

THE WHITE BOOK

Promotion of initiatives to develop mass production and consumption of clean energy, increase energy efficiency among community-based tourism entities, reduce emissions, and develop Green Tourism.

Bishkek-2022

Photo "BizExpert". (solar systems)

ABOUT THE PROJECT

The project "Promotion of Energy Efficiency and Renewable Energy Production in the at the Community Based Tourism Sector in Central Asia" of the European Union's SWITCH Asia II program aims to reduce the carbon footprint in the tourism sector of Kyrgyzstan, Uzbekistan and Tajikistan and aims to create a favorable environment for energy efficiency (E/E) growth, as well as strengthening sustainable energy consumption and production based on renewable energy sources (RES) by MSME entities in the tourism sector at the community level.



For more information about the Project, please visit www.switch-asia.eu

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CONTENT:

ABOUT THE PROJECT	2
INTRODUCTION.....	4
SECTION I. OUTCOMES AND RECOMMENDATIONS.	7
1.1. An effective matrix based on the adopted Law of the Kyrgyz Republic "On Renewable Energy Sources" and recommendations from the Roadmap	7
Case 1. Competitive procedures as an accepted mechanism and problems of access to basic resources.	9
SECTION II. DIRECTIONS OF POLICY IMPROVEMENT.....	10
Hybrid systems and technologies, Microgeneration from renewable energy sources.	11
2.1. Recommendations to the legislation on renewable energy.....	11
Matrix 1. Comparative table of recommendations to the Law "On Renewable Energy Sources".	13
2.2. Recommendations to the Law "On Energy".....	16
The possibility of technological connection to public networks and the sale of surplus energy produced.	16
Development of local energy supply systems and a mixed model of energy sector development.	18
Matrix 2. A comparative table to the draught law "On Energy."	20
2.3. Recommendations to the draft law "On Tourism"	21
"Green Sticker" labelling of tourism facilities based on the Green facility sticker conformity assessment procedure (hotel, hostel, guest house, etc.).....	23
Matrix 3. Comparative table to the Law of the Kyrgyz Republic "On Tourism"	24
SECTION III. Recommendations for inclusion in policy and strategic documents.	26
- Goals, program documents (Program implementation plan until 2026).....	26
SECTION IV. Recommendations for the inclusion of measures in the implementation of program documents.....	29
5.2. Improvement of the regulatory framework for the production and consumption renewable energy.	29
5.2. Recommendations for inclusion in the draught industry programme of the Tourism Development Strategy until 2026 (Item 528 of the Action Plan of the NDP of the Kyrgyz Republic until 2026).	31
5.2. Recommendations for the RE Development Program or Microgeneration Development Program	33
□ Introduction of mechanisms to stimulate industrial cooperation and integration into value chains with the EAEU countries ("Energy Cooperatives").	34
Section 5. General recommendations.....	35
5.1. Support of green tourism development infrastructure based on the production and consumption of clean energy based on renewable energy sources.....	35
5.2. Expanding the access of CBT business entities to financial resources.	36
5.3. Improvement of the system of planning and placement of microgeneration facilities (including the engineering infrastructure of tourism facilities for CBT).	37
5.4. State support for manufacturers and suppliers of technologically innovative renewable energy equipment for green energy.	38
APPENDIX 1. GENERAL IMPLEMENTATION PLAN OF THE "WHITE BOOK OF CHANGES"	39

INTRODUCTION

The country has obligations to reduce emissions and the negative impact on the environment. Program and strategic documents define the objectives of the development of sustainable (green) tourism and the growth of energy efficiency, including through the development of energy production and consumption based on RES. Kyrgyzstan declares a commitment to reduce GHG emissions by 16.63% by 2025 and 15.97% by 2030, and with international support, GHG emissions will be reduced by 36.61% by 2025, and by 43.62% by 2030, according to the "business as usual" scenario. ¹

An interdepartmental working group, with the support of experts from BizExpert, conducted a comprehensive assessment of the availability of the main factors of production (necessary economic resources). An assessment of the impact of policies (program documents) on the development of clean energy production and consumption, energy efficiency growth, an assessment of the impact of the regulatory framework, as well as an analysis of market failures, combining the methods of special economic and political economic analysis, allowed us to take into account almost all the problems of individual types of entrepreneurial activity involved in the value chain, belonging to various industries and sectors of the economy. It was possible to identify environmental problems of the tourism sector, develop solutions to existing problems, and propose sectoral policies and measures of state support for the development of entrepreneurial activities (with initiative), on which the large-scale introduction of renewable energy technologies, an increase in E/E, and the growth of production and consumption of clean energy in the tourism sector depend (hereinafter referred to as "Suppliers and Consumers" of renewable energy technologies, both producers and consumers of clean energy).

The conclusions obtained on the basis of the primary analysis of the use of renewable energy and the use of E/E technologies in the tourism sector were reflected in the report "Analysis of the State of the Business Environment in the Energy Sector of Kyrgyzstan" ² and confirmed during the activities of the Interdepartmental Working Group. To date, the objective reality is that the development of local clean energy production based on renewable energy from non-core business entities is not a high priority for authorised state bodies in the energy sector. Based on the results of the Interdepartmental Working Group, the goals of microgeneration development for non-core entities outside the energy sector were formulated, and it was proposed to improve the models of small-scale energy development taking into account the vector of decentralisation of clean energy production and consumption.

The main gap in policies to promote the development of mass use and introduction of renewable energy and E/E technologies is the non-recognition of the potential for the production of clean energy by business entities from other (non-energy sector) sectors of the country's economy and households. The lack of state support measures addressed to business entities, on which the introduction of clean energy production and consumption as well as the increase in energy efficiency depend, leads to the fact that only energy sector entities and business entities specialising in the production and sale of energy are beneficiaries of state support. Regulatory

¹Updated nationally determined contribution of the Kyrgyz Republic. <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kyrgyzstan%20First/%D0%9E%D0%9D%D0%A3%D0%92%20%D0%A0%D0%A3%D0%A1%20%D0%BE%D1%82%2008102021.pdf>.

² Analysis of the business environment of Kyrgyzstan's energy sector, Bishkek, 2020. <http://bizexpert.kg/analiz-sostoyaniya-delovoj-sredy-energosektora-v-kr/>

policies, in particular, have regulatory gaps and barriers for both core entities and non-core entities with entrepreneurial and investment initiatives to introduce renewable energy and E/E technologies to obtain benefits. At the same time, representatives of the tourism sector on the basis of CBT, despite their great interest in the development of their industry:

- They have no influence on the state policy of small-scale energy development;
- They were not involved in the promotion of their initiatives for independent clean energy production from renewable energy sources;
- They are not recognised as an interested party and, by inertia, belong to the category of energy consumers.

Previously adopted decisions and policy changes, including those adopted on June 30, 2022, the Law of the Kyrgyz Republic "On Renewable Energy Sources," are aimed at developing the use of renewable energy, the development of a "green economy," and improving energy efficiency in the Kyrgyz Republic, but have not yet been directed at those target groups of business entities that are interested but do not belong to the energy sector. **The newly enacted law is tasked with defining measures of state support and its subject, entrepreneurship**, allowing it to cover all entities on which the growth of clean energy production and consumption is dependent.

One of the expert conclusions in the Report "**Analysis of the State of the Business Environment in Kyrgyzstan's Energy Sector**"³ concluded that there was no compliance with legislative norms on periodic assessment of the actual impact of decisions taken (**non-compliance with the norms of the Kyrgyz Republic's Law "On Optimization of the Regulatory Framework for Regulating Entrepreneurship"** in terms of periodic analysis of the regulatory impact of the current law) and the **absence of a mechanism for assessing the actual impact of government programmes** on stakeholders (consumers, tourism entities) and on the goals of business development in other industries and spheres (for example, the growth of the business of "Suppliers of renewable energy and E/E technologies").

In the adopted new Law of the Kyrgyz Republic "On Renewable Sources," Article 14 defines the institute, the **National Academy of Sciences of the Kyrgyz Republic**, as the responsible executor, which will:

4) "Consider reports on state programme and research project implementation..."

6) "Annually submit information on the deployment and implementation of programmes in this area to the Cabinet of Ministers of the Kyrgyz Republic."

Thus, **a new model of analysis and evaluation of the effectiveness of programmes is being created**, and we also note that the law on optimization of the regulation of entrepreneurial activity, based on the results of the inventory of legislation in the implementation of the Presidential Decree, has been submitted for loss. **Accordingly, there is a risk of losing the Regulatory Impact Analysis (RIA) methodology of assessing the impact of state regulation** in its various forms on entrepreneurship in the new model of tracking the results of the impact of regulatory measures from policy documents.

The parties noted the existence of an intersectoral gap in the development of practical solutions arising from strategic documents, the lack of concrete implementation measures to influence the development of microgeneration, the failure to fulfil the tasks of programme

³ Analysis of the business environment of the energy sector of Kyrgyzstan, Bishkek, 2020. <http://bizexpert.kg/analiz-sostoyaniya-delovoj-sredy-energosektora-v-kr/>

documents, the actual lack of effective measures to support business entities on which the introduction of renewable energy technologies depends, as well as the presence of gaps and barriers in regulation. The situation was not improved by the creation of a new department in the Ministry of Natural Resources, Ecology, and Technical Supervision, whose functions include the regulation of the safe use of limited and renewable resources.

