The term “sustainable development” became widespread after the publication of the report “Our Common Future”, prepared in 1987 by the International Commission on Environment and Development, created under the auspices of the United Nations [2]. The concept under consideration was introduced to study the relationship between man, society and nature.

As a rule, in modern scientific literature the definition of the concept of “sustainable development” is used, which is given in the book “Our Common Future” [4]: generations to satisfy their needs. The new strategy for the development of civilization does not proceed from the priorities of the present day, but makes an attempt to put the present and future generations on the same level, to equate them in terms of the possibilities of satisfying vital needs.

#### **General information about literature sources**

The reliability of the research results is determined by the appropriateness of the approaches and methods used, data obtained from official sources, including the statistical data of the State Statistics Committee of the Republic of Uzbekistan, the Ministry of Innovative Development and the joint-stock company “O‘zbekiston issiqlik elektr stansiyalari”, as well as the implementation of relevant conclusions and proposals in practice by responsible organizations.

#### **Literature review**

In works on sustainable development, a systematic approach is used, in which a complex structure is considered, including social and ecological systems, social, economic and natural interactions. Taking into account the target orientation, the considered indicators are divided into three categories - input impact indicators, state indicators, management indicators.

Sustainable development of an enterprise, according to most authors, is the state of functioning of an enterprise, which, under the influence of external and internal environmental factors, retains the ability to maintain and increase the initial state in the considered time period. The key reference point is the stable economic condition of the enterprise in the long term. Ensuring sustainable development of an industrial enterprise involves solving a triune scientific and practical task: substantiating theoretical foundations, searching for opportunities, forming and testing sustainable development tools. The transition from the scientific formulation of the problem to its practical solution presupposes a clear understanding of the specifics of the object of research itself and the environment of its functioning.

For further research, such a definition of the concept of “sustainable development of industry” is proposed - this is a complex process of interdependent quantitative and qualitative transformations in industry, which reflects its ability to provide for a long time the target needs of society, its own economic efficiency, preservation of the environment and resource base [4].

Economic methods are based on commodity-money relations in the modern digital economy. Astakhanov V.I. Describing the economic mechanism, he notes that “under the conditions of a market

economic system and the complex interaction of the system of prices, profits and losses, supply and demand, the role of economic management methods increases, they are the most important condition for creating an integrated and effective system for managing the economy of an enterprise”[5].

The formation and sustainable development of economic processes is always associated with the functioning of various organizational systems within the enterprise. Organizational features include: the theoretical foundations of sustainable development; organizational structure of the enterprise; a contingent of qualified personnel; problem solving technique and technology; innovative organization of labor; legal framework for the development of the industry, etc. The most important elements of the organizational features of sustainable development include goals, ways, algorithms, strategies, principles, information and organization structure. If in such a system at least one of the elements turns out to be ineffective, then the entire system in the development of the organization will experience the influence of the imperfection of this element.

The combination of the organizational and economic aspects of sustainable development forms the components of the mechanism, which is widely considered in the publications of modern scientists.

From the point of view of Lomakina I.L. “The organizational and economic mechanism of management serves as the center of production, innovation, financial, social and other activities and is considered as a means of setting in motion and ensuring the stable functioning of systems of sustainable development by production, scientific and technological progress, material and technical supply and efficient use of production resources”[6].

Fedorovich V.O., exploring the essence and structure of the organizational and economic mechanism of property relations, gives the following definition: “the organizational and economic mechanism of property management is a multi -level hierarchical system of the main interconnected elements and their typical groups, as well as ways of their interaction, including integration and disintegration, during and under the influence of which the economic relations (interests) of the state, participants and shareholders, creditors and personnel, including representatives of the top management of the corporation, and society are harmonized”[7].

Shilova T.A. in his work “Organizational and economic mechanism for ensuring the competitiveness of an enterprise” writes that “under the organizational and economic mechanism for ensuring the competitiveness of an enterprise, one should understand a set of methods and methods that enable an enterprise to have a stable position in the market, attract and retain consumers in the implementation of the main goal of its activities”[8].

Novikov A.V. under the organizational and economic mechanism of development by a small enterprise is understood a system of functional management mechanisms, a set of elements (tools, methods, methods, rules and procedures) that can become management mechanisms after a small enterprise has appropriate production, organizational and other structures [9].

