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Sustainable Energy Connectivity in Central Asia

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The European Union – Kyrgyzstan: Sustainable Energy Days 2024

Workshop "Green buildings: trends and innovations in sustainable development"

Bishkek, 22 October 2024

Implementation of energy certification of buildings in Kyrgyzstan - lessons learnt and way forward

Salavat Soronbaev

ECB Expert, Unison Group

Stantec | intec | ACTED | European University Institute | FSR ENERGY Florence School of Regulation

Statistics: Overview of building construction in the Kyrgyz Republic

01

NEW CONSTRUCTION

13.5 million m2 of buildings were completed between 2010 and 2021. The annual average is about 1.0 million m2, (trend for 2023 1.3 million m2) with annual growth of 0.8% to 1.24% of the total building stock

02

RESIDENTIAL BUILDINGS

The total housing stock of Kyrgyzstan is 87.9 million m2, of which 97.5% is privately owned, more than 55% of which are 30 to 60 years old. 55% of which are between 30 and 60 years old: urgent repairs are required

03

PUBLIC BUILDINGS

9780 buildings or about 1.6 million m2. The average age of buildings is more than 60 years and less than 1.0% have been renovated. About 75% require large-scale energy renovation and the rest are to be replaced

05

COMMERCIAL BUILDINGS

approximately 1.6 to 2.2 million m2: a fast-growing and new market segment, some of which have introduced energy-efficient technologies

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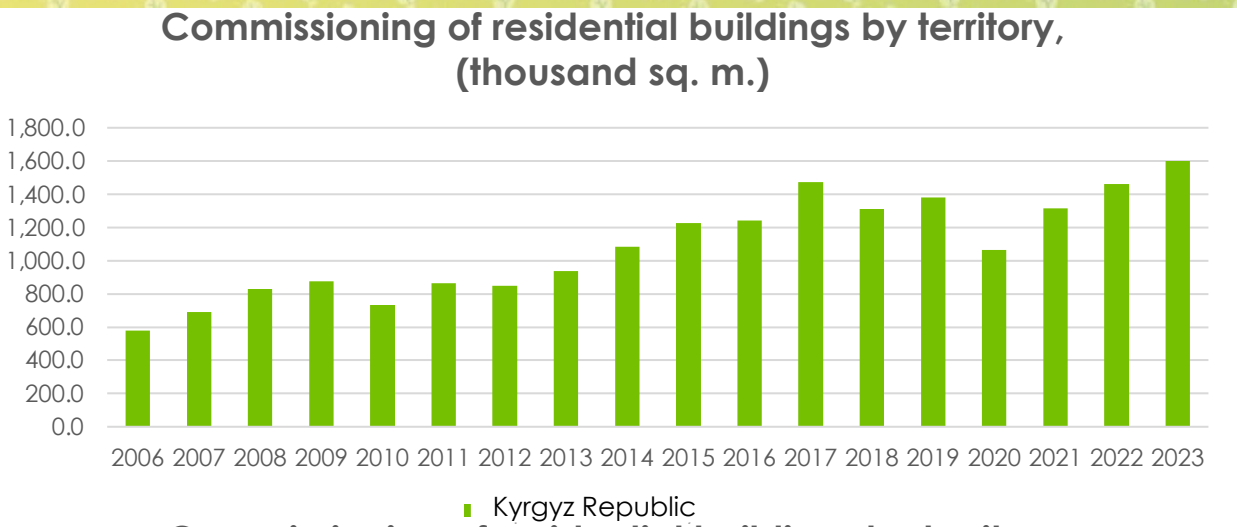
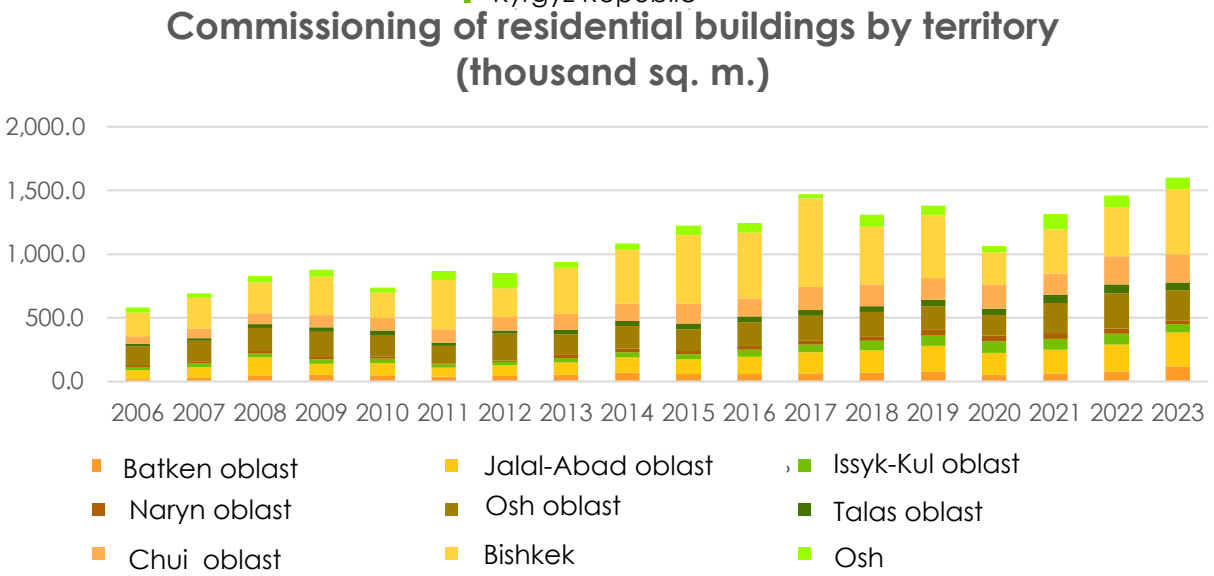
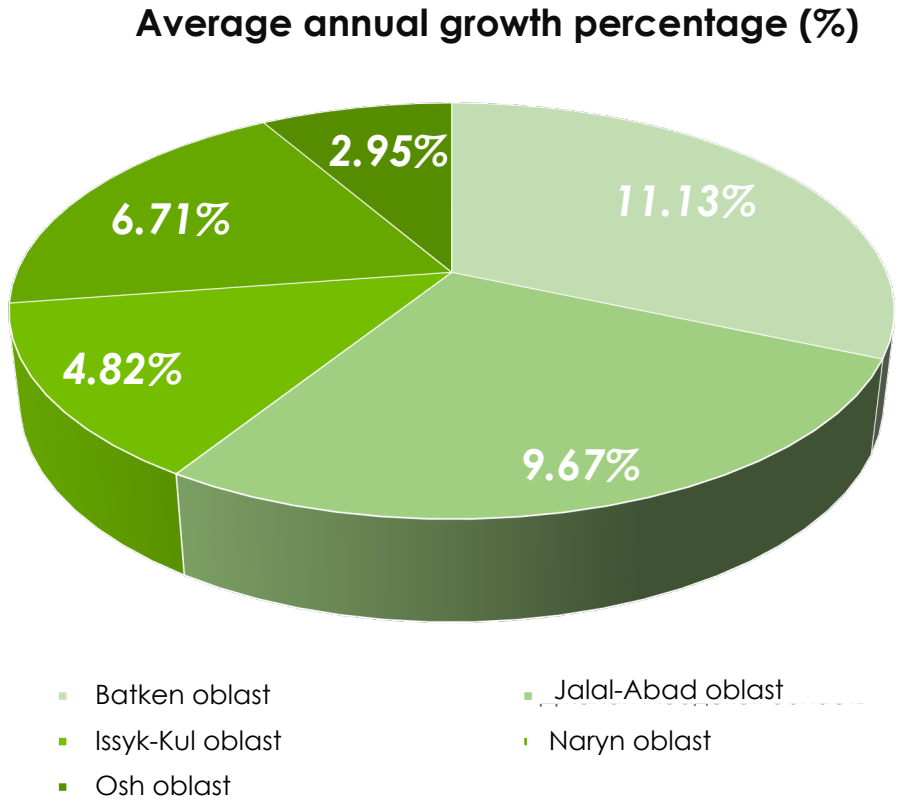
Increase in commissioning of buildings in Kyrgyzstan