The Interdepartmental Working Group (hereinafter referred to as the IWG) proposed a number of solutions and practical measures that influence state policy in order to expand the state's presence in the field of supporting mass local production and consumption of clean energy based on renewable energy, energy efficiency growth in the sector of "green" sustainable tourism based on CBT – through effective management of natural resources (land, water), rational use of factors of production, reasonable (smart) regulation, elimination of barriers and elimination of regulatory failures, as well as market failures.

The IWG did not have a mandate to develop changes in the structure, functions, and powers of departments, but Article 6, paragraph 14, of the new law still has a solution to the problem of interdepartmental interaction, which directly obliges departments to ensure interdepartmental cooperation in the field of renewable energy.

The activities of the IWG focused on achieving development goals within the framework of the Green Economy Program (Microgeneration Development), the Tourism Development Program, and equivalents to the priorities of the National Development Strategy of the Kyrgyz Republic for 2018–2040 and the National Development Program and Action Plan of the Kyrgyz Republic until 2026.

Following the results of the activities of the IWG and its members, and as a result of the dialogue and active participation of the members of the NGO Green Alliance, a number of recommendations and proposals from the Roadmap were reflected in the newly adopted law "On Renewable Energy Sources."

SECTION I. OUTCOMES AND RECOMMENDATIONS.

1.1. An effective matrix based on the adopted Law of the Kyrgyz Republic "On Renewable Energy Sources" and recommendations from the Roadmap

Law No. 49 of June 30 , 2022	Proposals and recommendations of the IWG
<p>Article 6 paragraph 1) the objectives of the state policy in the field of renewable energy are to strengthen energy security by <u>increasing the share of renewable energy, developing competitive energy systems</u> and ensuring environmental protection;</p>	<p>The purpose of the policy is <u>the development of mass production and consumption of clean energy and the growth of energy efficiency in CBT entities.</u></p>
<p>2) the state policy in the field of renewable energy is <u>implemented within the framework of national and regional programs;</u></p> <p><u>Article 8</u> 2) development, implementation and execution of national programs in the field of renewable energy, providing for internal and external sources of financing;</p>	<p>Recommendation – a specialized program for the development of the use of renewable energy Technologies - the development and adoption of a program for the development of Microgeneration. Inclusion in the Draft Strategy of Tourism Development for the next years, measures aimed at the introduction of "green standards", "green labeling", tourism facilities.</p> <p>For reference: The implementation plan of the National Development Program until 2026 provides for the development and adoption of a Renewable energy Development Program and the development of a tourism development strategy.</p>
<p>Article 6 p 3 ensuring environmental protection and <u>rational use of natural resources.</u></p>	<p>A different meaning and understanding of "Energy efficiency" was proposed – <u>the rational use of natural resources to generate energy with minimal or no negative impact on the environment. Accordingly, the principle of the state policy of rational use of natural resources should be supplemented: "... to obtain energy with minimal or no negative impact on the environment."</u></p>
<p>9) <u>information support of technical and technological achievements</u> in the field of renewable energy;</p> <p>10) broad involvement of the public and scientific and technical potential in</p>	<p>The IWG identified an information failure and a gap and recommended measures (Roadmap) to eliminate the failure as measures of state support for development, which are enshrined in the law, which will have</p>

<p>the process of renewable energy development;</p>	<p>to be disclosed in the draft sectoral development programs.</p>
<p><u>12) promotion of activities aimed at decentralized and autonomous generation of electric and thermal energy;</u></p> <p><u>13) involvement of the population in the production and use of renewable energy equipment;</u></p> <p><u>In Article 7, paragraph 3) support for the construction of independent renewable energy systems in cities, as well as in rural areas to provide energy services and the functioning of local production, life support of the population;</u></p>	<p>The IWG proposed the adjustment of energy sector development policies in terms of <u>adopting a decentralized model and involving the population (households) in the production and consumption of clean energy</u>, which indicates the task of developing Microgeneration (recommendation Roadmap).</p> <p>The adopted provisions of the law correspond <u>to the development of a decentralized - mixed model of energy sector development and the need to diversify generation is recognized, but it is not specified - due to Microgeneration, among other things.</u></p>
<p><u>6) support for the creation of service centers that ensure stable production of installations using renewable energy, repair and maintenance of the systems being created</u></p>	<p>One of the problems of microgeneration development, even at the stage of analyzing the state of the sector, was <u>identified as a market failure, the lack of technical service centers and related services</u>, this was reflected in the law as a development support measure and most importantly, that <u>support measures are additionally aimed at business entities included in the value chain</u>, consumer-oriented renewable energy technologies.</p>

Objectively, through the joint efforts of development partners and projects, and thanks to the initiative of the members of the NGO Green Alliance and individual experts, the decisions promoted were reflected in the adopted law, but separate mechanisms for regulating relations cannot be applied to the development of microgeneration at the level of CBT entities and households.

One of the law's problematic regulations is the way it provides natural resources—the main factors in clean energy production—on a competitive basis.

Case 1. Competitive procedures as an accepted mechanism and problems of access to basic resources.

Article 8. Public administration in the field of renewable energy

item 2. Competitive selection by the authorized state body is allowed only if there is a designated land plot and a preliminary feasibility study prepared by the authorized state body for the construction project of an electric power plant using renewable energy sources.

The applicability of regulation of access to water and land resources through "competitive procedures."

- 1. The object of tourism is located in a remote area, near a small water resource, the use of which will allow obtaining electric energy from a derivational microelectric power station (without the construction of dams) for their own needs and not for supply to an indefinite circle of consumers.**

The land plot has been formed, the purpose has been determined, and the object has been put into operation.

One real estate object is one consumer, one entrepreneurial initiative from a non-core subject of tourism activity; in such a situation, is a competition for the use of water resources and land plots necessary?

- 2. Is it necessary to solve the use of solar energy through a competition—that is, to install solar panels on a plot of land next to a yurt town hotel complex and generate heat and electricity for personal consumption?**

The land plot is on a long-term lease, and the functional and intended purposes are defined.

In this case, the tourism entity's own initiative is lost against the initiative of specialised small-scale energy entities aimed at extracting benefits and making profits from energy production and sale activities. In other words, the person who initiates the construction of microgeneration facilities for his own purposes may not become the winner of the competition.

A potential non-core producer—a tourism entity—may not become a local consumer.

The adopted resource management mechanism: firstly, does not solve problems with land use as such for the purpose of using small plots of land to accommodate microgeneration facilities belonging to various categories of land; secondly, this approach is applicable only to entities specialising (profile) in the production and sale of energy to third-party consumers; of course, if there are other applicants for the use of renewable (RES) and limited natural resources (land, except for their own plots), the competition may not take place at all.

SECTION II. DIRECTIONS OF POLICY IMPROVEMENT.

The state policy in the field of tourism provides for the development of tourism as a priority sector of the country's economy, and one of the tasks is the development of infrastructure, in particular the engineering infrastructure of tourism facilities. At the same time, it should be noted that the development of tourism at the CBT level using renewable energy is impossible without the creation of appropriate legal conditions and the use of market mechanisms for the widespread introduction of technologies for converting renewable energy into other types of clean energy. Accordingly, it is advisable to concentrate policies not only on the relevant entities and energy facilities but also to assist in the development of those types of entrepreneurial activities on which the introduction of renewable energy technologies, E/E, and local production and consumption of clean energy depend. Legislation should be improved in the following areas: land use, water use, microgeneration, certification, rules for the design and development of territories, technical regulations, operating rules, amendments to sectoral legislative acts, and other related issues.

The Cabinet of Ministers has decided to develop draughts of the Land and Water Code, and it is in these documents that it is necessary to define the order and procedures for the formation of land plots based on forms of legal zoning for the purposes of use, i.e., in fact, to determine in advance the permitted use of land and resources at the stage of spatial and territorial development planning. Define the principles of green tourism and legislate "non-interference" in the non-core activities of tourism entities for the production of clean energy in local territories for their own production and consumption.

In fact, there is a task of initial legal deregulation of microgeneration, while technological issues (technical parameters, standards, approval of measuring instruments, and determining the maximum and minimum capacity of power receiving devices of the manufacturer and consumer, other parameters and conditions of delivery, mutual flow) of connection to common networks must be resolved.

Hybrid systems and technologies, Microgeneration from renewable energy sources.

2.1. Recommendations to the legislation on renewable energy.

Introduction of amendments to the sectoral legislation of norms and regulations on microgeneration (the energy sector) in compliance with the principle of non-interference.

Microgeneration is the production of electricity by very low-power facilities.

Microgeneration is the operation of technological equipment and systems for the conversion of one type of energy from renewable sources into thermal or electrical energy directly at the property, at the nearest water body or at the nearest geothermal source.

Microgeneration based on renewable energy sources is the conversion of various renewable energy resources into thermal and electrical energy, the production of which is carried out on low-power equipment.

It is proposed to include basic norms and provisions in the draught law "on microgeneration" that reveal the essence of microgeneration from renewable energy sources, including the necessity to define and expand the conceptual apparatus and determine how relations between specialised entities of the energy sector and subjects of microgeneration will be regulated.