Gupanova E.Yu. notes that in terms of its content, the organizational and economic mechanism of development is a set of interrelated organizational, economic, administrative, legal and other levers and methods of purposeful influence on the management object to ensure the reliable functioning of the quality management system. The organizational and economic mechanism of development should be considered as a purposeful process of solving particular problems of the functioning of the system

on the basis of a stable set of methods, norms and rules for the formation and regulation of relations between the elements of the organizational structure[10].

So, A. Kulman claims that “the economic mechanism is determined either by the nature of the initial phenomenon, or by the end result of a series of phenomena”, and clarifies that “the constituent elements of the mechanism are always both the initial phenomenon and the final phenomena, and the whole process that occurs in the interval between them” [11].

In other words, any organizational and economic mechanism is a certain set or sequence of economic phenomena and processes.

I.T. Balabanov under the organizational and economic mechanism of the enterprise understands the financial mechanism – “the system of financial leverage, expressed in the organization, planning and stimulation of the use of financial resources” [12].

The “center of gravity” from high quantitative indicators and levels of development, including production and consumption in the present, should move towards maintaining their high potential in the future. The present generation of the population is obliged to take care of the future and provide not deteriorating, but improving social, economic and environmental conditions of life for future generations. Achieving sustainable development in a differentiated industry is impossible without achieving sustainable development of its individual subsystems. Each region has a lot that is specific, which determines the need to search for regional features of models for the transition to sustainable development.

### **Research methodology**

The study used statistical and expert analysis, methods of deduction, induction and other standard methods and building trend models.

### **Main content**

The study of economic processes at the level of enterprises, the main link of the national economy, is of key importance. It is at this level of management that it is necessary to deeply understand what opportunities each economic entity has to achieve and maintain sustainable and effective economic development.

Ensuring sustainable effective development of the enterprise is reflected in the achievement of systems of goals (social, economic, technical and environmental) based on the consistent implementation of the theoretical foundation of responsibility to society. In this case, profit is no longer the ultimate goal, which should be guided by management activities. It is one of the economic goals and performs an important function - it acts as a means of achieving the entire system of goals. It is proposed to consider the following indicators as a criterion for assessing the sustainable effective development of an enterprise: achieving sustainable rates of economic growth of the main activity of the enterprise, making a profit sufficient for self-financing of economic development and ensuring its sustainable growth in dynamics.

The quality of the economy and society, necessary for entering the phase of economic growth, is just beginning to form, especially at industrial enterprises. Currently, there are efficient enterprises for which the interests of all participants in economic activity are mutually balanced. To increase the number of such enterprises, the process of their transition from the current to the desired state

(sustainable and effective development) should be supported by the state by organizing the development of programs for the reform of enterprises, especially industrial ones.

Ensuring the sustainable development of energy enterprises in Uzbekistan consists of econometric modeling, analysis of findings and future development directions. Econometric modeling allows not only to quantitatively analyze the expansion coefficient of coronas in the heat energy supply, but also to determine the share of the contributing factor and the contributing factor. In our country, the econometric modeling of the expansion multiplier of the energy plant allows to quantitatively determine the factor affecting the electricity produced in the plant and to develop an optimal plan for the development of the plant.

The following factor can be used to determine the development of the Uzbekiston Pecpublikaci energy puzzle:

1. As a result factor:

- Electricity production volume (mln.kWh) , (  $Y$  );

2. As a precipitating factor:

- The volume of coal production is thousand t . (  $X_1$  );

- The volume of consumed coal is thousand t . (  $X_2$  );

- The volume of extracted gas is mln.m<sup>3</sup> (  $X_3$  );

- The volume of consumed gas is mln.m<sup>3</sup> (  $X_4$  );

- The amount of investments in fixed capital is billion soums (  $X_5$  );

- The volume of industrial products is billion soums (  $X_6$  );

- The volume of electricity consumption by the population is 1000 kWh (  $X_7$  ).

First of all, before creating a multi-factor econometric model for the volume of electricity production in the Republic of Uzbekistan, it is necessary to determine the density of dependence on the factors that are included in this model.

