



KSPEU

MINISTRY OF SCIENCE AND HIGHER EDUCATION OF THE RUSSIAN FEDERATION  
Federal State Budgetary Educational Institution of Higher Education  
«KAZAN STATE POWER ENGINEERING UNIVERSITY»  
(FSBEI HE «KSPEU»)

APPROVED

Director of the Institute of Digital  
Technologies and Economics

\_\_\_\_\_ Zainullin R.R.

«24» \_\_\_\_\_ February \_\_\_\_\_ 2026

**WORK PROGRAM FOR THE DISCIPLINE**

**B1.M.04.01 Industry economics**

Field of training

38.03.02 Management

Qualification

Bachelor's Degree

Kazan, 2026

The program was developed by:

Name Department name of the EOP developer	Position, academic degree, academic title Professor, Doctor of Economics, Professor	FULL name of the developer Burganov R. A.
EOP	Associate Professor, Candidate of Economics, Associate Professor Khusainova E. A.	Khusainova E. A.

Coordination	Name divisions	Date	No. protocol	Signature
Approved	By the EOP	05.03.2026	11	_____ Acting Head of Department, Associate Professor Livshits S.A.
Agreed	Management	10.02.2026	Protocol №5	_____ Head of the Department., Doctor of Social Sciences, prof.Makhiyanova A.V.
Agreed	Educational and Methodological Council of IDTE	24.02.2026	Protocol №6	_____ Director, Ph.D., Associate Professor, Zainullin R.R..
Approved	Scientific Council of IDTE	24.02.2026	Protocol №6	_____ Director, Ph.D., Associate Professor, Zainullin R.R.

## 1. Purpose, objectives and planned results of training in the discipline

The purpose of mastering the discipline is to form knowledge about the patterns and indicators of the development of the economy of the industry (energy).

The objectives of the discipline are:

- ✓ study of the place and role of the industry's economy in the development of the national economy;
- ✓ study of methods and means of determining the state of the industry's economy;
- ✓ determination of the efficiency of the functioning of the industry's economy;
- ✓ studying the prospects for the development of the industry in modern conditions.

Competencies and indicators formed by students:

Code and name of competence	Code and name of the indicator
UC-2 Able to define a range of tasks within the scope of a given goal and select the best ways to accomplish them, based on applicable legal norms, available resources, and constraints	UC-2.2 Selects the optimal method for solving problems, taking into account applicable legal norms and existing conditions, resources, and limitations
UC-10 Able to make informed economic decisions in various areas of life	UC-10.1 Demonstrates knowledge of the conceptual and categorical apparatus and methods of economic science
	UC-10.2 Demonstrates proficiency in modern methods of calculating indicators characterizing economic processes and phenomena in various areas of life

## 2. Place of the discipline in the structure of the OP

The discipline "Economics" belongs to the mandatory part of the curriculum in the direction of training 38.03.01 "Economics".

*Previous disciplines (modules), practices, research, etc. \_\_\_*

- Economy,
- Management,
- Organization of business activities.

*Subsequent disciplines (modules), practices, research, etc.*

- Economic and mathematical modeling,
- Enterprise planning.

## 3. Structure and content of the discipline

### 3.1. Structure of the discipline

### For full-time education

Type of academic work	Total ZE	Total hours	Semester
			4
TOTAL LABOR INTENSITY OF THE DISCIPLINE	3	108	108
CONTACT WORK*	-56	56	56
CLASSROOM WORK	1.38	50	50
Lectures	0.44	16	16
Practical (seminar) classes	0.94	34	34
Laboratory work	-	-	-
INDEPENDENT WORK ABOUT THE STUDENT	1.62	58	58
Study material	development 1.62	58	58
Course project	-	-	-
Course work	-	-	-
Preparation for intermediate certification	0	0	0
Intermediate certification:			Z
			-

### For full-time and part-time education

Type of academic work	Total ZE	Total hours	Semester
			5
TOTAL LABOR INTENSITY OF THE DISCIPLINE	3	108	108
CONTACT WORK*	-58	58	58
CLASSROOM WORK	1.3	48	48
Lectures	0.89	32	32
Practical (seminar) classes	0.44	16	16
Laboratory work			
INDEPENDENT WORK ABOUT THE STUDENT	1.7	60	60
Development of educational material	1.56	56	56
Course project	-	-	-
Course work	-	-	-
-Preparation for intermediate certification	0,11	4	4
Intermediate certification:			Z
			-

### 3.2. Content of the discipline, structured by sections and types of classes

Sections Discipline sections	Total hours	Distribution of labor intensity by type of academic work				Forms and type of control	Indexes of indicators of formed competencies
		lectures	lab. rab.	pr. zan.	sam. rab.		
Section 1	30	10	0		20	TK1	UK-2.2 Z UK-10.1 Y UK-10.2 ZU
Section 2	20	6	0		14	TK2	UK-2.2 ZU UK-10.1 ZU UK-10.2 ZU
Credit	0				0	<b>OM</b>	UK-2.2 ZU UK-10.1 ZU UK-10.2 ZU
<b>Total for 3 semester</b>	<b>50</b>	<b>16-34</b>	-		<b>34</b>		
<b>TOTAL</b>	<b>50</b>	<b>16</b>			<b>34</b>		

### 3.3. Content of the discipline

#### Section 1. General economic aspects of the industry functioning

##### Topic 1.1. Industry (energy)economics as an object of research and analysis

Issues of methodological support for studying the development of the industry's economy, definition of the energy economy as an object of study, industry structure of the national economy, analysis and scientific and practical features of the functioning of the energy economy.

##### Topic 1.2 Production activity as an integral part of the industry's economy

Identification of four phases of the movement of products – goods) - production, distribution, exchange, consumption, each of them has its own characteristics for scientific research and practical implementation. Definition of the essence of electricity generation and technology of energy production based on generating units. Information is given about the united energy systems (UES), the unified energy system of the country (UES). Energy production indicators: electricity generation at the level in physical, cost and labor dimensions at the level of the region, country: number of hours of use of installed capacity of power plants, energy intensity of production, energy intensity of GDP, efficiency of electricity generation.

##### Topic 1.2 Distribution of products in the industry's economy

Distribution of products (goods) as an activity for planning, implementing and controlling the movement of products (goods) from the manufacturer to the consumer. Structure of electricity distribution Organization for the management of the unified national (all-Russian) electric grid - open joint-stock company "Federal Grid Company of the Unified Energy System", fourteen interregional distribution grid organizations, about 3,000 territorial grid organizations. Dispatcher and Technological Management (DTU). Management of the Russian energy system. The system operator. Efficiency of electricity distribution - the length of power transmission lines (air, cable-to-air and cable), the number of substations, physical and technological aging of electric networks, the volume of electricity losses during transmission through electric networks, the volume of attracted investments in the field of electricity distribution creation of economic methods to stimulate the efficiency of network organizations.