Principle: **de-regulation.**

Do not set parametric limits on the capacity of microgeneration plants and equipment at the level of the law (**this recommendation is taken into account in the new law on renewable energy, but there is a regulatory parameter in the law**), while it is necessary to determine the range of entities that generate clean energy based on renewable energy to specify and exclude such entrepreneurs and the number of specialized business entities engaged in energy production in order to implement it as the main activity.

Non-core business entities generate heat and electricity for their own consumption and distribute excess energy via autonomous local networks.

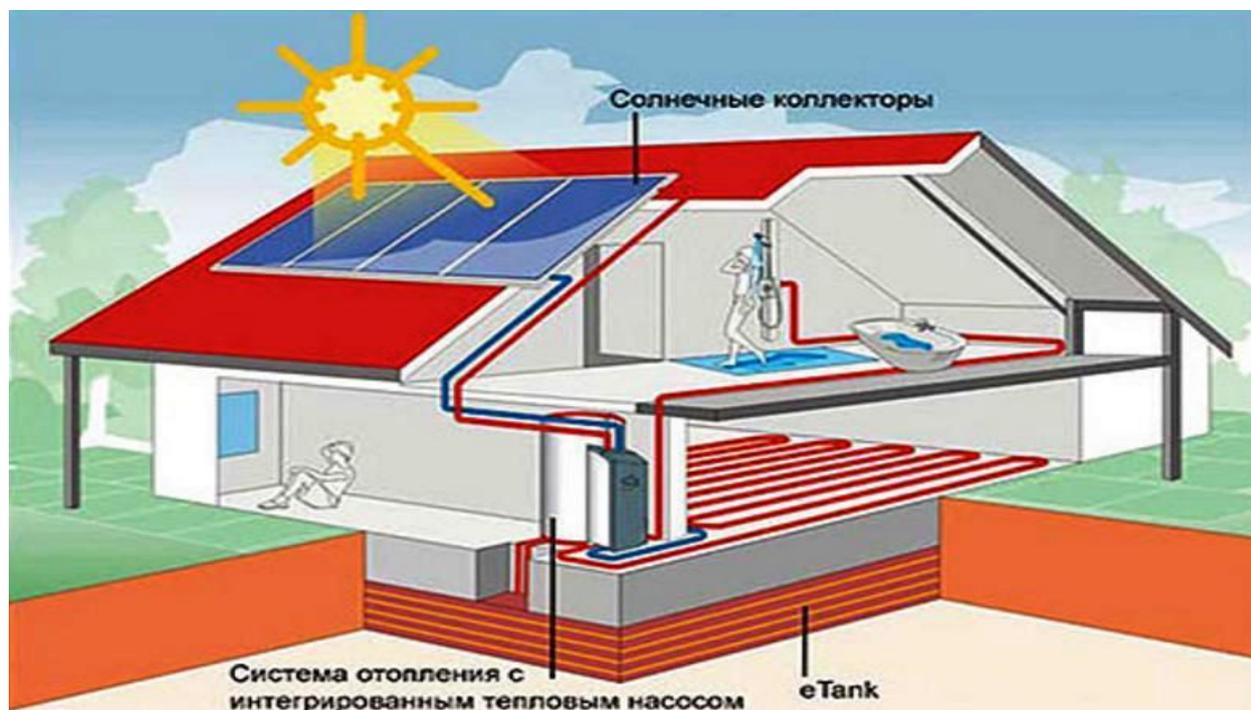
The activities of non-core business entities that generate clean energy from renewable energy sources for their own consumption and the sale of surpluses must be distinguished from the types of entrepreneurial activities for the production, transmission, and use of electric and thermal energy.

This approach will allow such entities to avoid licencing regimes of state regulation, and such additional activities (energy supply) should not be taxed under tax legislation. The principle

of non-interference in the activities of non-core business entities producing clean energy for their own consumption.

The advantages, continuity, and risk reduction of using hybrid energy supply systems for tourism facilities.

Combining several types of renewable energy sources into one common system—a hybrid scheme—eliminates the risk of power generation and supply instability (interruptions) during peak loads and falls due to non-coincidence in time, and the combination increases stability. The economic benefit is directly related to the local diversification of renewable energy sources and applied technologies, which is simple: solar, wind, and water flow energy (mini-hydroelectric power plants), solar thermal collectors, pumps, and biogas plants are combined into a single coordinated system. Overcoming the risk of instability of each element separately and combining them allows for the provision of the necessary capacity, particularly for remote tourism facilities that are remote from centralised networks and power supply systems.



Legal certainty for activities involving the production of various types of energy from renewable energy sources, including the production of "biogas."

A **hybrid energy supply system**—an energy system with multiple sources of renewable energy that uses at least two different technologies for generating (converting) electric and thermal energy—is the most promising in terms of generating electric energy in decentralised zones by non-core business entities such as households. Hybrid systems' total power parameters can exceed 15 kWt.

It is proposed legal provisions that reveal the essence and content of the use of various RES resources and hybrid technologies for real estate energy supply..

Hybrid systems of renewable energy supply of an object—generation of clean energy in decentralised zones based on renewable energy conversion technologies—create a single system of renewable energy supply of a real estate object by combining several energy sources (at least two different generation technologies).

A hybrid generation system based on the use of technological advantages from renewable energy sources is an efficient and painless way to transition from hydrocarbon-based thermal and electrical energy generation to renewable energy generation. Hybridization is the most effective and reliable method of increasing energy efficiency and contributing to the rejection of traditional fuels.

Matrix 1. Comparative table of recommendations to the Law “On Renewable Energy Sources”.

The current Law of the Kyrgyz Republic "On Renewable Energy Sources" dated June 30, 2022 No. 49	Proposed amendments
<p style="text-align: center;">Chapter 1. General provisions</p> <p>Article 1. Objectives of this Law The objectives of this Law are the development and use of renewable energy sources, improvement of the energy structure, diversification of energy resources, improvement of the social situation of the population, ensuring energy security of the Kyrgyz Republic, environmental protection and sustainable economic development.</p> <p>Article 3. Basic concepts and terms 14) certificate of conformity - a document issued on the basis of certification rules and reliably demonstrating that renewable energy and fuel sources are properly identified, comply with a standard or other regulatory document;</p> <p>Chapter 2. Fundamentals of public administration in the field of renewable energy</p> <p>Article 6. Basic principles of the state policy in the field of renewable energy</p>	<p style="text-align: center;">Chapter 1. General provisions</p> <p>Article 1. Objectives of this Law The objectives of this Law are the development and use of renewable energy sources, improvement of the energy structure, improvement of the social situation of the population, ensuring energy security of the Kyrgyz Republic, environmental protection and sustainable economic development.</p> <p>Article 3. Basic concepts and terms. Renewable energy technologies are the implemented achievements of science and technology, embodied in the form of various equipment, transmission, storage systems, devices, devices that generate thermal and electrical energy from</p>

<p>1) the objectives of the state policy in the field of renewable energy are to strengthen energy security by increasing the share of renewable energy, developing competitive energy systems and ensuring environmental protection;</p> <p>2) the state policy in the field of renewable energy is implemented within the framework of national and regional programs;</p> <p>3) ensuring environmental protection and rational use of natural resources, public health and labor protection in the implementation of measures aimed at the development of the renewable energy sector;</p> <p>4) state support for the use of renewable energy;</p> <p>6) attracting investments and supporting entrepreneurship;</p> <p>9) information support of technical and technological achievements in the field of renewable energy;</p> <p>10) broad involvement of the public and scientific and technical potential in the process of renewable energy development;</p> <p>12) promotion of activities aimed at decentralized and autonomous generation of electric and thermal energy;</p> <p>13) involvement of the population in the production and use of renewable energy equipment;</p> <p>14) ensuring interdepartmental and intersectoral cooperation in the field of renewable energy.</p> <p>Article 7. Promotion of renewable energy use</p> <p>3) support the construction of independent renewable energy systems in cities, as well as in rural areas to provide energy services and the functioning of local production, life support of the population;</p> <p>6) support for the creation of service centers that ensure stable production of installations using renewable energy, repair and maintenance of the systems being created;</p> <p>Article 8. Public administration in the field of renewable energy</p> <p>2) development, implementation and execution of national programs in the field of</p>	<p>renewable energy sources, as well as converting organic raw materials into biogas.</p> <p>Hybrid systems of energy supply of an object through the use of renewable energy - generation of clean energy in decentralized zones based on renewable energy conversion technologies that create a single system of energy supply of a real estate object through the use of several energy sources (at least two different generation technologies).</p> <p>Chapter 2. Fundamentals of public administration in the field of renewable energy</p> <p>Article 6. Basic principles of the state policy in the field of renewable energy</p> <p>1) the objectives of the state policy in the field of renewable energy are to strengthen energy security through the <u>diversification of energy resources</u> by increasing the share of renewable energy, developing competitive energy systems and ensuring environmental protection;</p> <p>2) the state policy in the field of renewable energy is implemented within the framework of <u>national, sectoral, regional and municipal programs</u>;</p> <p>3) <u>rational use of natural resources to obtain the necessary types of energy from renewable energy sources, with minimal or zero impact on the environment, public health and labor protection</u> in the implementation of measures aimed at the development of the renewable energy sector;</p> <p>4) state support for the use of renewable energy;</p> <p>6) attracting investments and supporting entrepreneurship;</p> <p>9) information support of technical and technological</p>
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renewable energy, providing for internal and external sources of financing;

3) reforming the energy sector, taking into account the use of the potential of renewable energy;

4) development and implementation of legal mechanisms, as well as regulatory and legal documentation, contributing to the development of the use of renewable energy and the production of renewable energy equipment;

10) accounting and regulation of the construction of renewable energy facilities connected to the common energy network, based on the issuance of technical specifications of electric power companies.