For this purpose, the coupling coefficient is calculated in the factor cell. Now we will create a multi-factor econometric model for the volume of electricity production in the Republic of Uzbekistan based on the factors mentioned above. In this case, if the potentiation method is not used in the first model type, the values in the natural logarithm are not obtained. It has the following distribution:

$$\hat{Y} = 80304,337 + 1,656 x_1 - 1,241 x_2 + 0,063 x_3 - 0,239 x_4 - 0,352 x_5 + 0,280 x_6 - 15546,551 x_7$$
$$R = 0.985$$

$$R^2 = 0,9703 \quad F_{calculation} = 18,664$$

The coefficient of 77506.248 in the model increases the influence of the factor that is not taken into account, that is, the amount of electricity production in the Republic of Uzbekistan was 80304.337 million kWh.

It can be seen from the complex model that when the volume of coal production (  $X_1$  ) exceeds 1 thousand tons, the volume of electricity production in the Republic of Uzbekistan (  $Y$  ) can lead to a total increase of 1.656 million kWh. The amount of consumed coal (  $X_2$  ) may increase to 1,000 tons, and the amount of electricity production in the Republic of Uzbekistan (  $Y$  ) may decrease by 1,241 million kWh. The volume of extracted gas (  $X_3$  ), about 1 mln. It can be added that the increase of m

<sup>3</sup> can lead to the increase of the volume of electricity production in the Republic of Uzbekistan (  $Y$  ) by 0.063 million kWh. The volume of consumed gas (  $X_4$  ) may decrease by approximately 1 mln.m<sup>3</sup>, and the volume of electricity production (  $Y$  ) in the Republic of Uzbekistan may decrease by approximately 0.239 mln.kWh. The amount of investments in fixed capital (  $X_5$  ) 1 bln. per soum, the volume of electricity production (  $Y$  ) in the Republic of Uzbekistan may decrease by 0.352 million kWh.

The volume of industrial production (  $X_6$  ) 1 bln. per soum, the volume of electricity production (  $Y$  ) in the Republic of Uzbekistan may increase by 0.280 million kWh. The volume of electricity consumption by the population (  $X_7$  ) may decrease by 1 thousand kWh, the volume of electricity production (  $Y$  ) in the Republic of Uzbekistan may decrease by 15546.551 million kWh.

$R^2 = 0,9703$ - the coefficient of determination shows that 97.03 percent of the volume of electricity production in the Republic of Uzbekistan depends on the factor included in the multifactor econometric model . About 3 percent of the rest are caused by other factors that have not been taken into account. Fisher's  $F$  -criterion is used to test the effectiveness or statistical significance of the constructed multifactor econometric model.

Fisher  $F$  -criterion :

$$F = \frac{R^2(n - m - 1)}{(1 - R^2)m} (1)$$

in this ep:

$n$  - observation cone;

$m$  is the influencing factor in the model;

$R$  is the multifactor coupling coefficient.

The calculated Fisher criterion is compared with the value in the table. To find the Fisher coefficient in the table,  $k_1$  fold and  $k_2$  zapup to determine uctun:  $k_1 = n - m - 1$  and  $k_2 = m$ . Therefore, the constructed econometric model is called moc (adequate) to the Japanese being studied .  $F_{\text{хисоб}} > F_{\text{жадвал}}$