The average annual growth rate for the entire republic is **7.06%.**

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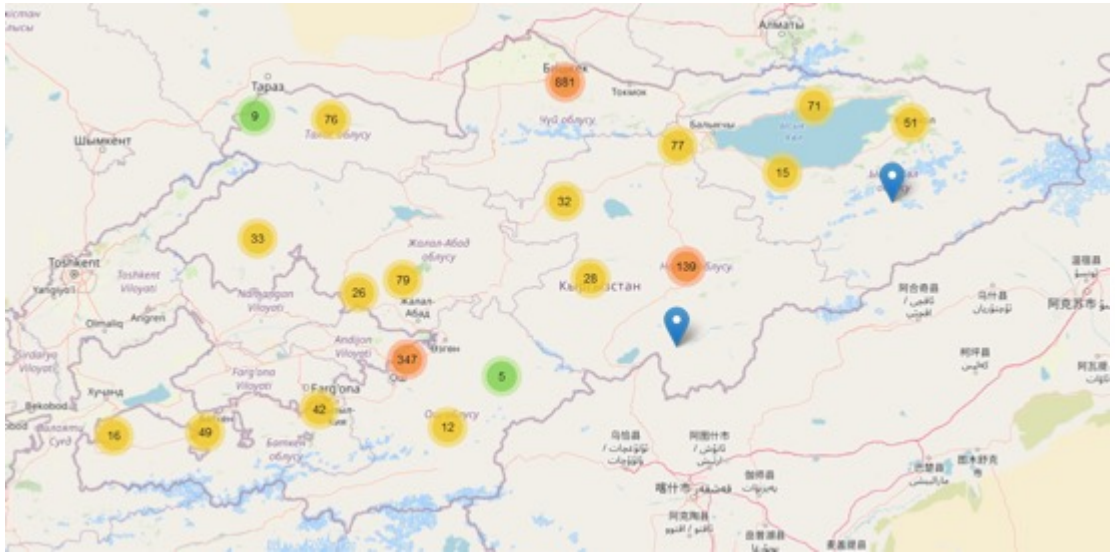
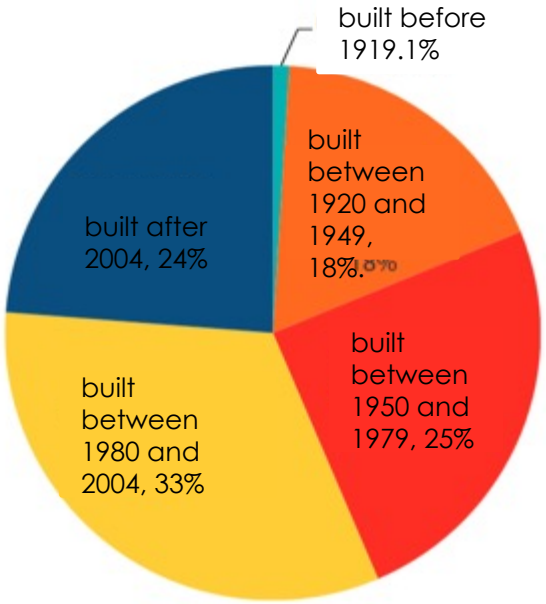
Objects under construction

Construction and building statistics in Kyrgyzstan show active new construction, but many residential buildings are in urgent need of repair due to their age. Public buildings also require extensive renovation, while the commercial sector is rapidly developing with the introduction of energy-efficient technologies. This highlights the need to modernize the country's infrastructure.





According to international assessments, the technical potential energy efficiency in residential buildings, including household electrical appliances, is 936 thousand.here., which corresponds to 88.1% per annum energy consumption in the sector.

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Legislative framework, energy certification of buildings in the Kyrgyz Republic

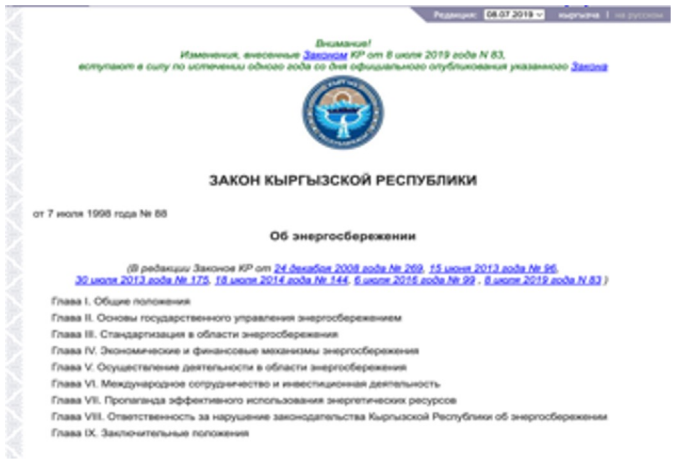
Objects of mandatory energy certification are residential, public, administrative and multifunctional non-industrial buildings when they:

- a) design and construction;
- b) commissioning;
- c) energy renovation.

In all other cases, energy certification of buildings is carried out on a voluntary basis: mark.

- d) leasing;
- d) putting up for sale;

Energy certification of buildings in Kyrgyzstan is carried out on a paid basis under an agreement between the owner and a certified specialist. The cost of services is agreed upon with the state antimonopoly authority in accordance with the Resolution of the Government of the Kyrgyz Republic dated August 2, 2012 No. 531 and Article 7 of the Law "On the Energy Efficiency of Buildings".