##### Topic 1.4 Mechanism of product exchange in the industry's economy

The essence and problems in the exchange phase. Needs and demand. Price and non-price factors:

Low-elastic demand for electricity. Intermediaries between buyers and sellers of electricity. Major market players: Trading System Administrator JSC (PBX JSC), Non-Commercial Partnership Association Market Council for Organizing an Effective System of Wholesale and Retail Trade in Electric Energy and Capacity (the "Partnership"), Financial Settlement Center JSC (CFR JSC). Indicators and efficiency of exchange: the number and value of concluded contracts; the number of outstanding contracts; compliance with the deadline for delivery of electricity; the number of people receiving access to the wholesale market system, etc. Indicators of financial calculations: the volume of electricity sold (purchased), the volume of capacity sold (purchased), costs associated with contract maintenance; profitability of activities in the energy sector exchange rate.

Topic 1.5. Product consumption in the industry's economy

The essence of electricity consumption. Features of electricity consumption. Classification of energy consumers. Principles of rational behavior in energy consumption of all types: motivation to optimize energy costs; monitoring of its own energy market potential; flexible positioning in energy markets with an active search for effective suppliers; compliance of the enterprise's energy management system with the conditions of operation in a competitive market; risk management arising in energy markets. Active and passive consumer behavior options. Structure of energy market potential. Calculation of the company's electricity needs.

## Section 2. Factors and trends in the development of the energy economy

2.1. Competitive and monopoly relations in the industry's economy

Prerequisites for reforming the electric power industry. Modeli electric power industry markets. Stages of energy reform. Wholesale market participants. Features capacity realization and electricity sales. Wholesale market sectors: long-term bilateral contracts, the day-ahead market (hereinafter referred to as RSV), and the balancing market (BR). Retail electricity market. Competition and monopoly in the energy market. Prices and pricing policy in the energy economy Pricing in the retail electricity market. Sales allowance. Special state bodies: the Regional Economic Commission of the REC and the Federal Tariff Service (FTS). Energy business in the development of the industry's economy.

Topic 2.2 State regulation of the industry's economy. Energy policy

Theories about the boundaries and directions of state participation in the economy. The essence, directions and methods of economic policy Factors influencing the effectiveness of economic policy: economic situations; the level of economic thinking. Directions of economic policy. Methods of economic policy: economic and administrative, direct and indirect methods. Forecasting. Energy policy in the development of the industry's economy. Main objectives of energy policy. Subjects of energy policy

Topic 2.3 Current trends in the development of the industry's economy

Federal Energy Strategy of Russia for the period up to 2035 and indicators of its implementation. Regional energy policy. Global trends in the energy sector. Konception of the development of the fuel and energy complex. Key issues in energy development. Digitalization of the economy and energy sector. The main effects of the introduction of digital technologies in the energy sector of the Russian Federation: International aspects of the development of the industry's economy. Concept of sustainable energy development. Indicators of sustainable economic development:

### 3.4. Thematic plan of practical exercises

1. Subject and methodology of the course " Industry Economics
2. Industry structure of the country's economy

3. Energy economics as an object of analysis
4. Production activity as an integral part of the industry's economy
5. Distribution of products in the industry's economy
6. Product exchange mechanism in the industry's economy
7. Product consumption in the industry's economy
8. Fundamentals of regulatory regulation of the industry
9. Electricity and capacity market
10. Prices and pricing policy in the energy sector
11. State regulation of the industry's economy
12. Energy policy in the development of the industry's economy
13. Energy business in the development of the industry's economy
14. Energy saving and energy audit
15. Production concentration
16. Current trends in the development of the fuel and energy sector
17. International aspects of the industry's economic development

### 3.5. Thematic plan of laboratory work

This type of work is not provided for in the curriculum.

### 3.6. Course project /course work

This type of work is not provided for in the curriculum.

## 4. Evaluation of learning outcomes

Assessment of the results of training in the discipline is carried out within the framework of current control and intermediate certification, conducted according to the point-rating system (BRS).

Scale of assessment of learning outcomes in the discipline:

Code Competence	code competence indicator	Plan it- Code of the competence indicator Planned results of training in the discipline	Level of formation of the competence indicator			
			High	Average	Below average	Low
			from 85 to 100	from 70 to 84	from 55 to 69	from 0 to 54
			Assessment scale			
			excellent	good	satisfactory	unsatisfactory
			credited			not credited
UC-2 Able to define a range of tasks within the scope of a given	UC-2.2 Selects the optimal method for solving problems, taking into account applicable	know: the best way to solve problems, taking into account the current legal norms and existing conditions,	: complete and meaningful answers to ticket questions (theoretical and	answers to ticket questions (theoretical or practical tasks) with some	for performing calculation works in the semester and test	for weak and incomplete performance of semester calculation

		resources and restrictions	practical tasks);	errors ;	tasks with significant errors ;	n papers and test tasks.
		be able to:				
		с choose theыбирать best way to solve problems, taking into account the current legal norms and existing conditions, resources and restrictions	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation work in the semester and test tasks with significant errors	for weak and incomplete performance of semester calculation papers and test tasks.
		методом оптимальнusing the optimal method способа of problem solving, taking into account the current legal norms and existing conditions, resources and limitations	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation works in the semester and test tasks with significant errors	for weak and incomplete performance of semester calculation papers and test tasks.
UC-10 Able to make informed economic decisions in various areas of life	UC-10.1 Demonstrates knowledge of the conceptual and categorical apparatus and methods of economic science	know:				
		conceptual and categorical apparatus and methodsы of economic science	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors;	for performing calculation works in the semester and test tasks with significant errors	for weak and incomplete performance of calculation works in the semester and test tasks.
		демонстрирдем onstrate knowledge of the conceptual and categorical apparatus and methods of economic science	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors;	for performing calculation works in the semester and test tasks with significant errors	for weak and incomplete performance of calculation works in the semester.

						and test tasks.
		possess				
		methods of demonstrating knowledge about the conceptual and categorical apparatus and methods of economic science	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation works in the semester and test tasks with significant errors	for weak or incomplete performance of calculation papers in the semester and test tasks.
		know				
	UC-10.2 Demonstrates proficiency in modern methods of calculating indicators characterizing economic processes and phenomena in various areas of life	up-to-date methods and calculation of indicators that characterize economic processes and phenomena in various areas of life	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors;	for performing calculation work in the semester and test tasks with significant errors	for weak or incomplete performance of calculation papers in the semester and test tasks.
		be able to:				
		use up-to-date methods for calculating indicators that characterize economic processes and phenomena in various areas of life	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation work in the semester and test tasks with significant errors	for weak and incomplete execution of semester calculation papers and test tasks.
		own:				
		heer master of modern methods of calculating indicators that characterize economic processes and phenomena in various areas of life	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation work in the semester and test tasks with significant errors	for weak and incomplete execution of semester calculation papers and test tasks.

