



# CHEAP AND CLEAN IN SAMSACU ON ENERGY RESEARCH



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In SamSACU, a number of works were carried out in the summer school in cooperation with professors and students of the Department of "Mechanical Engineering" and the Department of "Water Supply, Heat and Ventilation" of Osimi Technical University of Tajikistan.

Presentations were held at the department of "Mechanical Engineering" on the completion of the work carried out during the week on solving the problems of gas and heat supply in the city of Samarkand and the problems of delivering them to consumers.

•At the Samarkand State University of Architecture and Construction, a department of "Mechanical Engineering" was established, specializing in the research of cheap and clean energy sources.

•Department

•"60712300 - Mechanical Engineering (Bachelor)

•60730400 - Construction and Operation of Engineering Communications (Bachelor)

•70730401 - Engineering communication systems, construction and installation (Master's degree)

•05.09.03 - Heat supply. Ventilation, air conditioning. Basic doctoral students are trained in the specialty of gas supply and lighting and 05.05.06 - energy devices based on renewable energy types.



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Indicators in prestigious journals devoted to the topics of cheap and clean energy at the university



# CHEAP AND CLEAN IN SAMSAQU FOCUSED ON ENERGY MEASURES



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On October 30, 2023, Zafar Fayziyev, head of the Department of "Mechanical Engineering" of the Samarkand State University of Architecture and Construction named after Mirzo Ulug'bek, under the leadership of Gulmira Keldiyorova, associate professor of the Department of "Ecology and Life Activity Safety" of the Samarkand State University named after Sharof Rashidov, Doctor of Philosophy of Technical Sciences an open class on "Industrial ecology and alternative energy" was held for first-year graduate students.

Today, the issues of the use of renewable energy sources and the application of solar energy devices were given. Detailed information on the topics of structural and connection schemes of this type of devices and their useful performance indicators was given.





# CHEAP AND CLEAN IN SAMSACU FOCUSED ON ENERGY MEASURES



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From December 11 to 29 of this year, Rustam Aymatov and Maftun Uzboyev, senior lecturers of the "Mechanical Engineering" department of SamDAQU, visited the Russian Federation in order to improve the educational system at the university, increase the effectiveness of scientific research, develop mutual integration of education, science and production, and study international experience. they were on a business trip at the Moscow State University of Civil Engineering located in the capital city of Moscow.



Department head Zafar Fayziyev, who is on a professional tour of the Belarusian National Technical University located in the capital city of Minsk, reached a number of inter-departmental agreements.

BMTU UNESCO has signed inter-departmental cooperation agreements with Vyacheslav Chervinsky, Head of the Department of "Energy Saving and Renewable Energy Sources" and Associate Professor of Technical Sciences Alexander Pekhotalar, Head of the Department of "Heat Gas Supply and Ventilation" based on the memorandum concluded between SamDAQU and BMTU.

Based on the agreement, discussions were held regarding future joint implementation.

Also, the UNESCO Chair "Energy Conservation and Renewable Energy Sources" with the support of the United Nations Educational, Scientific and Cultural Organization and the National Commission for UNESCO Affairs of the Republic of Belarus on 20-22, 2023 December "Decarbonization of the energy sector, the role of the UNESCO chair in the exchange of scientific knowledge. An international expert seminar dedicated to "Ecological aspects of energy development" was held.

Zafar Fayziyev, the head of the "Mechanical Engineering" department, participated in this international expert seminar with a lecture on "Development of renewable energy in Uzbekistan", and was recognized by the moderator of the international expert seminar, candidate of technical sciences, associate professor Vyacheslav Chervinsky.

During the summer school, the Faculty of Civil Engineering, Head of the "Mechanical Engineering" department. Zafar Fayziyev the head of the department,

by teacher Shavkat Usmanov

visit to the gas supply branch of "Hududgaz Samarkand" was organized for foreign professors and teachers.

Branch director Anzor Muhammadiyev warmly welcomed the guests and introduced them with brief information about the company. Surat Odilov, head of the personnel department, gave detailed explanations about the general structure of the enterprise and its structure.

During the visit, chief specialist Khasan Doniyorov gave an interesting insight into the work of the corporate control point of gas consumed by consumers and the problems faced by gas consumers in regions, cities and districts today and their solutions.

In addition, the emergency dispatching service and the first high-pressure gas distribution points supplying the city





# CHEAP AND CLEAN IN SAMDAQU FOCUSED ON ENERGY MEASURES



On August 21-25, 2023, a summer school for foreign students was organized at the Samarkand State University of Architecture and Construction named after Mirzo Ulugbek.

A one-week program was developed by professors and teachers of the Department of "Mechanical Engineering" and the Department of "Environmental Engineering" of the Faculty of Civil Engineering. solutions, the development of the gas industry in the Republic, the role of gas networks in providing consumers with continuous and uninterrupted gas, problems and their solutions (in the example of the city of Samarkand).

Currently, professors and teachers of Osimi Technical University of Tajikistan and a group of students visited Samarkand State University of Architecture and Construction named after Mirzo Ulugbek.