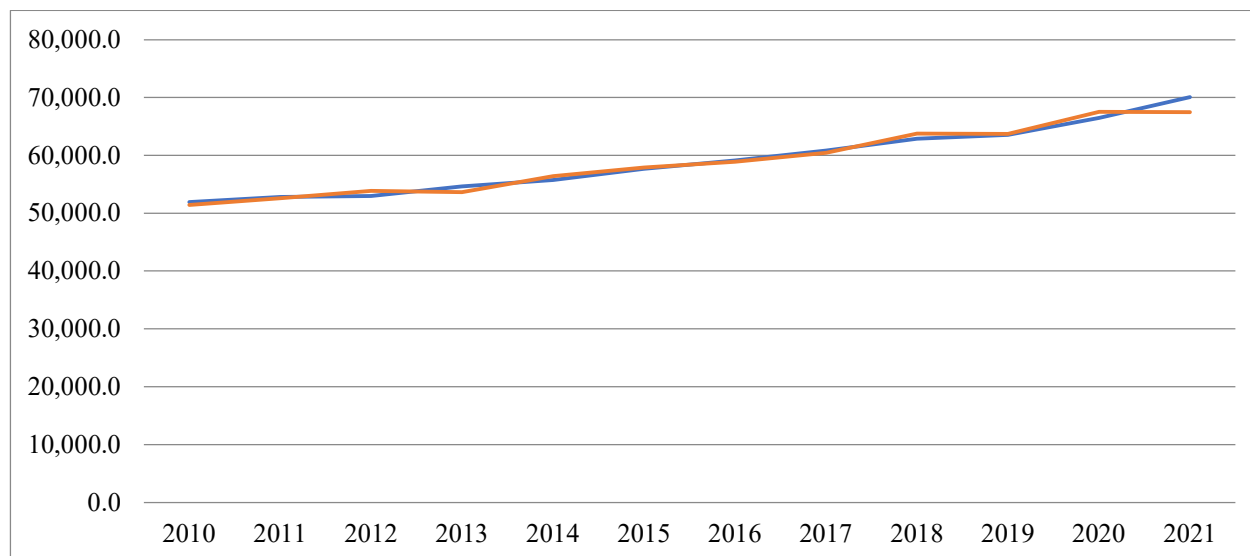
Therefore, the constructed econometric model is called statistically significant or moc emac to the Japanese being studied .  $F_{\text{хисоб}} < F_{\text{жадвал}}$  In this case, a non-linear econometric model is chosen instead of a linear econometric model.

$$F_{\text{calculation}} > F_{\text{table}}$$

$$F_{\text{calculation}} = 18,664 > F_{\text{table}} = 0,0066.$$

So, the created econometric model is statistically significant, it is able to directly determine the state of electricity production volume in the Republic of Uzbekistan .

Calculated and actual value of electricity production volume in the Republic of Uzbekistan in model ACOC is presented in table 1 below.



### 3.4-pacm. Calculated and actual value of electricity production volume in the Republic of Uzbekistan graphic

From table 1, it can be concluded that the calculated and real value of electricity production in the Republic of Uzbekistan during 2010-2021 have different values. In other words, it's not very big. It is possible to predict the volume of electricity production in the Republic of Uzbekistan for the future.

Table 1

Electricity network in the Republic of Uzbekistan in 2010-2021 and forecast multiplier in 2022-2026

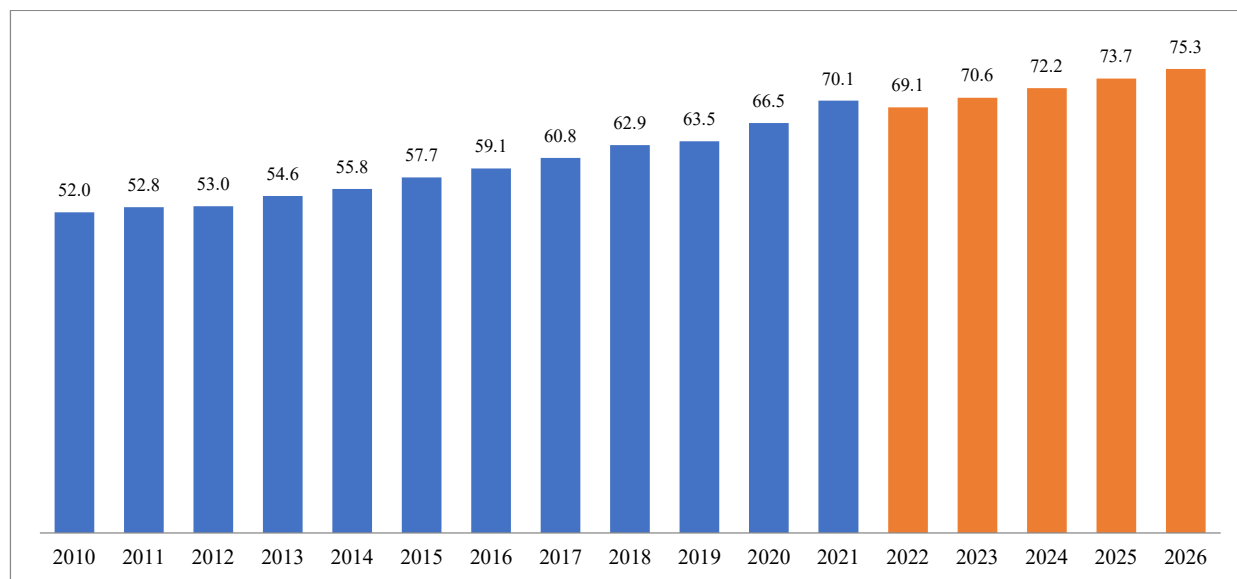
Years / Display name	Electricity production capacity (million kWh)	Coal production volume (thousand tons)	Amount of coal consumed (thousand tons)	Volume of extracted gas (mln.m <sup>3</sup> )	Volume of consumed gas (mln.m <sup>3</sup> )	Main to capital investments amount (billion)	Industry production volume (billion soums)	Population by electricity consumption volume (thousands kWh)
2010	51 976.3	3 629.4	2 644.5	65,958.5	52,794.3	16 463.7	38 119.0	1.8
2011	52 806.2	3 844.8	2 831.1	63 040.9	54 571.9	19,500.0	47 587.1	1.8