Evaluation materials for conducting current control and interim certification are given in the Appendix to the discipline's work program.

The full set of tasks and materials required for evaluating the results of training in the discipline is stored at the department of developera.

## **5. Educational, methodological and informational support of the discipline**

### **5.1. Educational and methodological support**

#### *5.1.1. Main literature*

1 Burganov R. A. Ekonomika otrasli (energetika) : uchebnik [Economics of the industry (energy): textbook]. - Kazan: KGEU, 2023. - 115 p. - URL: <https://lib.kgeu.ru/>. - Text : electronic.

2. Rogalev N. D., Zubkova A. G., Masterova I. V. Ekonomika energetiki : uchebnik [Economics of Energy: textbook]. - Moscow: MPEI Publishing House, 2011. - 320 p. - URL: <https://www.studentlibrary.ru/book/ISBN9785383003244.html>. - ISBN 978-5-383-00324-4. - Text: electronic.

3. Organizational and institutional changes in the service sector : a textbook / R. A. Burganov. Kazan: KGEU Publ., 2021, 91 p. (in Russian): <https://lib.kgeu.ru>. - Text : electronic.

#### *5.1.2. Additional literature*

1. экономика Burganov R. A. Vzaimodeystvie ekonomiki i elektroenergeticheskoi sfery: institutsionnoe izmerenie: monografiya [Interaction of the economy and the electric power sector: an institutional dimension: a monograph]. Moscow: INFRA-M, 2017. 124 p. ISBN 978-5-16-012822-1.

2. Planning at the enterprise: textbook / R. A. Burganov. Saint Petersburg: Lan Publ., 2020, 260 p. (in Russian): <https://e.lanbook.com/book/138161>. - ISBN 978-5-8114-4246-1. - Text: electronic.

3. Institutional aspects of transformation of the service sector: [monograph] / R. A. Burganov. Kazan: KGEU Publ., 2014, 200 p. (in Russian): <https://lib.kgeu.ru>. - 4771. - ISBN 978-5-89873-407-7. - Text: direct.

4. Rynok energoressursov : uchebnik [Energy Resource Market: textbook]. Moscow: Knorus Publ., 2022, 298 p. (Bachelor's Degree). - URL: <https://book.ru/book/943227>. - ISBN 978-5-406-09623-9. - Text: electronic.

### **5.2. Information support**

#### **5.2.1. Electronic and Internet resources**

n /	a Name of professional databases	Address
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1	Russian National Library	<a href="http://nlr.ru/2">http://nlr.ru/2</a>
2	All-Russian mathematical Portal	<a href="http://www.mathnet.ru/3">http://www.mathnet.ru/3</a>
3	National Electronic Library of the Bible (NEB)	<a href="https://rusneb.ru/4">https://rusneb.ru/4</a>
4	CyberLeninka	<a href="https://cyberleninka.ru/5">https://cyberleninka.ru/5</a>
5	Scientific electronic library eLibrary.RU	<a href="http://elibrary.ru">http://elibrary.ru</a>
6	Electronic Library of Dissertations (RSL)	<a href="http://diss.rsl.ru">diss.rsl.ru</a>
7	Springer	<a href="http://www.springer.com">www.springer.com</a>
9	Russian Science Citation Index (RSCI)	<a href="http://clarivate.ru">clarivate.ru</a>
10	Scopus	<a href="http://www.scopus.com">www.scopus.com</a>
11	Web of Science	<a href="https://webofknowledge.com/12">https://webofknowledge.com/12</a>
12	zbMATH	<a href="http://www.zbmath.org">www.zbmath.org</a>

### 5.2.2. Professional databases / Information and reference systems

No n /	a Name of professional databases	Address	Access mode
1	Reference legal system "Consultant Plus"	<a href="http://consultant.ru">http://consultant.ru</a>	login and password
2	Legal reference system for the legislation of the Russian Federation	<a href="http://garant.ru">http://garant.ru</a>	login and password

### 5.2.3.2.3. Licensed and freely distributed software of the Discipline

n /	a Software name	Description	Details of supporting documents
1	Windows 7 Professional (FSTEC certified) User operating system "CJSC "TaksNet"	Service "" PO No.	0000/2014 dated 27.05.2014 Not applicable. right. Perpetual 2 Windows 10 User Operating system Contract no. Tr096148 dated 29.09.2020, licensor
2	Windows 10	User Operating System	Contract No. Tr096148 dated 29.09.2020, licensor Softline Trade LLC, license type (type) not applicable. right, license validity
period 3	Chrome browser	Internet search and viewing system	Free license Neiskl. right. Perpetual
4	Office Professional Plus 2007 Russian OLP NL	Software package containing the necessary office programs	Contract No. 225 / 10, licensor of Soft Line Trade CJSC, license type (type) not applicable. law, license validity
period 5	Office Standard 2007 Russian OLP NL AcademicEdition+	Software package containing the necessary office programs	agreement No. 21/2010 of 04.05.2010, licensor of Soft Line Trade CJSC, license type (type) not applicable. right, the license is valid indefinitely

## 6. Material and technical support of the discipline

Name of the type of educational work	Name of the educational audience, specialized laboratory	List of necessary equipment and technical means of teaching
Lectures	Educational audience for	classes Specialized educational furniture,

	conducting lecture-type	technical means of teaching that serve to present educational information to a large audience (multimedia projector, computer (laptop), screen), demonstration equipment, educational and visual aids
Practical classes	Training room for conducting seminar-type classes, group and individual consultations, ongoing monitoring and intermediate certification	Specialized educational furniture, technical training tools (multimedia projector, computer (laptop), screen), etc.
Independent work	Computer class with Internet access B-600a	Specialized educational furniture for 30 seats, 30 computers, technical training equipment (multimedia projector, computer (laptop), screen), video cameras, software
	Reading room Library Reading room	Specialized furniture, computer equipment with Internet access and Internet access EIOS, screen, multimedia projector, software

## **7. Features of the organization of educational activities for persons with disabilities and disabled people**

Persons with disabilities and persons with disabilities have the opportunity to move freely from one educational and laboratory building to another, to climb all floors of educational and laboratory buildings, to study in educational and other premises, taking into account the peculiarities of psychophysical development and health status.