ЗАКОН КЫРГЫЗСКОЙ РЕСПУБЛИКИ

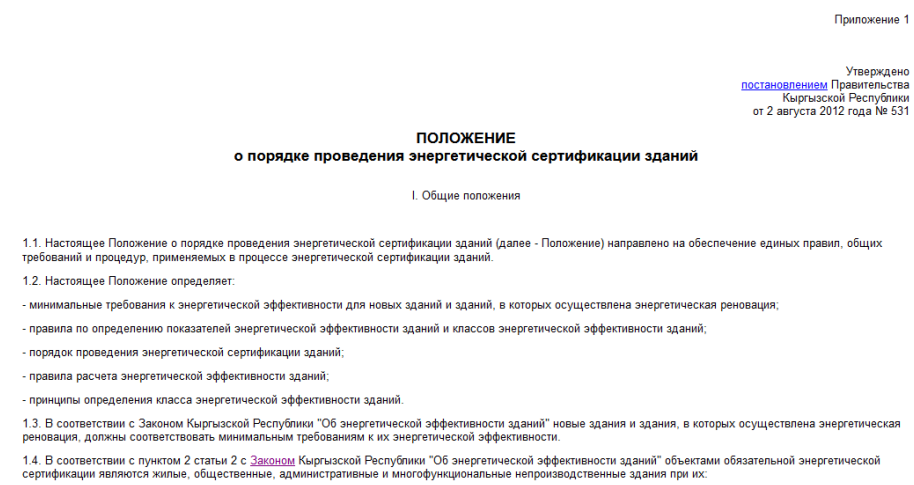
от 7 июля 1998 года № 68

Об энергосбережении

ЗАКОН КЫРГЫЗСКОЙ РЕСПУБЛИКИ

от 26 июля 2011 года N 137

Об энергетической эффективности зданий



Приложение 1

Утверждено
постановлением Правительства
Кыргызской Республики
от 2 августа 2012 года № 531

ПОЛОЖЕНИЕ
о порядке проведения энергетической сертификации зданий

I. Общие положения

1.1. Настоящее Положение о порядке проведения энергетической сертификации зданий (далее - Положение) направлено на обеспечение единых правил, общих требований и процедур, применяемых в процессе энергетической сертификации зданий.

1.2. Настоящее Положение определяет:

- минимальные требования к энергетической эффективности для новых зданий и зданий, в которых осуществлена энергетическая реновация;
- правила по определению показателей энергетической эффективности зданий и классов энергетической эффективности зданий;
- порядок проведения энергетической сертификации зданий;
- правила расчета энергетической эффективности зданий;
- принципы определения класса энергетической эффективности зданий.

1.3. В соответствии с Законом Кыргызской Республики "Об энергетической эффективности зданий" новые здания и здания, в которых осуществлена энергетическая реновация, должны соответствовать минимальным требованиям к их энергетической эффективности.

1.4. В соответствии с пунктом 2 статьи 2 с Законом Кыргызской Республики "Об энергетической эффективности зданий" объектами обязательной энергетической сертификации являются жилые, общественные, административные и многофункциональные непроизводственные здания при их:

A certified building energy certifier may not perform energy certification of buildings owned or managed by him or her, or of buildings owned or managed by his or her employer.

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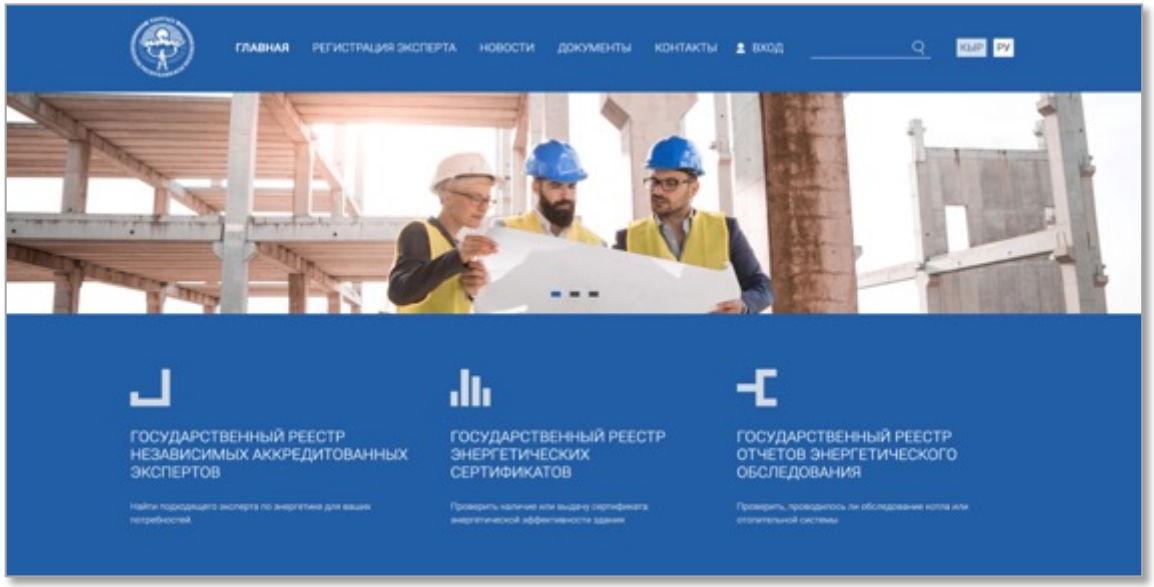
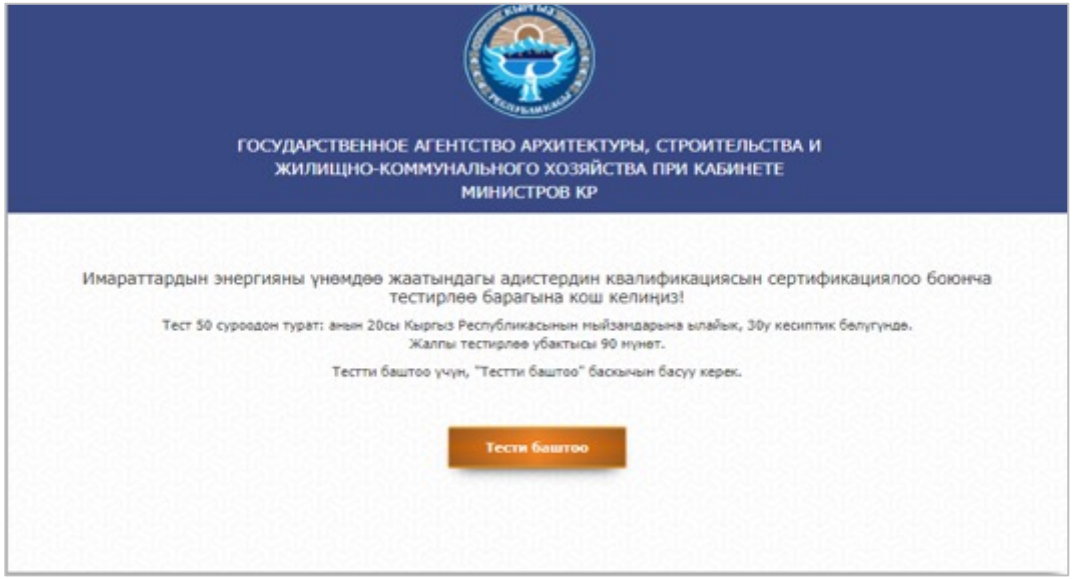
Energy certification system for buildings in Kyrgyzstan