2012	52,999.6	3 752.9	3 831.0	61 531.0	47 343.1	24 455.3	57 552.5	1.8
2013	54 618.6	4 090.0	5 720.9	58 305.4	46 318.4	30 490.1	70 634.8	1.8
2014	55,766.0	4 396.8	5 264.5	54 161.2	43 273.8	37 646.2	84 011.6	1.8
2015	57 658.1	3 488.0	4 235.6	54,600. 5	41 524.5	44 810.4	97 598.2	1.8
2016	59 100.5	3 867.3	5 003.3	56 132.1	43 690.3	51 232.0	111 869.4	1.8
2017	60,820.1	4 038.6	4 724.6	56 642.2	46,065.3	72 155.2	148 816.0	1.9
2018	62,896.6	4 174.4	6 768.0	61 585.5	48 343.1	124 231.3	235 340.7	1.9
2019	63 531.6	4 047.9	5 698.6	60 711.9	49 711.0	195,927. 3	322 535.8	1.9
2020	66,500.7	4 133.1	7 988.2	49,768. 2	46,057.5	210 195.1	368 740.2	2.0
2021	70 100.0	4 167.4	7 414.3	53 414.7	44 505.7	188 133.9	333 190.6	1.95
<b>2022</b>	<b>69,052.3</b>	<b>4 203.4</b>	<b>7 821.1</b>	<b>52</b> <b>583.2</b>	<b>44,049.2</b>	<b>206,957.</b> <b>6</b>	<b>364</b> <b>740.5</b>	<b>1.97</b>
<b>2023</b>	<b>70 603.3</b>	<b>4 239.4</b>	<b>8 227.9</b>	<b>51</b> <b>751.8</b>	<b>43 592.7</b>	<b>225,781.</b> <b>4</b>	<b>396</b> <b>290.3</b>	<b>1.98</b>
<b>2024</b>	<b>72 154.4</b>	<b>4 275.4</b>	<b>8 634.6</b>	<b>50,920.</b> <b>3</b>	<b>43 136.1</b>	<b>244</b> <b>605.1</b>	<b>427</b> <b>840.2</b>	<b>2.0</b>
<b>2025</b>	<b>73 705.4</b>	<b>4 311.5</b>	<b>9 041.4</b>	<b>50,088.</b> <b>9</b>	<b>42,679.6</b>	<b>263</b> <b>428.8</b>	<b>459</b> <b>390.1</b>	<b>2.02</b>
<b>2026</b>	<b>75 256.5</b>	<b>4 347.5</b>	<b>9 448.2</b>	<b>49</b> <b>257.4</b>	<b>42 223.1</b>	<b>282</b> <b>252.5</b>	<b>490</b> <b>939.9</b>	<b>2.04</b>

Using the information in the table 1, we will form the graph of changes in the forecast period based on the factors influencing the volume of electricity production in the Republic of Uzbekistan . In order to emphasize the dynamics in it, a graphic is given in the diagram 1.

From the graph in the picture, we can see that based on the considered factors, the volume of electricity will reach 75.3 billion kWh in 2026 and will increase by 107.4% compared to 2021.