Article 9. Competence of the authorized state body for the development and support of the use of renewable energy

4) has the right to reserve land plots for the construction of facilities using renewable energy;

5) has the right to initiate the work of the land commission, to participate in the consideration of the issue of granting land plots for the construction of facilities using renewable energy;

Chapter 3. Economic and organizational and legal mechanisms in the field of renewable energy

Article 10. Creation, acquisition and operation of renewable energy installations

2. Organizations engaged in the design of buildings are recommended to provide for the possibility of using solar energy or other renewable energy sources in the projects being developed.

9) tariffs for the sale of electric energy generated using renewable energy sources between the manufacturer and its consumer are established on a contractual basis;

10) tariffs for electric energy for own needs generated using renewable energy sources are not set;

Article 13. Information support of renewable energy activities

1) wide discussion of national and regional renewable energy use programs;

2) coordination of work on the creation of demonstration projects in the field of renewable energy;

achievements in the field of renewable energy;

10) broad involvement of the public and scientific and technical potential in the process of renewable energy development;

12) promotion of activities aimed at decentralized and autonomous generation of electric and thermal energy;

13) involvement of the population in the production and use of renewable energy equipment;

14) ensuring interdepartmental and intersectoral cooperation in the field of renewable energy.

Chapter 3. Economic and organizational-legal mechanisms in the field of renewable energy

Article 10. Creation, acquisition and operation of renewable energy installations

2. Organizations engaged in the building design are required to set a standard of 10% of the requested capacity due to the use of alternative sources (renewable energy sources) in the projects being developed.

<p>3) creation of zones with preferential use of renewable energy in the territory of administrative-territorial units;</p> <p>4) organization of exhibitions of technologies and equipment in the field of renewable energy;</p> <p>5) providing consumers and producers of renewable energy with information on their production and use;</p> <p>4) reviews reports regarding the implementation of state programs, research projects and evaluates the scientific level of research, testing and inspections carried out in the field of renewable energy;</p> <p>6) annually submits to the Cabinet of Ministers of the Kyrgyz Republic information on the progress of the deployment and implementation of programs in this area.</p>	
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2.2. Recommendations to the Law "On Energy".

Renewable energy technologies are scientific and technological achievements that are manifested in the form of various equipment, transmission and storage systems, devices, and devices that generate thermal and electrical energy from renewable energy sources, as well as the conversion of organic raw materials into biogas.

Energy efficiency is the rational use of energy resources to obtain the necessary types of energy from renewable energy sources with minimal or zero impact on the environment.

The possibility of technological connection to public networks and the sale of surplus energy produced.

It is proposed to create legal and regulatory frameworks for the distribution of surpluses, rules for accounting for the mutual flow of energy into centralised networks, and procedures for joining the networks in order to increase the economic benefits from the feasibility of introducing renewable energy and E/E technologies.

To determine that the minimum power parameter of at least 15 kW for commercial supply in the network, and the parameter for interchange of at least 1 kV when connecting to a unified power supply system is the most economically acceptable.

It is also necessary to determine the right of microgeneration entities to generate energy at any voltage standard, including creating low-voltage systems and local networks, with a mandatory condition of compliance with safety standards and rules. The principle of non-interference through non-application of norms and standards established by regulatory documents for grid energy.

Based on the results of the public discussion of the draught roadmap of June 7, 2022, and the proposals made, there are the following approaches to refusing to determine the parameters of microgeneration:

Argumentation for the rejection of the definition of minimum parameters and power rationing in the draught law "On Energy":

CASE.

Micro-hydroelectric power plants with a capacity of 1, 2, 5, 16, and 22 kW are being produced in the Kyrgyz Republic, respectively. There is already a capacity exceeding the indicator proposed in the bill by over 15 kW, and accordingly, any modernization or innovation can give an increase that will exceed the indicator defined in the law.

External supplies (imports) of generating systems may have values (passport data) that differ from the actual energy production (more or less) of the set value.

The use of hybrid systems will also deny the use of the parameter proposed in the draught law, as there is no certainty of the rules for calculating values, whether from a single source of renewable energy or from a combination of sources.

Except for the economic feasibility of determining the minimum value when supplied to centralised networks from microgeneration facilities, there are no explanations for the expediency of setting parameters—actual limits on the capacity of microgeneration plants. The debate over "how to differentiate" microgeneration from "small energy" appears insufficient, and the use of a limiting framework will create a barrier.

Regulation of relationships in the supply of surpluses to centralised networks from non-specialized entities.

- 1. to define the categories of subjects of regulated relations in industry legislation for the production and transfer of energy received from microgeneration facilities.**
- 2. to establish the form and mechanism of regulation of relationships in the supply of surpluses and supplies from specialised entities to centralised networks .**

1. The Kyrgyz Republic's renewable energy legislation governs the production, transmission, distribution, sale, and consumption of electric energy derived from renewable sources.

"Relations on production, transmission, distribution, sale, and consumption of electric energy due to microgeneration are established by decisions of the Cabinet of Ministers of the Kyrgyz Republic."

Regulation of the activities of microgeneration entities that intend to sell surplus energy on the grid for a fee or to engage in reciprocal supply.

Form of regulation: assessment of network standards compliance and economic feasibility of supply quality and volume

3. Supplier certification is an activity that assesses compliance with the standards and requirements of network organisations, the procedures of which are determined by the Cabinet of Ministers of the Kyrgyz Republic.

4. A certified supplier of thermal and electric energy in the grid is a business entity that receives energy from renewable energy sources that meets technical parameters, standards, and economically justified supply capacity, has passed a conformity assessment, and has been granted a certificate of admission.

The objective difference between the proposed regulation and the existing one is, first, certainty in relation to non-energy sector entities, and second, certainty in relation to specialised organisations, including Energy Cooperatives, which are possible forms of organising energy production and consumption in local territories.

The proposal in the draught law to use a reference norm-definition for a special law on renewable energy can be regarded as an exception to the relationships governed by the energy law. However, exclusion as a method of refusing regulatory intervention through state regulation in sectoral law indicates the problems with the correlation of norms and regulations, as well as the applicability of laws, and does not solve the problems of Microgeneration development.

The policy of decentralisation and generation diversification as a way to promote Microgeneration.

Development of local energy supply systems and a mixed model of energy sector development.

Decentralization is an economic model for the development of small-scale energy and a form of implementing policies aimed at increasing energy production and consumption to meet their own needs through microgeneration from renewable energy sources.

A local network is a local power system that involves the creation of its own power grid structures on a certain territory and can work in various ways, including autonomously.

Local energy systems based on renewable energy sources are autonomous complexes of generation, transmission, storage, and consumption of clean energy.

Such definitions and clarifications, as well as the definition of the National Energy System as a component with its own management regime, a complex of autonomous local systems, and networks, should be included in the law.

Energy audit is the professional activity of persons, organizations providing services for assessing the state of the energy system of a real estate object, energy supply systems, rationality of energy consumption, analysis of energy efficiency reserves and development of a set of measures for their technical justification to reduce energy consumption, increase energy

efficiency, including through the use of modern technologies and the introduction of renewable energy technologies.

Development of the Institute of Energy Audit for the purposes of increasing energy efficiency and assessing compliance with network standards during supplier certification.

A distinctive feature of the Energy Audit from the Certification of Energy Efficiency of Real Estate Objects is the provision of consulting services and practical assistance in the development of feasibility studies and technical assistance to MSME entities with intentions to introduce renewable energy and E/E technologies and produce and consume clean energy. Furthermore, the development of non-state structures eliminates the failure of information and technical advisory services. It should be noted that the activities of energy audit organisations require proper regulation.

The goal is to promote the growth of energy efficiency in tourism facilities that do not fall under mandatory building and structure certification (subject to assessment to the standards and parameters of technical regulations on energy efficiency), even if voluntary certification does not cover the assessment of the use of renewable energy technologies for the facility's energy supply.

Make amendments to the legislation:

An energy audit is a survey of energy facilities to identify energy efficiency, improvement measures, and the feasibility of their implementation, which includes the collection of documentary information, instrumental examination, information analysis, and the development of recommendations for energy conservation (passport of the facility, assessment of compliance with standards, etc.).

To supplement the legislation on energy efficiency of buildings and structures with parameters for assessing the use of renewable energy technologies directly for the energy supply of a real estate object, to develop and adopt assessment methods, and to define criteria and parameters

- **Energy auditing of real estate objects** is the professional activity of individuals or organisations that provide services for assessing the state of a real estate object's energy system, energy supply systems, rationality of energy consumption, analysis of energy efficiency reserves, and development of a set of measures for their technical justification to reduce energy consumption and increase energy efficiency, including through the use of modern technologies and the introduction of renewable energy technologies.