Conditions of unhindered access to all educational facilities are provided for the training of persons with disabilities and disabled people with musculoskeletal disorders. Information about special conditions created for students with disabilities and disabilities is available on the university's website <url>[www//kgeu.ru](http://www//kgeu.ru) There is a possibility to provide technical assistance by an assistant, as well as sign language interpreters and tiflosurd interpreters.

To adapt to the perception of reference and educational material on the discipline by persons with disabilities and hearing impairments, the following conditions are provided:

- for better orientation in the classroom, use alerts about the beginning and end of the lesson (the word "call" is written on the blackboard).

- the teacher attracts the attention of a hard-of-hearing student with a gesture (a hand is placed on the shoulder, a soft pat is performed);

- when talking to a student, the teacher looks at them, speaks clearly, in short sentences, providing the ability to read lips.

Compensation for difficulties in speech and intellectual development of hard-of-hearing students is carried out by:

- use of diagrams, diagrams, drawings, computer presentations with hyperlinks that comment on individual components of the image;

- regular use of exercises for graphic selection of essential features of objects and phenomena;

-providing an opportunity for the student to receive targeted advice by e-mail as needed.

The following conditions are provided for adaptation to the perception of reference, educational, and educational materials provided by the educational program for the chosen field of study by persons with disabilities and visually impaired people:

-the official website on the Internet is being adapted to meet the special needs of visually impaired people, and large-scale reference information on the schedule of training sessions is provided.

-the teacher and his interlocutor (if necessary) who are present at the lesson are introduced to the students, and each time the person to whom the teacher addresses is called;

-actions, gestures, and movements of the teacher are briefly and clearly commented on.

-printed information is provided in a large font (starting from 18 points) and is fully voiced.

-the necessary level of illumination of the premises is provided;

-it is possible to use computers during classes and the right to record explanations on a voice recorder (at the request of students).

The form of conducting current and intermediate certification for students with disabilities and disabilities is determined by the teacher in accordance with the curriculum. If necessary, students with disabilities, taking into account their individual psychophysical characteristics, are given the opportunity to pass an interim certification orally, in writing on paper, in writing on a computer, in the form of testing, etc., or are given additional time to prepare an answer.

## **8.Methodological recommendations for teachers on the organization of educational work with students.**

Methodological support of the process of educating students is one of the determining factors of high quality of education. A university teacher, demonstrating high professionalism, erudition, a clear civic position, self-discipline, and a creative approach to solving professional problems, contributes to the formation of a harmonious personality during the educational process.

When implementing the discipline, the teacher can use the following methods of educational work:

- methods of forming a person's consciousness (conversation, dispute, suggestion, instruction, control, explanation, example, self-control, story, advice, persuasion, etc.);

- methods of organizing activities and forming behavioral experience (task, public opinion, pedagogical requirement, assignment, training, creating educational situations, training, exercise, etc.);

- methods of motivating activity and behavior (approval, encouragement of social activity, censure, creating success situations, creating situations for emotional and moral experiences, competition, etc.)

When implementing the discipline, the teacher should take into account the following areas of educational activity:

*Civic and patriotic education:*

- formation of students ' holistic worldview, Russian identity, respect for their family, society, state, spiritual, moral and socio-cultural values accepted in the family and society, national, cultural and historical heritage, formation of the desire for its preservation and development;

- formation of students ' active citizenship based on traditional cultural, spiritual and moral values of Russian society, in order to increase their ability to responsibly exercise their constitutional rights and obligations;

- development of legal and political culture of students, expansion of constructive participation in decision-making affecting their rights and interests, including in various forms of self-organization, self-government, socially significant activities;

- formation of motives, moral and semantic attitudes of the individual, allowing to resist extremism, xenophobia, discrimination on social, religious, racial, national grounds, interethnic and interfaith intolerance, and other negative social phenomena.

*Spiritual and moral education:*

- education of a sense of dignity, honor and honesty, conscientiousness, respect for parents, teachers, and older people;

- formation of the principles of collectivism and solidarity, the spirit of mercy and compassion, the habit of caring for people in difficult life situations;

- forming solidarity and a sense of social responsibility towards people with disabilities, overcoming psychological barriers towards people with disabilities;

- formation of an emotionally rich and spiritually elevated attitude to the world, the ability and ability to pass on your aesthetic experience to others.

*Cultural and educational education:*

- forming an aesthetic picture of the world;

- formation of respect for the cultural values of the native city, region, country;

- increase the cognitive activity of students.

*Scientific and educational education:*

- formation of students ' scientific worldview;

- formation of the ability to acquire knowledge;

- formation of skills in analyzing and synthesizing information, including in the professional field.

**Current changes and approvals** for the new academic year

No n/	No a No. of the section for making	Date of making changes	Content of changes	"Agreed" Head of the department implementing the discipline	"Agreed" Chairman of the Department of Management of the Institute( faculty), which includes the
1	2	3	4	5	6
1					
2					
3					



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**(FSBEI HE «KSPEU»)**

**EVALUATION MATERIALS**  
**by discipline**

**B1.M.04.01 Industry economics**

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Assessment materials on the discipline, designed to assess the results of training for compliance with indicators of achievement of competencies.

Assessment of the results of training in the discipline is carried out within the framework of current control (TC) and interim certification, conducted according to the point rating system (BRS).

### 1. Technological map

Semester \_4

Section name	Forms and type of control	Rating indicators				
		I current control	Additional points to TC1	points to TC2	Total	Interim certification
<b>Section 1.</b> "General economic aspects of the industry functioning"	<b>TC1</b>	<b>10</b>	<b>0-15</b>	<b>10</b>	<b>25-35</b>	<b>25-35</b>
Oral survey		5				
Independent work report		5				
<b>Section 2.</b> " Factors and trends in the development of the energy economy"	<b>TC2</b>			<b>10</b>	<b>25-30</b>	<b>25-35</b>
Oral Survey		5			5	5
Test (Test)					5	5
Report (Dkl), message (Sbsh)		5			5	
<b>Intermediate certification (credit)</b>	<b>OM</b>				<b>50</b>	<b>0-55</b>
<b>Orally</b>						

### 2.Evaluation materials of the current control and interim certification

Scale of assessment of learning outcomes in the discipline:

Code Competence	code competence indicator	Plan it- Code of the competence indicator Planned results of training in the discipline	Level of formation of the competence indicator			
			High	Average	Below average	Low
			from 85 to 100	from 70 to 84	from 55 to 69	from 0 to 54
			Assessment scale			
			excellent	good	satisfactory	unsatisfactory
			credited			not credited