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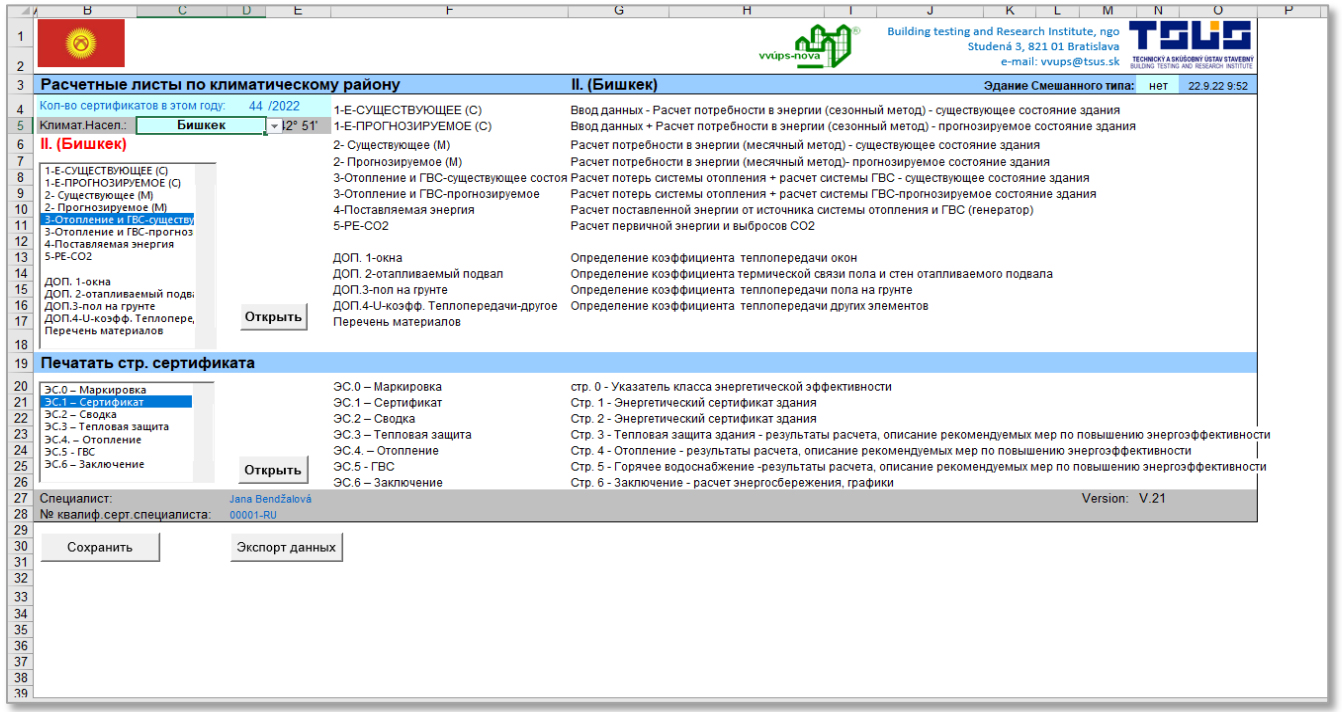
Tools for energy certification of buildings in Kyrgyzstan



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Building codes and standards