Matrix 2. A comparative table to the draught law "On Energy."

The current version of the Law of the Kyrgyz Republic "On Energy"	Proposed amendments and revision
<p>Chapter 1. General provisions</p> <p>Article 4. Basic terms and their definitions</p> <p>microgeneration - the production of electricity on-site or near the place of its consumption, regardless of size, technology or fuel, both off-grid and in parallel with the grid;</p> <p>microgeneration facility - an electric energy production facility owned by right of ownership or otherwise legally owned by an electric energy consumer whose energy receiving devices are technologically connected to electric grid facilities with a voltage level of no more than 1 kV and with a maximum power of no more than 15 kW, if electrical equipment is not used to supply electric energy to such an object in the electric grid, designed to serve more than one room in a building, including being part of the common property of an apartment building;</p>	<p>Chapter 1. General provisions</p> <p>Article 4. Basic terms and their definitions</p> <p>certified supplier of thermal and electric energy in the grid - a business entity that receives energy from renewable energy sources that meets technical parameters, standards, economically justified supply capacity, has passed a conformity assessment and received a certificate of admission.</p> <p>Decentralization - an economic model for the development of small-scale energy, a form of implementation of policies aimed at increasing energy production and consumption to meet their own needs through microgeneration from renewable energy sources.</p> <p>Energy audit - the professional activity of persons, organizations providing services for assessing the state of the energy system of a real estate object, energy supply systems, rationality of energy consumption, analysis of energy efficiency reserves and development of a set of measures for their technical justification to reduce energy consumption, increase energy efficiency, including through the use of modern technologies and the introduction of renewable energy technologies.</p> <p>Energy efficiency - the rational use of energy resources to obtain the necessary types of energy from renewable energy sources, with minimal or zero impact on the environment.</p> <p>local network - a local power system that involves the creation of its own power grid structures on a certain territory that can work, including autonomously.</p> <p>Local renewable energy systems - autonomous complexes of generation, transmission, storage and consumption of clean energy.</p> <p>microgeneration facility - an electric energy production facility owned by right of ownership or otherwise legally owned by an electric energy consumer whose energy receiving devices are technologically connected to electric grid</p>

<p style="text-align: center;">Chapter 4. Features of the implementation of activities in the electric power industry</p> <p>1. Relations on production, transmission, distribution, sale and consumption of electric energy using renewable energy sources are regulated by the legislation of the Kyrgyz Republic on renewable energy sources.</p> <p>2. Relations on production, transmission, distribution, sale and consumption of electric energy due to microgeneration are established by decisions of the Cabinet of Ministers of the Kyrgyz Republic.</p>	<p>facilities <u>with a voltage level of at least 1 kV</u> and with a minimum power of at least 15 kW for commercial supply.</p> <p>Supplier certification - an activity to assess compliance with the standards and requirements of network organizations, the procedure and procedures of which are determined by the Cabinet of Ministers of the Kyrgyz Republic.</p> <p style="text-align: center;">Chapter 4. Features of the implementation of activities in the electric power industry</p> <p>2. Relations on production, transmission, distribution, sale and consumption of electric energy due to microgeneration are established by the Law of the Kyrgyz Republic "On Microgeneration". <i>(Amendments after the adoption of the law on Microgeneration)</i></p>
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2.3. Recommendations to the draft law "On Tourism"

(Key definitions: Green labeling, declaration of conformity and green standards, self-regulation and institutions, entities.)

- Creation of regulatory and legal conditions for the development of a system for assessing the compliance of facilities and activities with environmental energy efficiency standards, green standards ("**Green eco-labeling**") of **tourism facilities in the new Kyrgyz Republic "On Tourism" Law.**(Introduction of norms and provisions on self-regulation in the draught law "On Tourism"). (IWG Protocol No. 8).).

Based on the outcomes of the discussion and the special position of the Ministry of Economy and Commerce of the Kyrgyz Republic, the authorised body for the implementation of the policy of the technical regulation system, the IWG adopted the following decisions on the basis of Protocol No. 10:

"In order to put in place a system of Green standards, it must be determined that the most acceptable form of conformity assessment will be "Declaration of conformity" to accepted green standards, as the most simplified and least costly system of co-regulation.

A self-declared environmental statement (declaration) is an environmental statement declared without certification by an independent third party by a manufacturer, importer, distributor, or other person who may benefit from such a statement.

Development of national or regional standards or adaptation of standards.

Self-regulation is an initiative activity carried out by organised business or professional entities that consists of developing and establishing standards and rules for this activity, as well as monitoring compliance with accepted standards and requirements.

Certain regulatory functions may be delegated to self-regulating organisations.

Recommendation on amendments to the draught law "On Tourism Article No. ...Self-regulation in Tourism."

- 1. Activities for setting standards, providing audit services, monitoring, and maintaining a register of the organization's member entities, and self-regulation of relationships arising from business entities' voluntary acceptance of additional obligations to comply with accepted norms and rules in the fields of quality, safety, environmental friendliness of services provided, and operation of tourism infrastructure facilities.**
- 2. Self-regulating organisations are non-profit organisations based on voluntary membership that unite entrepreneurs based on the principle of uniformity of types of entrepreneurial activity and are formed for the purpose of self-regulating activities based on environmental standards, rules, and mandatory legislative requirements.**
- 3. Standards of a self-regulating organisation: regulatory documents establishing additional requirements for conducting business activities by members of a self-regulating organization, developed and accepted by members in the form of obligations, approved by the authorised body in the field of tourism, and duly registered.**

Article 3. Basic concepts (in the draft law on tourism based on the results of the inventory)

<p>Instead of the definition proposed in the draft law</p>	<p>Green technologies are safe technologies that minimise the negative impact on nature, people, and related processes, ensuring the operation of accommodation facilities, engineering, and communal infrastructure based on the rational use of natural resources while minimising environmental impact..</p>
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Definitions of Engineering infrastructure as an integral part of tourist infrastructure:

<p>Instead of the existing definitions</p>	<p>Proposed change: The tourism infrastructure is a set of accommodation facilities, <u>engineering and communal infrastructure for tourism activities</u> and all modes of transportation for people and tourist goods, sports, catering facilities, entertainment, leisure organisations, and means of acquaintance for educational, business professional, recreational, and sporting purposes.</p>
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The object of regulation, the subject, the proposed approach, identifying the object to which the requirements are imposed.

	<p>Accommodation facility - a property object that provides tourists with permanent or temporary lodging, including lodging facilities (room stock) and separate living quarters (rooms) intended for living.</p>
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Recommended solution: inclusion of concepts and definitions in tourism industry legislation.

The introduction of Green labelling of real estate objects on which and through which services are provided - tourism objects - must be identified and defined on the basis of uniform norms of Kyrgyz Republic legislation.

"Green Sticker" labelling of tourism facilities based on the Green facility sticker conformity assessment procedure (hotel, hostel, guest house, etc.)

Objectively, the need to develop, approve, and adopt green standards remains the responsibility of the tourism community and business associations, as does monitoring and maintaining a register for specially created non-commercial self-regulatory organizations.

Based on the decisions of the authorised body, the proposed option of making a large number of additions and amendments to the draught law "On Tourism" was rejected. Following consultations with the heads of the Department of Tourism and responsible specialists, it was proposed to reduce the proposed additions and make amendments to the draught law on amendments to the current Law of the Kyrgyz Republic "On Tourism.

However, the point-by-point introduction of additions and amendments to the current law does not allow creating sufficient legal conditions for the implementation of the recommendations and decisions of the IWG, and changing the content and inclusion of new norms and provisions in their article-by-article layout may violate the existing meanings and the previously laid down concept of the law, i.e., violate the legal structure..

Matrix 3. Comparative table to the Law of the Kyrgyz Republic "On Tourism".

Current edition	Proposed amendments
<p>Article 1. Basic concepts</p> <p>The following basic concepts are used in this Law:</p> <p>tourism - temporary departures (trips) of citizens of the Kyrgyz Republic, foreign citizens and stateless persons (hereinafter referred to as citizens) outside their permanent place of residence for recreational, educational or professional-business, sports, religious and other purposes without engaging in paid activities in the country (place) of temporary stay; the tourism industry is a set of hotels and other means of accommodation for tourists, means of transport, catering facilities, entertainment facilities and facilities, educational, business, recreational, sports and other purposes, organizations engaged in tour operator and travel agency activities, as well as organizations providing excursion services and services of guides and interpreters;</p>	<p>Article 1. Basic concepts</p> <p>Declaration - a statement made by the subject of the activity regarding the compliance of tourist facilities with green standards;</p> <p>Green labelling ("Green sticker") designation of tourism accommodation facilities (hotel, hostel, guest house, etc.) based on the procedure for assessing compliance with accepted green standards;</p> <p>green standards – additional requirements for tourism facilities;</p> <p>green technologies are safe technologies that minimise the negative impact on nature, people, and related processes, ensuring the operation of accommodation facilities, engineering, and communal infrastructure based on the rational use of natural resources while minimising environmental impact;</p> <p>Self-regulating organizations are non-profit organisations based on voluntary membership that unite entrepreneurs on the basis of the principle of uniformity of types of entrepreneurial activity and are formed for the purpose of self-regulating activities based on the principle of uniformity of types of entrepreneurial activity..</p> <p>Self-regulation in tourism is the activity of setting standards, providing audit services, monitoring, and maintaining a register, as well as the self-regulation of relationships arising from additional accepted obligations by tourism entities that go beyond mandatory norms, rules, and mandatory safety requirements.;</p> <p>self-regulation is an initiative activity undertaken by organised subjects of entrepreneurial or professional activity, with the purpose of developing and establishing standards and rules for this activity, as well as monitoring compliance with accepted standards and requirements.</p> <p>standards of a self-regulating organization are normative documents that establish additional requirements for members of a self-regulating organisation to conduct business activities. They are developed and accepted by members in the form of obligations, approved by the authorised body in the field of tourism, and duly registered.</p> <p>the accommodation object is a property object that includes accommodation facilities (room stock) and separate living quarters (rooms) intended for living for tourists (tourists).</p> <p>tourism infrastructure is a set of accommodation facilities, engineering and communal infrastructure for tourism activities, all types of means of transportation of people and tourist, sports</p>