UC-2 Able to define a range of tasks within the scope of a given goal and select the best ways to accomplish them, based on applicable legal norms, available resources, and constraints	UC-2.2 Selects the optimal method for solving problems, taking into account applicable legal norms and existing conditions, resources, and limitations	know:				
		the best way to solve problems, taking into account the current legal norms and existing conditions, resources and restrictions	: complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation works in the semester and test tasks with significant errors ;	for weak and incomplete performance of semester calculation papers and test tasks.
		be able to:				
		choose the best way to solve problems, taking into account the current legal norms and existing conditions, resources and restrictions	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation work in the semester and test tasks with significant errors	for weak and incomplete performance of semester calculation papers and test tasks.
		методом оптимально using the optimal method of problem solving, taking into account the current legal norms and existing conditions, resources and limitations	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation works in the semester and test tasks with significant errors	for weak and incomplete performance of semester calculation papers and test tasks.
UC-10 Able to make informed economic decisions in various areas of life	UC-10.1 Demonstrates knowledge of the conceptual and categorical apparatus and methods of economic science	know:				
		conceptual and categorical apparatus and methods of economic science	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors;	for performing calculation works in the semester and test tasks with significant errors	for weak and incomplete performance of calculation works in the semester and test tasks.
		be able to:				
демонстрировать demonstrate	complete and	answers to ticket	for performing	for weak and		

		knowledge of the conceptual apparatus and methods of economic science	meaningful answers to ticket questions (theoretical and practical tasks);	questions (theoretical or practical tasks) with some errors;	g calculation works in the semester and test tasks with significant errors	incomplete performance of calculation works in the semester. semester and test tasks.
		possess				
		methodsofdemonstrating knowledgeabout the conceptual and categorical apparatus use and methods of economic science	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation works in the semester and test tasks with significant errors	for weak or incomplete performance of calculation papers in the semester and test tasks.
		know				
	UC-10.2 Demonstrates proficiency in modern methods of calculating indicators characterizing economic processes and phenomena in various areas of life	up-to-date methods and calculation of indicators that characterize economic processes and phenomena in various areas of life	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors;	for performing calculation work in the semester and test tasks with significant errors	for weak or incomplete performance of calculation papers in the semester and test tasks.
		be able to:				
		use up-to-date methods for calculating indicators that characterize economic processes and phenomena in various areas of life	complete and meaningful answers to ticket questions (theoretical and practical tasks);	answers to ticket questions (theoretical or practical tasks) with some errors ;	for performing calculation work in the semester and test tasks with significant errors	for weak and incomplete execution of semester calculation papers and test tasks.
		own:				
		master of modern methods of calculating indicators that	complete and meaningful answers	answers to ticket questions (theoretical	for performing calculation	for weak and incomplete

		characterize economic processes and phenomena in various areas of life	to ticket questions (theoretical and practical tasks);	1 or practical tasks) with some errors ;	work in the semester and test tasks with significant errors	execution of semester calculation papers and test tasks.
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### 3.List of evaluation tools

Brief description of the assessment tools used in the current monitoring of academic performance and intermediate certification of a student in the discipline:

Name estimated value tools	Brief description of the evaluation tool	Description of the evaluation report tools
Report (Dcl), communication (Sbs)	The product of a student's independent work, which is a public speech on presenting the results of solving a certain educational and practical, educational and research or scientific topic.	Topics of reports and messages
Round table discussion (COP), discussion (Dsk), polemic (Plm), disput (Dsp), debates (Dbt)	Assessment tools that allow students to engage in the process of discussing a controversial issue or problem and evaluate their ability to argue their own point of view	List of discussion topics for a round table, discussion, polemic, debate, and debate
Synopsis of educational material	Short text representation of the revised information	List of sections
Multimedia presentation (MP)	Presentation of the content of educational material using multimedia technologies	Presentation topics
Survey by sections (topics)	Knowledge of the main concepts of the topic / section / discipline	List of definitions of the main concepts of the topic / discipline
Practical task (PZ)	A tool for assessing the ability to apply the acquired theoretical knowledge in a practical situation. The task is aimed at evaluating competencies in the discipline and contains clear instructions for implementation or an algorithm of actions	Set of tasks and tasks
Abstract (Rfu)	The product of a student's independent work, which is a written summary of the results of theoretical analysis of a certain scientific (educational and research) topic.	Abstract topics
Job Interview (Sbs)	A control tool organized as a special conversation between the teacher and the student on topics related to the discipline being studied, and designed to find out the	Questions about the sections of the discipline

	amount of knowledge of the student on a certain section, topic, problem, etc.	
Test (Test)	A system of standardized tasks that allows you to automate the procedure for measuring the level of knowledge and skills of a student	Set of test tasks

#### **4. A list of control tasks or other materials necessary for assessing knowledge, skills and abilities that characterize the stages of competence formation in the course of mastering the discipline**

Note.

*In the author's textbook "Industry Economics (energy): textbook / R. A. Burganov. - Kazan: KGEU, 2023. - 115 p. - URL: <https://lib.kgeu.ru/>. - Text: electronic" Each topic is followed by "Self-test questions", "Tests and tasks".*

#### **For the current control of TC1:**

*Verified competence:*

*CC-2.2.2-Selects the best way to solve problems, taking into account the current legal norms and existing conditions, resources and restrictions*

*UK-10.1.1-Demonstrates knowledge of the conceptual and categorical apparatus and methods of economic science*

*UK-10.2-Demonstrates proficiency in modern methods of calculating indicators that characterize economic processes and phenomena in various areas of life*

#### **Topics of reports and messages**

1. Division of labor as the main factor in the development of the industry's economy.
2. Indicators of the industry structure.
3. Fuel and energy complex of the country in modern conditions
4. Features of the energy economy
5. Types of power plants in the region and their features.
6. Energy efficiency
7. Role and significance of product distribution
8. Structure of the electric grid complex of the electric grid complex
9. Power distribution efficiency indicators
10. The main market players.
11. Infrastructure bases for energy product exchange
12. Indicators and efficiency of energy product exchange
13. Reasons for consumer classification
14. Principles of rational behavior and motivational factors.
15. Energy consumption rate. Factors influencing the norms.