**Diagram 1. Actual and estimated values of <sup>1</sup>electricity production in the Republic of Uzbekistan in 2010-2021 ( billion kWh )**

There is another way to create a multi-factor econometric model of the volume of electricity production in the Republic of Uzbekistan and the factors influencing it. In contrast to the first type of model, in the case where the potentiation method is used, the natural logarithm indicators of the values are taken and used. The regression equation has the following product:

$$\hat{Y} = 10,805 + 0,013 x_1 - 0,046 x_2 + 0,063 x_3 - 0,207 x_4 - 0,137 x_5 + 0,262 x_6 + 0,694 x_7$$

$$R = 0.9796$$

$$R^2 = 0,9597 \quad F_{\text{calculation}} = 13,603$$

$R^2 = 0,9597$ - the coefficient of determination shows that 95.97 percent of the volume of electricity production in the Republic of Uzbekistan depends on the factor included in the multifactor econometric model. More than 4 percent of the rest are caused by other factors that have not been taken into consideration.

It can be seen from the complex model that when the volume of coal production ( $\ln X_1$ ) exceeds 1 thousand tons, the volume of electricity production in the Republic of Uzbekistan ( $\ln Y$ ) can lead to a total increase of 0.013 million kWh. The amount of consumed coal ( $\ln X_2$ ) may reach 1 thousand tons, and the amount of electricity production in the Republic of Uzbekistan ( $\ln Y$ ) may decrease by 0.046 million kWh. The volume of extracted gas ( $\ln X_3$ ), approximately 1 mln. m<sup>3</sup>, it can increase the volume of electricity production ( $\ln Y$ ) in the Republic of Uzbekistan by 0.063 million kWh. The volume of consumed gas ( $\ln X_4$ ) can decrease by 1 mln.m<sup>3</sup>, the volume of electricity production in the Republic of Uzbekistan ( $\ln Y$ ) can decrease by 0.207 mln.kWh. The amount of investments in fixed capital ( $\ln X_5$ ) is 1 bln. per soum, the volume of electricity production in the Republic of Uzbekistan ( $\ln Y$ ) may decrease by 0.137 million kWh. The volume of industrial output ( $\ln X_6$ ) is 1

<sup>1</sup> Author development

bln. per soum, the volume of electricity production in the Republic of Uzbekistan ( $\ln Y$ ) may increase by 0.262 million kWh. The volume of electricity consumption by the population ( $\ln X_7$ ) may increase by 1 thousand kWh, and the volume of electricity production in the Republic of Uzbekistan ( $\ln Y$ ) may increase by 0.694 million kWh.

The calculated Fshep criterion is compared with the value in the table. From this it turned out that each  $F_{\text{calculation}} > F_{\text{table}}$ , i.e.

$$F_{\text{calculation}} = 13,602 > F_{\text{table}} = 0,012$$

So, the created econometric model is statistically significant, it is able to directly determine the state of electricity production volume in the Republic of Uzbekistan. In the model, it is possible to predict the volume of electricity production in the Republic of Uzbekistan for the future.

