

«I approve»

Member of the Board - Acting
Vice Rector for Finance and
Infrastructure Development

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The University's plan to modernize existing buildings in order to increase energy efficiency for the 2024-2025 academic year

The present plan has been developed in accordance with the Environmental Code of the Republic of Kazakhstan dated January 2, 2022, No. 400-VI, the Law of the Republic of Kazakhstan dated July 16, 2001, No. 242-II "On Architectural, Urban Planning, and Construction Activities in the Republic of Kazakhstan," the Law of the Republic of Kazakhstan dated January 13, 2012, No. 541-IV "On Energy Saving and Increasing Energy Efficiency," the energy-saving and energy-efficiency requirements for design (design and estimate) documentation of buildings, structures, and facilities, approved by the order of the Minister for Investments and Development of the Republic of Kazakhstan dated March 31, 2015, No. 405, and SN RK 1.02-03-2022 "Procedure for the Development, Approval, and Composition of Design and Estimate Documentation for Construction."

Objective: The primary goal is to modernize the existing university buildings to significantly enhance energy efficiency, reduce energy consumption, and decrease operating costs, in accordance with energy-saving policies and sustainable development goals.

In the 2024-2025 academic year, the university plans to renovate the U.A. Dzholdasbekov Student Palace and the educational-sports complex.

To improve the energy efficiency of the buildings during reconstruction, the following measures are planned:

Action Plan for Enhancing Energy Efficiency for the 2024-2025 Academic Year

| № | Name of Activities | Solutions for Enhancing Energy Efficiency | Deadlines |
|---|--|---|------------|
| 1 | Energy Audit and Assessment | <ol style="list-style-type: none"> 1. Conducting a detailed assessment of energy consumption for all existing university buildings. 2. Identifying the main energy-consuming systems (heating, cooling, lighting, ventilation). 3. Evaluating the quality of thermal insulation, window glazing, and the integrity of enclosure structures. | Q1-Q2 2025 |
| 2 | Modernization of Building Enclosure Structures | <ol style="list-style-type: none"> 1. Installation of new wall and roof insulation using modern thermal insulation materials to meet current thermal resistance standards. 2. Ensuring compliance with thermal protection requirements. 3. Installing insulated profiles for window and door frames to eliminate heat loss. 4. Developing an energy passport for each building. | Q2-Q3 2025 |
| 3 | Modernization of Heating, Ventilation, and Air Conditioning Systems | <ol style="list-style-type: none"> 1. Upgrading outdated systems to energy-efficient models. 2. Implementing effective thermal insulation for heating network pipelines and comprehensive fire and thermal insulation for exhaust duct systems. 3. Replacing the single-pipe heating system with a two-pipe system. 4. Installing new modern heating substations. | Q1-Q3 2025 |
| 4 | Optimization of Lighting and Power Supply Systems | <ol style="list-style-type: none"> 1. Replacing existing incandescent and fluorescent lamps with energy-efficient LEDs. 2. Installing motion sensors and daylight control systems to reduce unnecessary electricity usage. 3. Technical accounting of the building's electricity consumption will be provided by electronic meters with a digital data transmission interface. | Q1-Q3 2025 |