#### **For the current control of TC2**

*Verified competence:*

*CC-2.2.2-Selects the best way to solve problems, taking into account the current legal norms and existing conditions, resources and restrictions*

*UK-10.1.1-Demonstrates knowledge of the conceptual and categorical apparatus and methods of economic science*

*UK-10.2-Demonstrates proficiency in modern methods of calculating indicators that characterize economic processes and phenomena in various areas of life*

16. Fuel and energy balance of the country
17. Participants in retail electricity markets.
18. Pricing methods in the electricity and capacity markets.
19. Energy price regulators (RECs, FTS).
20. Problems of energy policy.
21. Regional energy policy.
22. Russia's Energy strategy for the period up to 2030
23. Profitability of an energy-efficient business
24. Energy saving and energy saving policy
25. Performance indicators for the use of fuel and energy resources (6 items)
26. Competition in the energy sector
27. Digital economy and energy: features, implementation indicators
28. Sustainable energy

### **Test tasks for the current control of TC1:**

#### **Under section 1. General economic aspects of the industry's functioning**

1. Continue with the phrase: "The industry is ...":
  - a) an area of economic activity characterized by a certain unity of functions performed;
  - b) an area of economic activity characterized by a certain unity of types and purpose of the product being created;
  - c) an area of economic activity characterized by a certain unity of technological processes used;
  - d) homogeneous organizations, enterprises, companies, firms engaged in the production of similar products, performing similar works, performing similar services, meeting similar needs;
  - e) all are correct.
2. Indicators of the industry structure are:
  - a) the number of independent industries;
  - b) the ratio between the extractive and manufacturing industries;
  - c) both answers are correct.
3. The fuel and energy complex stands for:
  - a) fuel and energy complex;
  - b) fuel and economic complex;
  - c) transport and energy complex.
4. The object of analysis of the branch economy does not include:
  - a) household;
  - b) the consumer;

- c) the industry;
- d) a group of companies.

5. Features of the functioning of the energy economy include:

- a) there is no gap between production and distribution;
- b) the absence of discontinuity in production;
- c) the coincidence in time of the processes of electricity production and consumption.
- d) complexity and special operating conditions of power equipment;
- e) all answers are correct.

6. The energy intensity of production of a unit of output is:

- a) the total amount of electricity consumed;
- b) the amount of electricity consumed per unit of output;
- c) loss of electricity in the production of products.

7. The role and place of energy in the country's economic development system is characterized by:

- a) the industry's share in GDP;
- b) the specific weight of the industry's production elements (the cost of fixed assets, the number of employees, etc.);
- c) the share of energy in the development of the fuel and energy complex.

8. Please indicate whether the statement "Urban heating is a process of centralized heat supply based on combined generation of electric and thermal energy" is correct:

- a) yes.
- b) no.

9. Select the main product movement phases:

- a) production;
- b) distribution;
- c) exchange;
- d) consumption;
- e) advertising activities.

10. Generating companies include:

- a) CHPP;
- b) WIND farms;
- c) NUCLEAR POWER plants;
- d) JSC "PBX";
- e) Megafon.

11. The country's energy sector consists of:

- a) fuel and energy complex;
- b) electric power industry;
- c) centralized heat supply;
- d) heat treatment;
- e) farm management.

12. Planning of the power plant's production capacity uses:

- a) theoretical production capacity;
- b) practical production capacity;
- c) market production capacity;
- d) exclusion or reduction of competition.

13. Power consumption is measured in:

- a) kilowatt-hours;
- b) tons;
- c) units.
- d) barrels;
- e) carats.

14. The main functions of product distribution include:

- a) creating ways to deliver products to customers;
- b) organization of delivery;
- c) creation of delivery points;
- d) reliable and timely delivery;
- e) production of products;
- f) product consumption.

15. The electricity distribution structure includes:

- a) Federal Grid Company of the Unified Energy System;
- b) fourteen interregional distribution grid organizations;
- c) about 3,000 territorial network organizations;
- d) NUCLEAR power plants;
- e) CHPP.

16. Main production indicators of electricity distribution:

- a) the amount of electricity generated;
- b) the length of power transmission lines;
- c) the number of substations;
- d) the amount of electricity losses.

17 The exchange procedure includes:

- a) in the first phase of product movement;
- b) in the fourth phase of product movement;
- c) in the third phase of product movement;
- d) in the second phase of product movement.

18. Electricity demand is affected by changes in:

- a) the price of this product;
- b) prices for substitutes and complementary goods;
- c) prices for complementary goods;
- d) income of the population.

11. The main organizers and players of the electricity market include:

- a) Trading System Administrator JSC;
- b) NP Market Council Association;
- c) Financial Settlement Center JSC (abbreviated as CFR JSC);
- d) JSC "TDU".

19. Main production indicators of electricity exchange:

- a) the number and value of concluded contracts;
- b) the number of outstanding contracts;
- c) compliance with the deadline for electricity delivery;
- d) the number of people accessing the wholesale market system;
- e) the number of substations.

20. The demand for electric and thermal energy consists of the following energy requirements:

- a) for technological purposes;
- b) for driving equipment and tools;
- c) for household needs (lighting and ventilation of industrial and administrative buildings and structures, etc.);
- d) to increase inventory.

21. Calculations of fuel demand for technological needs are influenced by:

- a) the volume of production;
- b) fuel consumption rate;
- c) the period of the heating season;
- d) the type of building.

22. Indicate whether the statement "Electricity consumption is related to personal use" is correct:

- a) yes.
- b) no.

## **According to section 2 Factors and trends in the development of the energy economy for**

### **TC -2**

*Verified competence:*

*CC-2.2.2-Selects the best way to solve problems, taking into account the current legal norms and existing conditions, resources and restrictions*

*UK-10.1.1-Demonstrates knowledge of the conceptual and categorical apparatus and methods of economic science*

*UK-10.2-Demonstrates proficiency in modern methods of calculating indicators that characterize economic processes and phenomena in various areas of life*

1. Calculation of electricity demand is determined by the formula:

- a)  $Q = gV$ ;
- b)  $C = bV$ ;
- c)  $W = wV$ ;
- d)  $E = eV$ .

2. The term "energy balance" means:

- a) complete quantitative equality at a given time between the consumption and arrival of fuel and energy in the energy sector;
- b) complete quantitative equality at a given time between external and internal fuel and energy expenditures in the energy sector.