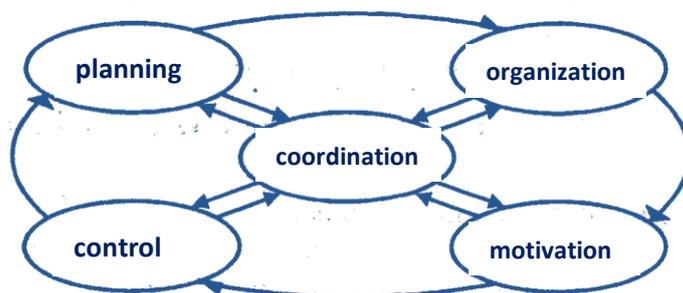
	goods, involved catering facilities, leisure, sports organizations, used technical means and facilities for the provision of tourist services.
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Given the uncertainty surrounding regulatory policy changes, an obvious solution, including the introduction of legal norms and mechanisms in industry legislation aimed at the development of self-regulation and regulation of the activities of self-regulatory organisations, should be included in the tourism development strategy for the next few years: measures aimed at the development of institutions and the creation of legal conditions, including and through the adoption of new laws, and a law on tourism that meets the new realities.

SECTION III. RECOMMENDATIONS FOR INCLUSION IN POLICY AND STRATEGIC DOCUMENTS.

The effectiveness of policy changes and decision-making requires the activity and interest of politicians; the goals of changes should be clear to society and business; and industry departments should come to a consensus on taking responsibility for the result of changes.

The Ministry of Culture, Sports, and Youth Policy of the Kyrgyz Republic is the key authorised state body responsible for the implementation of state policy in the field of tourism. The main tasks of the Ministry of Economy and Trade include determining the expected results, forecasting the consequences, calculating the economic benefits and costs of changes, and subordination to the goals of socio-economic development. The agency also determines policies for the development of MSME entrepreneurship and is in charge of the development of the technical regulation system; as a result, the agency should become the primary architect of change. The Ministry of Energy determines the development policy of the energy sector and the formation of basic legislation in the field of energy.



It will also require the use of a broader mandate to increase the effectiveness of the changes being undertaken at the level of the presidential administration's authorised division in the field of reform analysis and monitoring, as well as achieving the actual programme and project goals of the strategic documents being implemented.

- **Goals, program documents (Program implementation plan until 2026)**

For program documents, determine the subordination of the goal:

- Programming the development of mass production and consumption of clean energy and the growth of energy efficiency among tourism entities at the level of CBT involves households involved in the provision of certain types of related services to tourists.
- The proposed draught action plan **Annex 1** includes the inclusion of components (measures) in the programme documents, the implementation of the adopted documents of the Cabinet of Ministers of the Kyrgyz Republic and the draught programme for the development of renewable energy, the tourism development strategy, the recommended new document—the microgeneration development program—and the implementation of the provisions of the Kyrgyz Republic's adopted law on renewable energy in terms of determining practical impact measures and measures of state support.

The measures taken in the framework of the preparation of the Action Plan for the implementation of the National Development Program of the Kyrgyz Republic until 2026, approved by the Decree of the President of the Kyrgyz Republic, prescribe to solve the problem of regulatory and technical regulation of the design and Construction of various facilities through adaptation of building codes and regulations, as well as technical regulations, can be included in sections of the renewable energy development programme and recommended for the development and adoption of the microgeneration development programme.

Objectively, the development of microgeneration for own needs is a way to reduce emissions, increase the sustainability of energy supply, and achieve mass use of renewable energy technologies and energy efficiency technologies in everyday life and business, especially where there is no access to traditional energy supply systems for tourism facilities and there is a shortage of capacity.

It is important to determine the targeting of support measures for the development of Microgeneration by the types of RES used.

Item 437 from the Implementation Plan of the 2026 programme - "Development of Microgeneration of Electricity"

Microgeneration is the activity of converting one type of energy from renewable sources into thermal or electrical energy directly on a property, on the nearest water body, land plot, or geothermal source.

This definition broadens the range of energy types defined in draught laws, resulting from the use of renewable energy and technologies for converting one type of energy into another, in relation to real estate and resources (land, water, and subsoil).

It should be noted that the other proposed formulations include microgeneration of energy based on the use of solid and liquid fuels, which does not meet the goals of reducing emissions.

The Implementation Plan in the adopted development programme until 2026 includes tasks for the development of specialised state programmes.

Section of the Programme Plan "Renewable energy sources and energy efficiency".

- Item 421 "Development of the RES development strategy and introduction of amendments and additions to the legislation and the Law "On Renewable Energy Sources".

- Item 435 Development of alternative energy sources "development of a RES Development Program (for the medium term).

- Paragraphs 438-439 "Development of a mechanism for financing renewable energy installations, for microgeneration of electricity - Development of a mechanism for crediting citizens using renewable energy installations.

- Item 440 Development and updating of National Building Codes and Regulations - development of a Plan of measures for the implementation of specific technological solutions in various sectors of the economy.

According to the results of the discussion of the draught road map dated July 6, 2022, based on information from the partners of the Green Alliance, the Renewable Energy Association, and national expert Eleonora Kazakova, there are several bills today, each of which defines different generation parameters.

There are discrepancies between the draught norms and provisions developed by the working groups in the draught laws (based on the results of the inventory of legislation) and those posted in the public domain. There are also initiatives by deputies of the Parliament (Jogorku Kenesh of the Kyrgyz Republic) on amendments and additions to existing laws.

Accordingly, the recommendation on the formation of microgeneration development policies is of great relevance when there is a risk in the form of a lack of coordination in the formation of economic sector development policies between various executive and legislative authorities.

Decentralization is an economic model for the development of small-scale energy, a form of policy implementation aimed at increasing energy production and consumption to meet their own needs through microgeneration from renewable energy sources.

This definition takes place when developing the goals of program documents and determines the choice of a mixed model for the development of the country's energy sector.

SECTION IV. RECOMMENDATIONS FOR THE INCLUSION OF MEASURES IN THE IMPLEMENTATION OF PROGRAM DOCUMENTS.

5.2.Improvement of the regulatory framework for the production and consumption renewable energy.

1. Improvement of the regulatory framework for the production and consumption of renewable energy.



- Amendments and additions to the legal and regulatory frameworks of the procedure for regulating activities for the production of clean energy by non-core entities for their own consumption and the sale of surplus.
- Regulatory and legal regulation of the rules of design and development of territories of cities and settlements (building codes “SNIP”).
- Regulation of the procedure for authorised bodies (primary property owners) involved in determining the functional and purpose of land plots for the placement of microgeneration infrastructure facilities.
- Regulatory and technical regulation of the safety of facilities.
- Creation of regulatory and legal conditions for the development of a system for assessing the compliance of facilities and activities with environmental energy efficiency standards, green standards ("Green Energy Certification") in the new edition of the Law of the Kyrgyz Republic "On Tourism".
- Development and adoption of the law "On the development of Microgeneration".
- Decision-making "On the development of a comprehensive Microgeneration development program based on a decentralized model".

2. Recommendations for addressing the issue of land use and land ownership, as well as the use of land plots for the placement of generation facilities, energy storage, and energy transmission activities.



**Section of the National Development Program of the Kyrgyz Republic until 2026 4.4.
"Tourism development" Item 522**

Measure/task	Action	Responsible performers	Period/terms	Sources of financing
Development of the draft Law of the Kyrgyz Republic on amendments and additions to the Land Code of the Kyrgyz Republic <u>regarding the definition of the category of land for tourism facilities</u>	Adoption of the law, definition <u>of the category of lands for tourism development</u>	Ministry of Agriculture, ICISMP, LGA, LSG (by agreement)	II quarter 2022–IV quarter 2024	Within the republican budget funds

To supplement the text of **Paragraph 522** with the words "... categories of land for tourism facilities **and infrastructure of tourist facilities**", which will allow the formation of land plots taking into account the need for the placement of microgeneration facilities.