SN KR 41:03:2022 «**Boiler rooms installations**»,
SN KR 41- 04:2022 «**Heating, ventilation and air conditioning**»
SNiP KR 23-01:2013 «**Construction thermal engineering**»
SP KR 23-101-2013 «**Design of thermal protection of buildings**»

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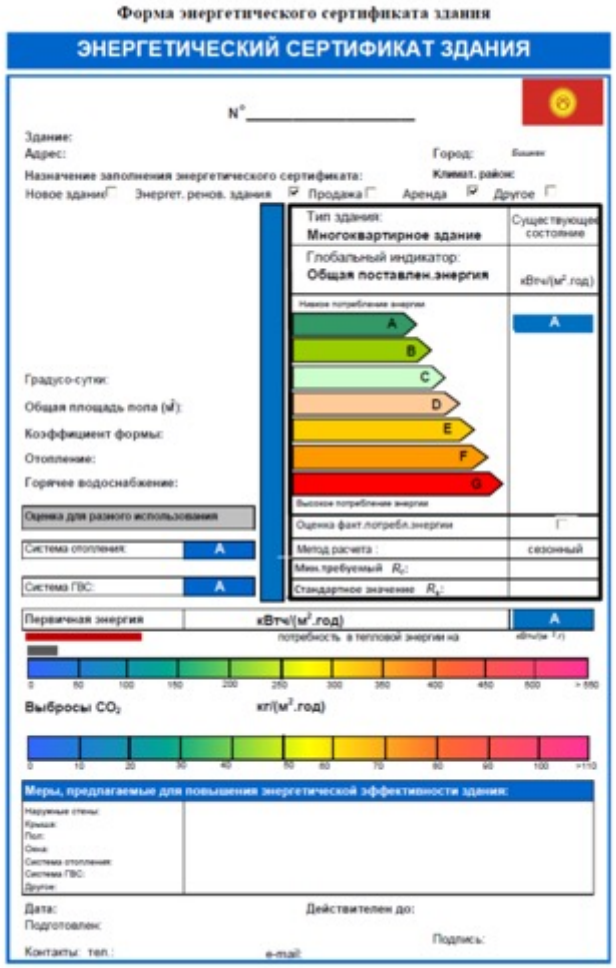
The process of energy certification of buildings

Steps	Implementation
Applicant (owner of the building)	Preparation of documents and applications for certification
Obtaining design and technical documentation	Obtaining the necessary documents for analysis
Visual inspection	Inspection of the building and its technical systems
Familiarization with technical documents	Analysis of the submitted documents
Energy efficiency calculations	Conducting calculations on the efficiency of the building
Proposal of measures to improve efficiency	Development of recommendations for improving efficiency
Registration of the certificate	Registration of the certificate in the registry
Submitting a report	Submission of the report in three copies (to the State Construction Committee, the Applicant, the expert)
Energy Efficiency Label	Placement of energy labeling on a building


Форма энергетического сертификата здания

ЭНЕРГЕТИЧЕСКИЙ СЕРТИФИКАТ ЗДАНИЯ

N°_____

Здание:
Адрес:
Город:
Назначение заполнения энергетического сертификата:
Климат. район:
Новое здание
Энергет. ренов. здания
Продажа
Аренда
Другое
Тип здания:
Многоквартирное здание
Существующее состояние
Глобальный индикатор:
Общая поставлен.энергия
кВтч/(м².год)
Новое потребление энергии
A
B
C
D
E
F
G
Высокое потребление энергии
Градусо-сутки:
Общая площадь пола (м²):
Коэффициент формы:
Отопление:
Горячее водоснабжение:
Оценка для разного использования
Оценка факт.потребл.энергии
Система отопления:
A
Метод расчета :
сезонный
Мин.требуемый R_o:
Система ГВС:
A
Стандартное значение R_o:
Первичная энергия
кВтч/(м².год)
A
потребность в тепловой энергии на
0 50 100 150 200 250 300 350 400 450 500 > 550
Выбросы CO_2
кг/(м².год)
0 10 20 30 40 50 60 70 80 90 100 >110
Меры, предлагаемые для повышения энергетической эффективности здания:
Наружные стены:
Крыша:
Пол:
Окна:
Система отопления:
Система ГВС:
Другое:
Дата:
Действителен до:
Подготовлен:
Подпись:
Контакты: тел.:
e-mail:

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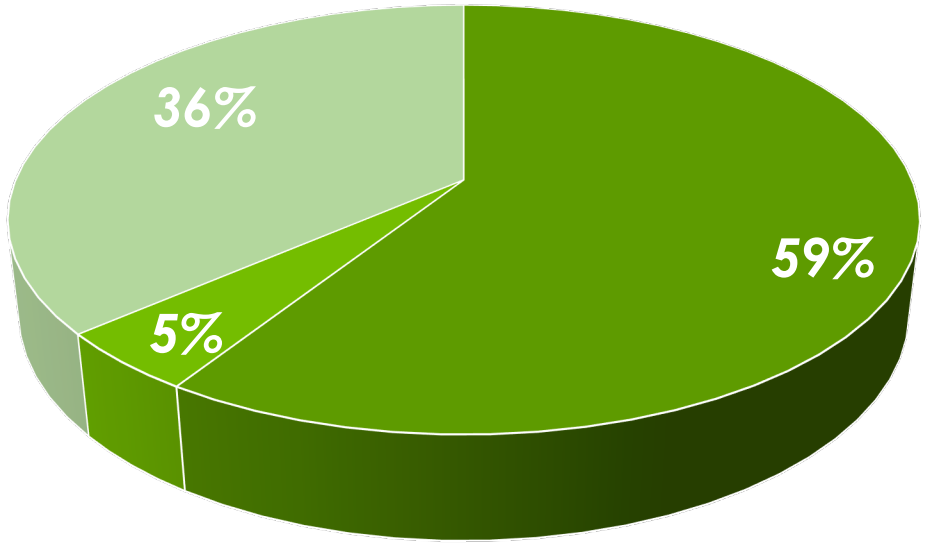
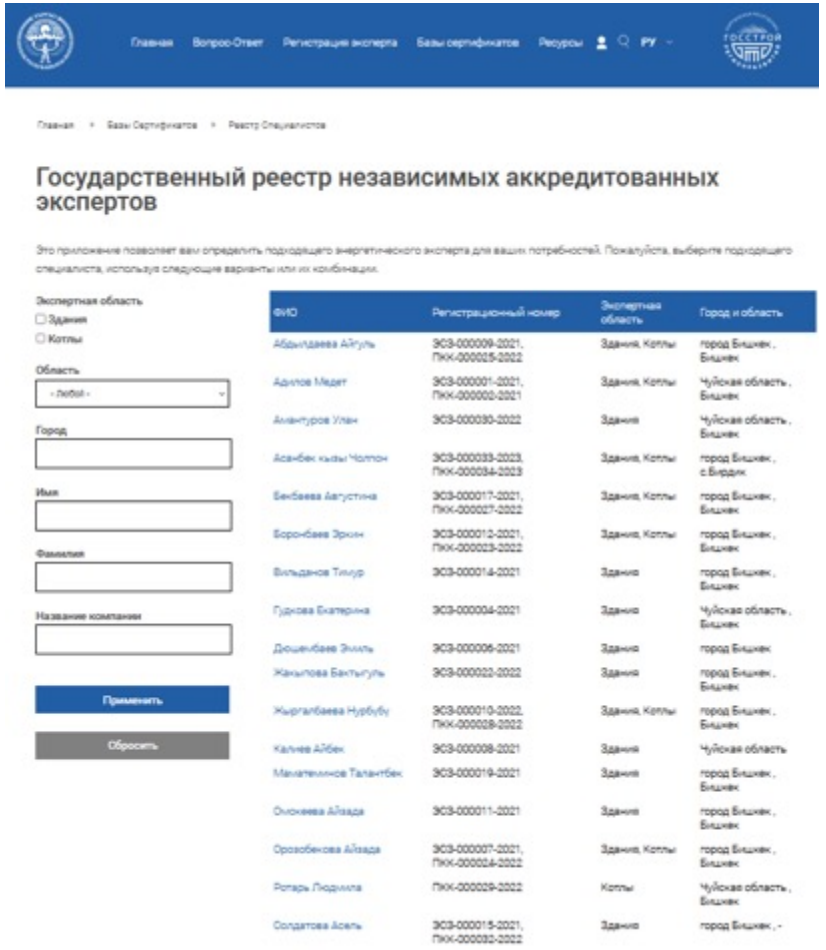
Registry of independent accredited experts