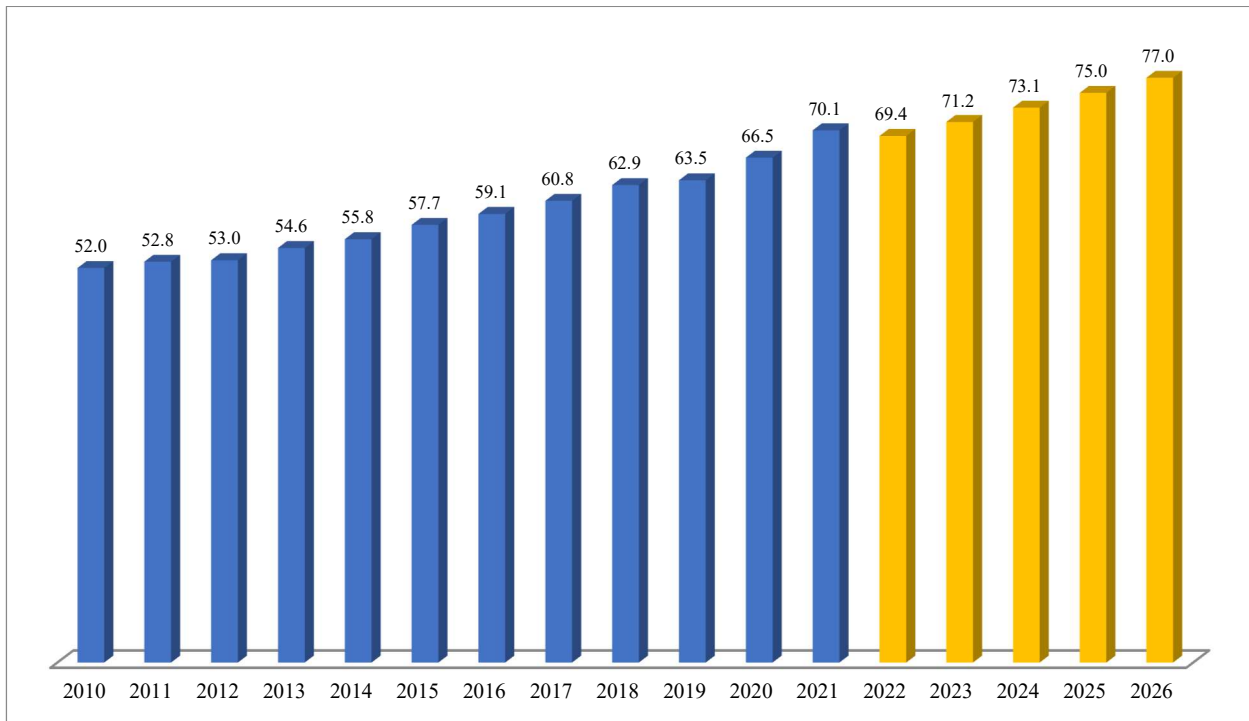
**Table 2**

**Electricity network in the Republic of Uzbekistan in 2010-2021 and forecast multiplier in 2022-2026**

Years	Electricity work release capacity (million kWh)	Coal digging release volume (thousand tons)	Consumption done coal volume (thousand tons)	Dig up volume of released gas (mln.m <sup>3</sup> )	Consumption volume of gas produced (mln.m <sup>3</sup> )	Main to capital investments amount (billion soums)	Industry product volume (billion soums)	Population by electricity consumption volume (thousands kW.s)
2010	51 976.3	3 629.4	2 644.5	65,958.5	52,794.3	16 463.7	38 119.0	1.8
2011	52 806.2	3 844.8	2 831.1	63 040.9	54 571.9	19,500.0	47 587.1	1.8
2012	52,999.6	3 752.9	3 831.0	61 531.0	47 343.1	24 455.3	57 552.5	1.8
2013	54 618.6	4 090.0	5 720.9	58 305.4	46 318.4	30 490.1	70 634.8	1.8
2014	55,766.0	4 396.8	5 264.5	54 161.2	43 273.8	37 646.2	84 011.6	1.8
2015	57 658.1	3 488.0	4 235.6	54,600.5	41 524.5	44 810.4	97 598.2	1.8
2016	59 100.5	3 867.3	5 003.3	56 132.1	43 690.3	51 232.0	111 869.4	1.8
2017	60,820.1	4 038.6	4 724.6	56	46,065.3	72 155.2	148	1.9

				642.2			816.0	
2018	62,896.6	4 174.4	6 768.0	61 585.5	48 343.1	124 231.3	235 340.7	1.9
2019	63 531.6	4 047.9	5 698.6	60 711.9	49 711.0	195,927.3	322 535.8	1.9
2020	66,500.7	4 133.1	7 988.2	49,768 .2	46,057.5	210 195.1	368 740.2	2.0
2021	70 100.0	4 167.4	7 414.3	53 414.7	44 505.7	188 133.9	333 190.6	1.95
<b>2022</b>	<b>69 360.2</b>	<b>4 207.4</b>	<b>8 502.7</b>	<b>52,661 .8</b>	<b>44 174.5</b>	<b>296 825.4</b>	<b>495 536.4</b>	<b>1.97</b>
<b>2023</b>	<b>71 199.9</b>	<b>4 246.6</b>	<b>9 251.5</b>	<b>51 911.1</b>	<b>43 773.0</b>	<b>381 625.0</b>	<b>615 944.8</b>	<b>1.99</b>
<b>2024</b>	<b>73 088.5</b>	<b>4 286.1</b>	<b>10,066.2</b>	<b>51 171.2</b>	<b>43 375.1</b>	<b>490 651.0</b>	<b>765 610.7</b>	<b>2.0</b>
<b>2025</b>	<b>75,027.1</b>	<b>4 326.0</b>	<b>10,952.6</b>	<b>50 441.8</b>	<b>42,980.9</b>	<b>630 824.4</b>	<b>951 643.3</b>	<b>2.02</b>
<b>2026</b>	<b>77 017.2</b>	<b>4 366.3</b>	<b>11,917.1</b>	<b>49,722 .7</b>	<b>42 590.2</b>	<b>811 043.8</b>	<b>1 182 879</b>	<b>2.04</b>