3. Optimization of procedures for the provision of land use for tourism purposes and the use of land plots for small-scale energy and microgeneration facilities

- Legislative definition of standards for the area of land plots reserved (used) for the placement, construction, and operation of small energy facilities;
- Development of standards regulating space-planning conditions, technical requirements, and standards based on the parameters of the required (augmented) capacity of installations based on renewable energy (microgeneration).
- Use of lands without changing their legal status and category (formation of a land plot for microgeneration objects without changing the status and category). "Multifunctionality".
- Elaboration of amendments and proposals for land reform in the development of new codes (land and water), based on which it is necessary to establish a mechanism for regulating land use on the basis of legal zoning (permitted use) of land functionally related to the category of energy land and industrial land.

Priority amendments and additions to the current legislation.

- **Conducting an advocacy campaign for the development of self-regulation.**



- Study and exchange of experience between associations (SRO) of other countries, applying similar approaches and ways to achieve the goals of sustainable tourism development;
- Studying the experience and practises of self-regulation;
- Formation of a circle of interested organisations to promote initiatives and be ready to assume obligations and responsibilities;
- Provision of resources for the process of policy formation and implementation;
- Organizing and conducting an advocacy campaign, forming a circle of interested business organizations;
- Finding resources and involving development partners to provide technical, expert support for the study and exchange of experience between organisations in other countries.

Expected result:

1. Adoption by the parties of one of the forms and models of self-regulation in the sector.
2. Introduction of industry-specific "Green Eco standards," rules for their use, and mechanisms for their practical implementation.
3. Reducing the negative impact on the environment. The growth of production and consumption of clean energy from renewable energy sources, the growth of E/E.

- **Development of a draught law regulating the process and procedures for assessing compliance with "green eco standards," as well as the mechanism of "green labeling" of tourism facilities and monitoring compliance with declared obligations by a business entity.**



- Creation of legal conditions for the practical implementation of policies;
- Development and adoption of legal acts by defining implementation mechanisms and regulating the relations between the parties in the process of conformity assessment (declaration, labeling, etc.).
- Development of rules, processes and procedures for conformity assessment, monitoring, labeling, registry maintenance, accounting, etc.

5.2. Recommendations for the RE Development Program or Microgeneration Development Program



1. Stimulating the development of Microgeneration

- Adoption of a comprehensive program for the development of microgeneration based on a decentralized model;
 - Development of pilot projects within the framework of the Law of the Kyrgyz Republic "On Public-Private Partnership" to attract funds to finance microgeneration projects;
 - Development and adoption of a decision on inclusion in the draught tourism development strategy.
- Following the discussion and the final extended meeting of the IWG, a proposal was received on the need for more specific programming of the development of production

and consumption of clean energy obtained through the conversion of renewable energy sources (to develop special development programs).

- **To create and implement "Programs for the mass deployment of microelectric power plants and wind power units."**
- **o Development and adoption of a "Program for the Introduction of Biogas Plants in Rural Areas"**
- **Set the task of using water heating installations instead of solar energy as measures to reduce emissions and conserve energy using traditional resources when developing documents for local (municipal, urban) socioeconomic development.**

2. Creating conditions for the development of cooperation in the field of green energy.

- Introduction of mechanisms to stimulate industrial cooperation and integration into value chains with the EAEU countries ("Energy Cooperatives").

SECTION 5. GENERAL RECOMMENDATIONS

Support for various types of entrepreneurial activities on which the growth of clean energy production and consumption from renewable energy sources, as well as the growth of E/E, is dependent.

5.1. Support of green tourism development infrastructure based on the production and consumption of clean energy based on renewable energy sources.

- Creation of a system of information and consulting platforms;
- To organise basic technological spaces for renewable energy in regional centres (repair, maintenance, issues of equipment operation, and improvement of technologies and parameters);
- Provision of information, consulting services, R&D support, and the development of marketing companies for the promotion of renewable energy technologies and products, exhibitions, and events for the exchange of experience through the CCI, including in the regions of the Kyrgyz Republic;
- creation of an electronic information resource ("cost-benefit calculator");
- conducting a "business caravan" on technology transfer and other information and consulting support in the field of renewable energy on a systematic basis.

The NRIIEE proposes the formation and implementation of policies and state programmes aimed at the development of its own production:

Development of industrial production of equipment:

- 1. For solar thermal systems (capacitive heat exchangers, storage tanks, automatic control and control systems, circulation pumps);**
- 2. For biogas plants (methane tanks, gas tanks, faecal pumps, gas meters, and distributors);**
- 3. For heat pump installations (Compressors, thermoregulators, electric motors, solar heat exchangers and evaporators, chokes, and automatic control systems);**
- 4. For geothermal installations (deep pumps, heat exchangers, compressors, control systems);**
- 5. For wind power plants (permanent magnet generators, wind wheels, support trusses, automation systems, batteries, inverters, stabilization units);**
- 6. For Micro-hydroelectric power plants (electric generators, turbines, automatic control systems, water intake devices and hoses).**

Simultaneously, it is critical to provide **information support**, create and develop an **infrastructure to support entrepreneurship development**, consulting, technological, engineering services through specially created support institutions, implement R&D support measures, introduce clean energy production, and establish requirements for state and municipal

procurement of equipment for microgeneration of clean energy, which will eliminate market gaps and promote the development of business entities on which depends the growth of energy efficiency and local production, consumption of clean energy, and by and large the reduction of emissions.

- Development of measures aimed at providing access to information about hydrothermal resources (explored, used-licensed wells, preserved, promising) with an indication of their characteristics necessary for the development of projects (IWG Protocol No. 9).

On the basis of Protocol No. 10 and discussion of the Draft Roadmap dated June 7, 2022 of the Roadmap, and on the basis of proposals received from Mavlyanbekov Sh.U., the head of the Department for the Organization of Project Work, the National Research Institute of Energy and Economics, should include items as measures of information support for the development and use of RES resources and ensuring the availability of data:

- **Formation of the "Wind Cadastre";**
- **Development of an "Interactive Energy Map of Small Watercourses"**

Implementation will require conducting surveys and attracting resources to carry out the relevant work.

5.2. Expanding the access of CBT business entities to financial resources.



- Formation of special mechanisms of concessional financing through green lending and the attraction of funds from special funds at "Reduced rates."
- The use of a portion of the Tourism Development Fund's funds to create exemplary microgeneration facilities in each region to address the issues of developing engineering infrastructure for the provision (microgeneration) of tourism facilities.

1. Implementation of leasing for microgeneration.

- Sustainable financing of microgeneration projects and the development of equipment leasing.

2. Improving the financial stability of CBT business entities.

- Guarantees of acquisition of surpluses by centralized networks for transfer to consumer entities at a commercial tariff (reduction of payback periods for projects).

3. Stimulating the growth of "Green" projects.

- State support for the use of environmentally friendly technologies.

4. Increasing the potential in the field of production and consumption of energy based on renewable energy.

- Conducting training seminars through entrepreneurship development centers: for "Suppliers" and "Consumers" of energy;
- Formation of special educational digital platforms for the self-development of technologies;
- Organization of periodic practical training through Technology Development Support Centers at universities or other educational institutions (technology transfer).
- Amendments and additions to the building codes (regulation of the placement of microgeneration facilities in cities, towns, and beyond). (Regulatory and legal regulation of the Rules for the Design and Development of Territories of Cities and Settlements) (IWG Protocol No. 8).

5.3. Improvement of the system of planning and placement of microgeneration facilities (including the engineering infrastructure of tourism facilities for CBT).



- Development and adoption of municipal programs for the development of engineering infrastructure, master plans of PDP, taking into account the need for microgeneration facilities.
- Making additions to the building codes: territorial planning norms, taking into account the placement of microgeneration facilities.
- Development of measures to ensure the activity of standards (SNIp, technical regulations, rules for the operation of "Microgeneration" installations (for example, gas tanks of various low capacities), including initiating work on the development of the technical regulations of the Customs Union "On the safety of equipment operating under excessive pressure" (TR CU 032/2013)" (Protocol of the IWG No. 9);
- Borrowing and adapting regulatory systems from internationally recognised urban planning regulation systems, such as the Code of Norms and Rules for the Design and Construction of Real Estate ("Eurocodes"), etc.;

The decision to broaden the list of goods (units of equipment for microgeneration and other non-renewable energy technologies, E/E, equipment, components, materials, and so on) that require VAT exemption -- import (IWG Protocol No. 9);

5.4. State support for manufacturers and suppliers of technologically innovative renewable energy equipment for green energy.

Expected result: Attracting a large number of producers and suppliers of renewable energy in the Kyrgyz Republic due to VAT exemption when importing goods under TN VED codes of microgeneration technologies.