Regional distribution



Bishkek Osh oblast Chui Oblast

40 independent accredited experts



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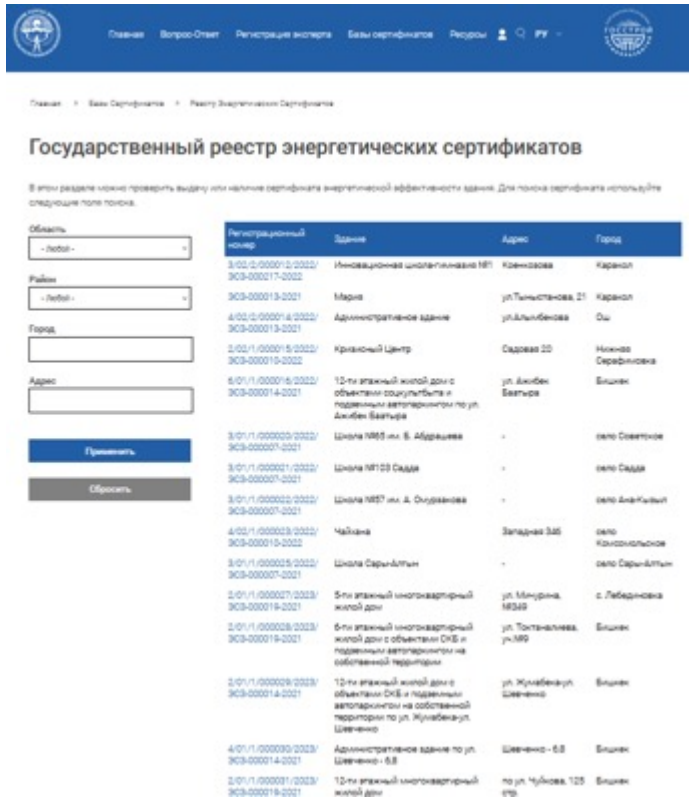
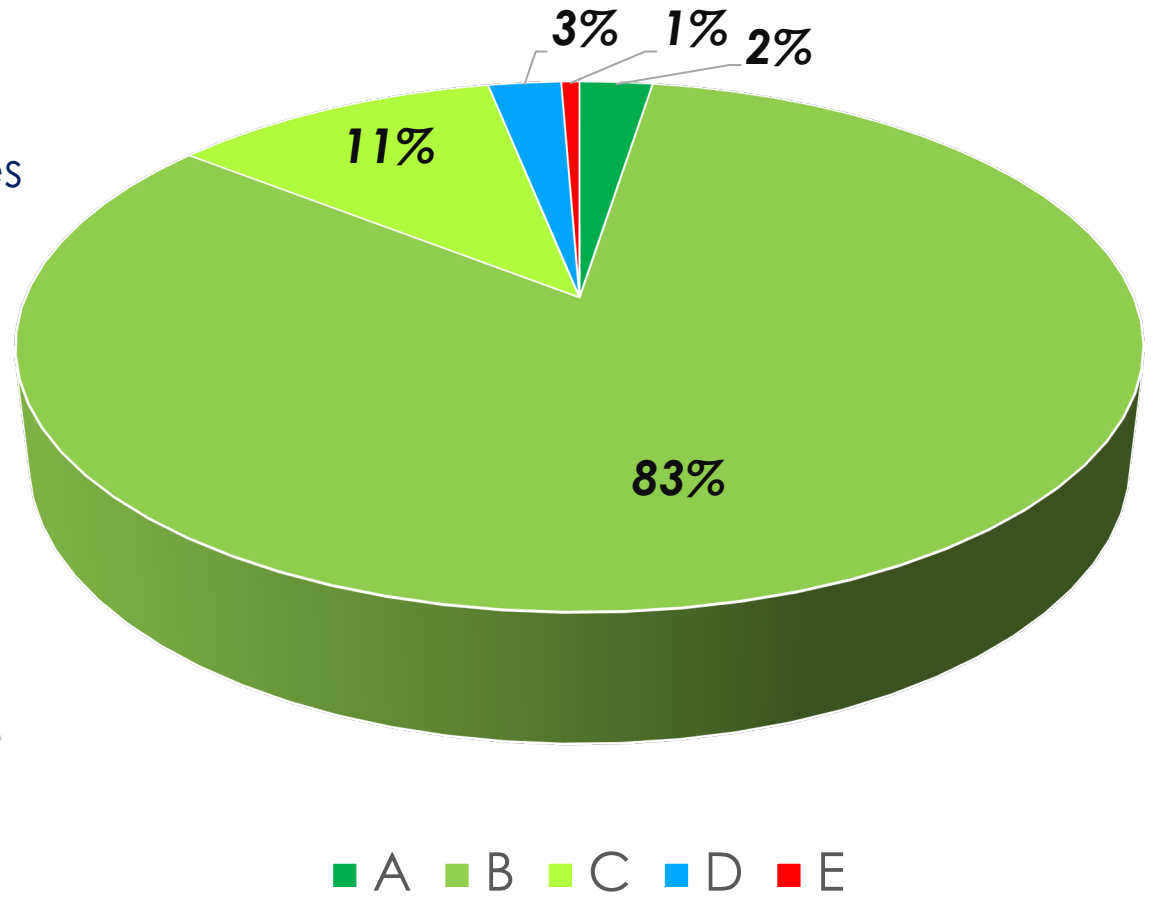
State Register of Energy Certificates



160 energy certificates



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Recommendations

Update the existing legislative framework regarding energy efficiency in buildings, taking into account the emergence of new technologies

Development and implementation of action plans for energy audits of public buildings and implementation measures determined based on the results of the inspections

Establish a pricing policy for issuing energy certificates for buildings (based on the purpose and area of the building)

To encourage and stimulate renovation in public and private buildings, ensure the development of a regulatory act to implement mechanisms for the practical use of benefits in the Tax Code of the Kyrgyz Republic, Article 409, paragraph 2, subparagraph 3

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Next steps

Strengthening the legislative framework and developing new standards

Training and certification programs for specialists

Creating financial incentives for building owners and developers

Information campaigns to raise awareness

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THANK YOU FOR YOUR ATTENTION!

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