Using the information in the table, we will form the graph of changes in the forecast period based on the factors influencing the volume of electricity production in the Republic of Uzbekistan . In order to emphasize the dynamics in it, a graphic is given in the diagram 2.



**Diagram 2. Actual and estimated values of electricity production in the Republic of Uzbekistan in 2010-2021 (billion kWh)**

From the graph in the picture, we can see that, based on the factors considered, the amount of electricity in 2026 will be 77 billion. kW hour and 70.1 billion kW in 2021. 7 billion per hour. kW will be more per hour and as a result it will increase by 109.8%. But for this, it is necessary to start new energy production facilities and increase energy efficiency.

### **Conclusion**

After building an econometric models of sustainable developing of energy system in Uzbekistan. We can that in our country must be doing more works in this sphere. They are:

- revising the principles of formation of conditions for sustainable development for enterprises of the thermal energy system;
- investing renewable energy resources for developing a green economy;
- reducing the coal digging release to the minimal index;
- development of new types of power generation.

## References

1. Encyclopedic Dictionary / Ch.ed. A.M.Prokhorov. - M.: Encyclopedia, 1979. - p. 129
2. Results of the UN Conference on Environment and Development [Rio de Janeiro, June 3 - 14, 1992] // World of Science. - 1992. - T.36, N 4. - P.1-7.
3. V.M.Rodionova, M.A. Fedotova The financial stability of the enterprise in the context of inflation. - M.: Publishing house "Perspective", 1995. P. 40
4. Pashuta M. Innovations as a factor of accelerated development of the economy [Text] / M. Pashuta // Staff. - 2006. - No. 6. - P.23.
5. Astakhanov V.I. Study of management methods / V.I.Astakhov // Issues of regional economics. - 2010. - No. 4. - P. 31-39
6. Lomakina I.L. Methodological bases for the formation of the organizational and economic mechanism of enterprise management / I.L.Lomakin // Proceedings of the Far Eastern State Technical University. - 2007. - No. 146 - P. 186
7. Fedorovich V.O. Composition and structure of the organizational and economic mechanism for managing the property of large industrial corporate entities / V.O. Fedorovich // Siberian Financial School. - 2006. - No. 2 - S. 45–54
8. Shilova T.A. Organizational and economic mechanism for ensuring the competitiveness of the enterprise / T.A. Shilova [Electronic resource]. – Electron . – Moscow, [2011]. – Access mode: [http://www.rusnauka.com/SND/Economics/10\\_shilova.doc.html](http://www.rusnauka.com/SND/Economics/10_shilova.doc.html)
9. Novikov A.V. A modern view of the organizational and economic mechanism of managing a Russian enterprise / A.V. Novikov // Economics and environmental management. - 2011. - No. 2 - p. 152
10. Gupanova Yu.E. Methodological approaches to the formation of the organizational and economic mechanism of quality management at the enterprises of the baking industry / Yu.E. Gupanova // Omsk Scientific Bulletin. - 2008. - No. 1 (63) - P. 46
11. Kulman A. Economic mechanisms: Per. from French; under total r units N.I. Khrustaleva. Moscow: Progress; Univers , 1993. - 12 p.
12. Balabanov I.T. Fundamentals of financial management: Proc . n special. M.: Finance and statistics, 1997 - 218 p.
13. Bloomberg, ESG assets may hit \$ 53 trillion by 2025, a third of global AUM.
14. Informations of the joint stock company "O'zbekiston issiqlik elektr stansiyalari"