3. The electricity balance is the balance of the economy's demand for electricity and production, which is determined by the following formula:

- a)  $\mathcal{E}_{\text{выр}}^c - \mathcal{E}_{\text{выр}}^{\text{бл.-с.}} + \mathcal{E}_{\text{пок}} = \mathcal{E}_{\text{потр}} - \mathcal{E}_{\text{прод}} + \Delta\mathcal{E}_{\text{пот}}$ ;
- b)  $\mathcal{E}_{\text{выр}}^c + \mathcal{E}_{\text{выр}}^{\text{бл.-с.}} + \mathcal{E}_{\text{пок}} = \mathcal{E}_{\text{потр}} + \mathcal{E}_{\text{прод}} + \Delta\mathcal{E}_{\text{пот}}$ ;

$$\text{c) } \mathcal{E}_{\text{выр}}^{\text{с}} + \mathcal{E}_{\text{выр}}^{\text{бл.-с.}} - \mathcal{E}_{\text{пок}} = \mathcal{E}_{\text{потр}} + \mathcal{E}_{\text{прод}} - \Delta \mathcal{E}_{\text{пот}};$$

$$\text{d) } \mathcal{E}_{\text{выр}}^{\text{с}} - \mathcal{E}_{\text{выр}}^{\text{бл.-с.}} + \mathcal{E}_{\text{пок}} = \mathcal{E}_{\text{потр}} + \mathcal{E}_{\text{прод}} - \Delta \mathcal{E}_{\text{пот}}.$$

4. The main processes of restructuring the electric power industry and liberalizing the wholesale and retail electricity markets were completed in:

- a) 2001;
- b) 2005;
- c) 2008
- d) 2022

5. Utility service providers act as electricity consumers in the market:

- a) wholesale;
- b) small wholesale;
- c) retail.

6. The main electricity trading sectors do not include:

- a) long-term bilateral agreements;
- b) the day-ahead market;
- c) balancing market;
- d) the retail market.

7. Indicate whether the statement is true: "Extra volumes of planned production are bought and sold at the RSV":

- a) correct.
- b) incorrect.

8. The main planned regulator of economic life of economic entities is:

- a) world prices;
- b) reference prices;
- c) market prices;
- d) nominal prices.

9. In case of inflationary risk:

- a) income is devalued (in terms of real purchasing power);
- b) expenses are reduced;
- c) income is not devalued;
- d) resource prices are stable.

10. In the structure of electricity prices, 38 % are occupied by:

- a) sales allowance;
- b) the price of electricity transmission services;
- c) the purchase price on the wholesale electricity and capacity market.

11. Regulatory authorities in the energy sector include:

- a) REC;
- b) THE Federal Tax Service.
- c) A PBX.
- d) NUCLEAR power plants.

12. The author of the doctrine of free competition is considered to be:

- a) A. Smith;
- b) F. Lista;
- c) Karl Marx;
- d) J. Keynes.

13. Please indicate whether the statement "The scientific aspect of economic policy is a systematic scientific study of the motives and actions aimed at shaping the effective development of the national economy" is true:

- a) true.
- b) incorrect.

14. Replacing economic methods with market incentives:

- a) possible;
- b) not possible.

15. Please indicate whether the statement "Energy policy is a chaotic activity aimed at the stable development of the domestic energy market, ensuring national and global energy security, and developing interstate cooperation in the energy sector" is correct:

- a) true.
- b) incorrect.

16. Energy policy levels do not include:

- a) local (at the level of a manufacturing enterprise);
- b) municipal;
- c) regional (level of the subject of the Russian Federation);
- d) national (federal);
- e) international (supranational, international);
- f) global;
- g) the correct answer is missing.

17. The following documents were adopted on the strategic development of the fuel and energy sector:

- a) one;
- b) two;
- c) three;
- d) four;

18. Cover the activities of suppliers in the transmission of energy through main and distribution electric and thermal networks, as well as in the sale (trade) of energy carriers:

- a) energy supply services;
- b) services.
- c) a) and b) are correct.
- d) a) and b) are incorrect.

19. By industry affiliation, the following are distinguished:

- (a) Public energy;
- b) municipal energy;
- c) industrial energy;
- d) microenergy;
- e) macroenergy.

20. Indicate whether the statement "Billing companies that specialize in measuring and recording energy resources invest in improving accounting systems and ensure their accuracy and

reliability" is correct:

- a) yes;
- b) no.

21. The following factors have an impact on labor productivity growth:

- a) technological improvements;
- b) improving the level of education and skills of employees;
- c) improving the level of organization of production;
- d) all of the above is true.

22. The division of labor is characterized by:

- a) the state of natural and climatic conditions of management;
- b) separation of different types of labor activity;
- c) solving the problem of employment.

23. The last stage of repair work is:

- a) drawing up a work plan;
- b) use of modern repair technologies;
- c) acceptance of equipment after repair;
- d) checking the operation of the equipment.

24. The level of electrical equipment is characterized by:

- a) the coefficient of electric equipment of workers;
- b) the amount of energy consumed over a certain period of time;
- c) electricity costs for a certain period of time.

25. Global energy trends include:

- a) deep decentralization of energy production (small-scale generation, storage);
- b) digitalization and intellectualization of infrastructure;
- c) consumers' transition to active behaviors;
- d) the emergence of decentralized markets and high financial technologies;
- e) development of the coal industry.

26. Introduction of digital technologies in the energy sector of the Russian Federation entails:

- a) energy independence and infrastructure security of economic development;
- b) advanced modernization of the basic infrastructure company;
- c) radical improvement of the quality and availability of transmission and technological connection services, development of competitive markets for related services (personal account, load management, etc.);
- d) increase in tariff growth.

## Practical exercises

### Task 1

Determine the volume of commercial, gross, sold and net production of the enterprise on the basis of the following data: the enterprise produced the main product in the amount of 325.6 million rubles; industrial work performed on the side amounted to 41.35 million rubles; the cost of semi-finished products of its own manufacture — 23.7 million rubles, of which 80 % was consumed in its own production; the amount of work-in-progress increased by R5 million; material costs account for 40 % of marketable output.

### Task 2

Determine the average annual production capacity and utilization rate if the volume of output in the reporting period was 690,000 units. per year. In the reporting period at the beginning of the year, the company installed 3,000 machines. During the reporting period, 320 machines were put into operation from March 1, and 62 machines were withdrawn from operation from August 1. The productivity of one machine is 65 parts per hour. The annual working time fund is 3990 hours.

**Task 3**

Determine the market capacity of each firm in the base and planned years in terms of value and market share. In the base year, three companies operating on the market produced and sold vehicles worth \$ 45,800. Firm B sold \$ 21,600 worth of mobile cars. Firm A had 26% of the market. The market capacity is expected to grow by 8% next year. Firm B plans to gain an additional 7 % of the market. Firm A is not expected to lose its market position.

**Task 4**

Determine the volume of marketable products of the enterprise if the cost of finished products planned for production is 840 million rubles., the cost of component parts for sale on the side — 160 million rubles., the cost of component parts for own needs-80 million rubles., capital repairs performed on their own-130 million rubles., the cost of tools manufactured for their own production and non-industrial farms, — 30 million rubles.

**Task 5**

Determine the volume of products sold based on the data below.