APPENDIX 1. GENERAL IMPLEMENTATION PLAN OF THE "WHITE BOOK OF CHANGES"

№	Task	Measure/Action	Terms of implementation	Performers	Financing
1. IMPACT ON MARKET FAILURES					
1.1. Unavailability, underdevelopment and lack of infrastructure provision of consulting, engineering, repair, maintenance and other related services.					
1.	Support of green tourism development infrastructure based on the production and consumption of clean energy.	○ Development of a system of information and consulting platforms based on the entrepreneur service centres (ESC).	20...	MEC, Ministry of Energy, universities, Technology incubators, specialized business entities, development partners, associations, other interested parties.	Within the framework of the republican budget, funds from international and donor organizations and private investments
		○ To organize basic technological spaces for renewable energy in regional centers (repair, maintenance, equipment operation issues, and technology and parameter improvements).	20...		
		○ Provision of information, consulting services, R&D support, development of marketing companies for the promotion of renewable energy technologies and products, exhibitions, events for the exchange of experience through the ESC, including in the regions of the Kyrgyz Republic.	Up to 20...		
		○ Creation of an electronic information resource "cost-benefit calculator".	20...		
		○ Conducting a "Business caravan" on technology transfer and other information and consulting support in the field of renewable energy on a systematic basis.	Until 2026		
		<ul style="list-style-type: none"> ● Development and development of industrial production of equipment: <ul style="list-style-type: none"> - Capacitive heat exchangers, storage tanks, automatic control systems, circulation pumps, and other components used in solar thermal systems; - Methane tanks, gas tanks, faecal pumps, gas meters, and distributors for biogas plants; - Compressors, thermoregulators, electric motors, solar heat exchangers and evaporators, chokes, and automatic control systems for heat pump installations; - Deepwater pumps, heat exchangers, compressors, and control systems for geothermal installations; 			

		<ul style="list-style-type: none"> - Permanent magnet generators, wind wheels, support trusses, automation systems, batteries, inverters, stabilisation units for wind power plants; - Electric generators, turbines, automatic control systems, water intake devices, and hoses For micro hydroelectric power plants. 			
		<ul style="list-style-type: none"> o Formation of the "Wind Cadastre"; 			
		<ul style="list-style-type: none"> o Development of an "Interactive Energy Map of small watercourses". 			
2.	State support for manufacturers and suppliers of technological, innovative renewable energy equipment for green energy	<ul style="list-style-type: none"> o Attracting a large number of producers and suppliers of renewable energy in the Kyrgyz Republic due to VAT exemption when importing goods under TN VED codes of microgeneration technologies based on renewable energy; 	20...	Ministry of Economy and Commerce, Ministry of Energy, international development partners, associations, other interested parties.	
1.2. Problems of land use and land ownership, the use of land plots for the placement of generation facilities, storage of energy transmission and activities.					
3.	Optimization of procedures for the provision of land use for tourism purposes and the use of land plots for small energy and microgeneration facilities.	<ul style="list-style-type: none"> o Legislative definition of standards for the area of land plots reserved (used) for the placement, construction, and operation of small energy facilities. o Development of regulatory standards (space-planning conditions, technical requirements, standards based on the parameters of the required (augmented) capacity of installations based on renewable energy (microgeneration). o Use of lands without changing their legal status and category (Formation of a land plot for microgeneration objects without changing the status and category). "Multifunctionality". o Development of changes and proposals for land reform. 	20...	The Department of Architecture and Technical Regulation of the GAASZHKH under the KMKR, the State Agency of Land Resources under the MSVHRR of the Kyrgyz Republic (land, water, urban cadastre), primary and secondary land owners, the State Agency of Water Resources under the MSVHRR of the Kyrgyz Republic (land, water, urban cadastre).	Within the framework of the republican budget, funds from international and donor organizations, private investments.
4.	Strengthening the system of planning and placement of microgeneration facilities, (including engineering infrastructure of tourism facilities of CBT).	<ul style="list-style-type: none"> o Development and adoption of municipal programs for the development of engineering infrastructure, master plans of PDP, taking into account the need for microgeneration facilities. o Making additions to the building codes SNiP – territorial planning norms, taking into account the placement of microgeneration facilities. 	20...		

1.3. Lack and limited availability of financial resources				
5. Expanding the access of CBT business entities to financial resources.	<ul style="list-style-type: none"> Formation of special mechanisms of concessional financing through green lending and attraction of funds from special funds at "Reduced rates". 	20...	The regulator, financial institutions, associations, large enterprises, financial structures, specialized international funds, authorized government development partners.	Funds from international and donor organizations, private investments
	<ul style="list-style-type: none"> The use of part of the funds of the Tourism Development Fund for the creation of exemplary microgeneration facilities in each region to address the issues of developing engineering infrastructure for the provision (microgeneration) of tourism facilities. 	Until 2026		
6. Implementation of leasing for microgeneration.	<ul style="list-style-type: none"> Sustainable financing of microgeneration projects, development of equipment leasing. 	20...		
7. Improving the financial stability of CBT business entities.	<ul style="list-style-type: none"> Guarantees of surplus acquisition by centralised networks for transfer to consumer entities at a commercial tariff (reduction of project payback periods) 	20...	Authorized state agencies,	Within the framework of the republican budget
1.4. Low competence				
8. Increasing the potential in the field of production and consumption of energy based on renewable energy.	<ul style="list-style-type: none"> Conducting training seminars through entrepreneurship development centers: for "Suppliers" and "Consumers" of energy. Development of specialised educational digital platforms for self-development and green technology education Organization of periodic practical training through Technology Development Support Centers at universities or other educational institutions. (technology transfer). 	Until 2026	The Ministry of Education and Science of the Kyrgyz Republic, Universities (HEI), Development Partners, Interested "Suppliers" and "Consumers".	Within the framework of the republican budget, funds from international and donor organizations, private investments.
1.5. Environmental problems				
9. Stimulating the growth of "Green" projects.	<ul style="list-style-type: none"> State support for the use of environmentally friendly technologies. 	Up to 20...	MK, MF, development partners	Within the framework of the republican budget, funds from international

10.	Formation of the infrastructure of "green" certification.	<ul style="list-style-type: none"> ○ Implementation of Green labelling. Development or adaptation of green standards. ○ Creation of legal conditions for the activities of private organizations specializing in Energy Audit. ○ Regulatory and legal regulation of the activities of non-governmental organizations to assess compliance with green standards. 	20...	The Ministry of Energy, business associations, the private sector, which has the initiative to create a quasi-regulation system	and donor organizations, private investments.
2. IMPACT ON REGULATORY FAILURES					
11.	Strengthening the regulatory framework for the production and consumption of energy based on RES.	<ul style="list-style-type: none"> ○ Amendments and additions to the NPB of the procedure for regulating activities for the production of clean energy by non-core entities for their own consumption and the sale of surpluses. 	20...	MK, Ministry of Energy, private sector, development partners	Within the framework of the republican budget, funds from international and donor organizations, private investment.
		<ul style="list-style-type: none"> ○ Regulatory and legal regulation of the rules of design and development of territories of cities and settlements (building codes). 	20...	Gosarchstroy, Ministry of Energy	
		<ul style="list-style-type: none"> ○ Borrowing, adaptation of regulatory systems of internationally recognized systems of urban planning regulation: design and construction of the Code of Norms and Rules for the Design and Construction of Real Estate "Eurocodes", etc.; 			
		<ul style="list-style-type: none"> ○ Regulation of the procedure and procedures for the activities of authorized bodies (primary property owners) involved in determining the functional and purpose of land plots for the placement of microgeneration infrastructure facilities. 	20...	MK, Ministry of Energy, Gosarchstroy, development partners	Within the framework of the republican budget
		<ul style="list-style-type: none"> ○ Regulatory and technical regulation of the safety of facilities. 	20...	Gosarchstroy, Ministry of Energy, Authorized body in the field of safety assessment of facilities	Within the framework of the republican budget, funds from international and donor organizations, private investments.
		<ul style="list-style-type: none"> ○ Creation of regulatory and legal conditions for the development of a system for assessing the compliance of facilities and activities with environmental energy efficiency standards, green standards ("Green Energy Certification") in the new version of the Law of the Kyrgyz Republic "On Tourism". 	20...		

		<ul style="list-style-type: none"> Adoption of a draught law "On the Development of Renewable Energy Microgeneration." 	20...	IEC	Within the framework of the republican budget
12.	Improving the conditions for the import of technologies and equipment for the production of renewable energy.	<ul style="list-style-type: none"> Determination of the commodity nomenclature of imported low-power equipment (microgeneration), systems based on renewable energy technology, E/E for temporary exemption from VAT (addendum to the list, Decree of CM KR dated 4.10.2021 No. 196). 		Ministry of Energy, Ministry of Energy	Within the framework of the republican budget
3. IMPACT ON PUBLIC ADMINISTRATION FAILURES					
13.	Stimulating the development of microgeneration.	<ul style="list-style-type: none"> Adoption of a comprehensive program for the development of microgeneration based on a decentralized model; Development of pilot projects within the framework of the Law of the Kyrgyz Republic "On Public-Private Partnership" to attract funds to finance microgeneration projects. Development and adoption of amendments and additions to the tourism development program. Development and adoption of the "Program of mass introduction of micro power plants and wind power units". Development and adoption of the "Program for the introduction of biogas plants in rural areas". Development of documents for local (municipal, urban) socio-economic development, with a focus on the task of using solar energy water heating installations to reduce emissions and conserve energy from traditional resources. 	2024	Ministry of Energy, MK, associations, development partners	Within the framework of the republican budget, funds from international and donor organizations
14.	Creating conditions for the development of cooperation in the field of green energy.	<ul style="list-style-type: none"> Introduction of mechanisms to stimulate industrial cooperation and integration into value chains with the EAEU countries ("Energy Cooperatives"). 	2024	Ministry of Energy, Ministry of Energy, MK	