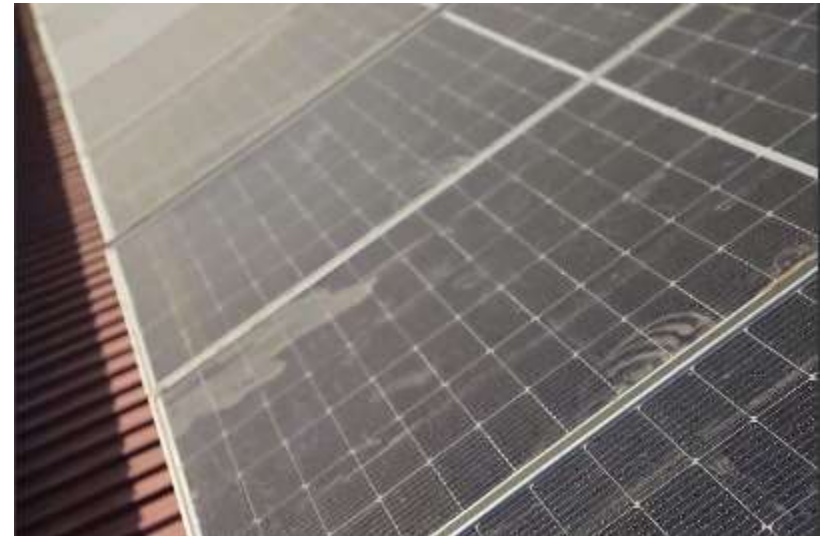
This project was organized in order to develop recommendations and proposals aimed at solving the existing problem in cooperation with the students of the higher educational institution, students and teachers of foreign countries, scientific researchers of the university, and experts of the project organization.



## ENERGY IN SAMSACU SAVING RECONSTRUCTION AND CONSTRUCTION



According to the decision of the President of the Republic of Uzbekistan, No. PQ-57 dated 16.02.2023, on measures to accelerate the introduction of renewable energy sources and energy-saving technologies in 2023 100 kWh solar panels were installed in the main building of the university, and another 440 kWh solar panels are being installed on the roofs of student residences of the university and the Faculty of Architecture.



A new modern educational building with 3,500 seats is also being built on the territory of the university. Currently, along with the construction and improvement works in the interior and exterior parts of the buildings, solar panels providing alternative energy are also being installed on the roofs.



## ENERGY IN SAMSACU SAVING RECONSTRUCTION AND CONSTRUCTION



- ✓ 81 energy-efficient aluminum and plastic frames were replaced with wooden frames from Jumala;
- ✓ 420 sq.m. Wall insulation covered with basalt coating;
- ✓ 10 unusable heating radiators and pipes were replaced;
- ✓ 80 m heating system pipes covered with thermal insulation;
- ✓ 20 Capacity lights were replaced with energy-saving ones;
- ✓ 8 motion sensors were installed;
- ✓ Graphs on turning on air conditioners have been created



# ENERGY CONSUMPTION REDUCTION PLANNING IN SAMSACU



In order to ensure the implementation of the Decision of the President of the Republic of Uzbekistan "On measures to accelerate the introduction of renewable energy sources and energy-saving technologies in 2023" dated February 16, 2023, Mirzo Ulug'bek at the Samarkand State University of Architecture and Construction named after Kerem Cilli, electrical engineering and electronics engineer of the Turkish company "Technical Renewable Energy Consulting Trading Limited" On May 18, 2023, a practical seminar-training on the topic "Methods of increasing the efficiency of installing and using solar panels as a renewable energy source" was held in the small activist hall of the university.

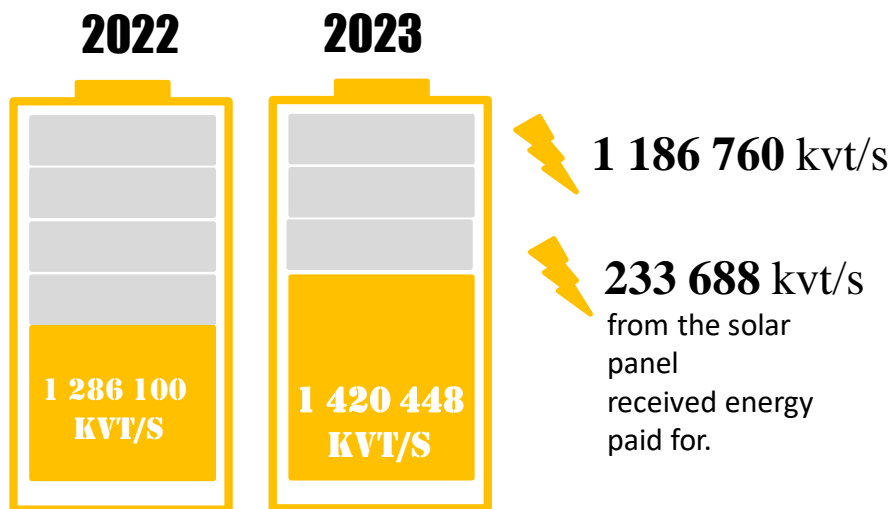
According to the agenda of the seminar-training, sessions were held in the form of interactive questions and answers on issues such as types of inverters, photovoltaic panels, calculating the possibility of electricity production, and the solar energy ecosystem.

According to the decision of the President of the Republic of Uzbekistan, No. PQ-57 of 16.02.2023 on measures to accelerate the introduction of renewable energy sources and energy-saving technologies in 2023, systematic work is planned at the University





# ENERGY CONSUMPTION IN SAMSACU



SamSACU has launched a policy of gradually abandoning the energy industry, which consumes a lot of carbon. Today, the university does not use oil at all. However, taking into account the possibility of problems related to natural gas during the heating season, it has coal reserves.



**In SamSACU, 601,967 square meters of energy is consumed per person**



57896 sq.m Common area of the university	57430 sq.m The area of heated areas in the university	466 sq.m. The area of unheated areas of the University
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