Indicator	Indicator value
Annual production volume	720
Finished product balances: at the beginning of the year	120
at the end of the year	40
Balances of products shipped but not paid for: at the beginning of the year . at the end of the year	50
	20

**Task 6**

Determine the input, output and average annual capacity of the workshop, if the number of machines in the workshop at the beginning of the year is 24.18 machines were put into operation in June, 12 machines were retired in April, and 3 machines were retired in August. Machine productivity per hour-10 parts. The number of days off is 110, the number of days with a reduced shift is 12, and the shift duration is 8 hours. The work mode is single-shift. Time spent on equipment repairs - 3% of the operating time.

**Task 7**

Determine the volume of sold, gross, marketable and net output. The source data is given below.

Indicator	Indicator value
The company's main products, mln rubles.	520
Industrial services, mln rubles	48
Cost of semi-finished products of our own production, mln rubles.	50
Including for own production, %	50
Increase in work-in-progress at the end of the year, mln rubles.	38
Stock of finished goods, mln rubles: At the beginning of the year	80
At the end of the year	30
Specific weight of material costs in marketable products, %	55

**Task 8**

Determine the average annual production capacity of the enterprise and the possible volume of production with a production capacity utilization factor of 0.75. The initial data is given below.

Production line power	Entry period/disposals	Indicator value, t

At the beginning of the year	-	25000
entered information	1st of February	5000
entered information	August 1st	17000
retiring company	April 1st	3000
retiring company	November 1st	60000

### Task 9

Evaluate and find opportunities for the company's output in the amount of 60,000 units. The planned capacity utilization factor is 0.8. Specific capex per unit of capacity is 26 thousand rubles. The amount of funds that the enterprise can allocate to increase output is 346 million rubles. If necessary, the company can take out a loan at 25 % per annum, provided that it is repaid in one year. The sourced data is given below.

Production line power	Indicator		
	number of equipment units.	annual output of a unit of equipment, pcs.	I / O period
At the beginning of the year	31	1510	-
Entered information	14	1940	May 1
	10	1010	July 1st
Retiring company	7	1510	March 1
	9	1510	August 1st

### Task 10

Determine the volume of gross, commercial and sold products using the following data: for the reporting year, the volume of output at the enterprise amounted to 570 thousand units; the free selling price per unit of production — 1250 rubles.; the cost of industrial work performed on the side - 1250 million rubles.; capital repairs of equipment-250 million rubles.; production of workshops consumer goods — 76 million rubles.; the cost of unrealized products in the warehouse at the beginning of the year — 433 million rubles., at the end of the year-520 million rubles.; increase in the balance of work-in-progress-121 million rubles.

## List of discussion topics for a round table, discussion, polemic, debate, debate

### TC 1

1. Why the division of labor as the main factor in the development of the industry's economy.
2. Pros and cons of building a nuclear power plant.
8. Is the structure of the electric grid complex imperfect?
9. There is no need to divide electricity consumers into different categories.
14. Who behaves more rationally than others in terms of energy consumption?

### TC 2

15. Ways to improve the country's fuel and energy balance
17. Causes of pricing problems in the electricity and capacity markets.
19. Do we need price regulators in the energy sector (RECs, FTS)?

20. Energy policy objectives.
21. Regional energy policy: pros and cons.
22. Russia's Energy Strategy for the period up to 2030
23. Is the energy business profitable?
24. How can I improve the efficiency of using fuel and energy resources?
26. Is there competition in the energy sector or not?
27. Digital economy and energy: features, implementation indicators
28. Implementation of sustainable energy in modern conditions.

### **Abstract topics**

#### **TC 1-**

The place of the energy economy in the national economy  
Methods of tariff formation in the energy economy

#### **TC 1-**

Energy strategy in modern conditions  
Regional features of the energy economy development

### **For intermediate certification:**

#### **Questions for the test:**

1. General provisions on the economics of the industry and methodological foundations, the purpose and objectives of its study.
2. Division of labor as the main factor in the development of the industry's economy.
3. Industry and its development trends. Indicators of the industry structure. Industry lead rate. Industry share.
4. Development of individual sectors of the economy. Extractive and processing industries.
5. Fuel and energy complex of the country: features and sub-sectors.
6. General provisions on the energy economy
7. Key indicators of the place of energy in the country's economy.
8. Features of the energy economy
9. Functions of the energy economy
10. The production process in the electric power industry. Composition of the energy sector.
11. Participants in the production process. Generating units and their types.
12. Types of power plants and their features.
13. Energy production indicators and efficiency
14. Role and significance of product distribution
15. Structure of electricity distribution. Electric grid complex and its composition
16. Complexity of the process of production, transport and distribution of electric energy.
17. Dispatching and technological control of electricity distribution

18. Key production indicators and power distribution efficiency indicators
19. General provisions on the exchange of products in the energy sector. The role of electricity demand.
20. Infrastructure bases for the exchange of energy products. The main market players.
21. Indicators and efficiency of energy product exchange
22. General provisions on the exchange of products in the energy sector
23. Infrastructure bases for energy product exchange
24. Indicators and efficiency of energy product exchange
25. Consumption of electric power products and classification of consumers
26. Consumer behavior in the market. Principles of rational behavior and motivational factors.
27. Energy market, energy technology and economic potential of energy company
28. Calculation of electricity needs
29. General provisions on norms and regulations in the industry's economy
30. Norms and regulations in the energy sector. Kinds. Energy consumption rate. Factors influencing the norms.
31. Energy balance in the energy regulation system: essence, tasks and types.
32. Fuel and energy balance and its structure
33. Wholesale electricity and capacity market. Wholesale market entities.
34. Electricity trading sectors in the wholesale market
35. Retail electricity market. Participants in retail electricity markets. Contractual structure
36. The role and significance of prices in the development of the economy and industry
37. Pricing methods in the electricity and capacity markets. "Tariff menu".
38. Energy price regulators (RECs, FTS, etc.). Sales premium.
39. The essence, directions and methods of economic policy. "Carrot or stick?"
40. The essence, objectives, and levels of energy policy.
41. Regional energy policy. Russia's Energy strategy for the period up to 2030
42. Types of energy services. Energy service: its essence and types.
43. Energy business: features and types.
44. Financial services market
45. Energy service companies (ESCO) and their operational efficiency.
46. The essence of eco-saving and energy-saving policy.
47. Regulatory framework for energy saving
48. Performance indicators for the use of fuel and energy resources (6 indicators)
49. The process of economic (market) concentration and its indicators
50. Global trends in the energy sector. Concept and problems of fuel and energy complex development. Key tasks of the fuel and energy sector until 2030
51. Digital economy and energy: features, implementation indicators
52. Sustainable energy: content and indicators of its development

