

NP JSC "South Kazakhstan University named after M. Auezov»



STRATEGY TO ACHIEVE CARBON NEUTRALITY AND SUSTAINABLE DEVELOPMENT OF NAD "SOUTH KAZAKHSTAN UNIVERSITY NAMED AFTER M.AUEZOV" UNTIL 2035



Introduction

“This Strategy for achieving carbon neutrality of the Republic of Kazakhstan until 2060 was developed taking into account global climate trends and in fulfillment of relevant international obligations. The strategy defines national approaches, the strategic course of state policy for the consistent transformation of the economy to ensure prosperity, sustainable economic growth and equitable social progress and is adopted to ensure consistency and coordination of state policies,” as stated by the head of state Kassym-Jomart Tokayev

Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This means finding ways to meet our economic, social and environmental needs without depleting natural resources or creating problems for future generations.



Carbon neutrality refers to achieving a balance between greenhouse gas (GHG) emissions from an activity and their removal or absorption from the atmosphere. Achieving carbon neutrality is critical to mitigating climate change and transitioning to a more sustainable future.



Sustainable development of Kazakhstan

Kazakhstan has taken significant steps towards sustainable development, focusing on economic growth, social justice and environmental protection.

Economic sustainability: Kazakhstan has rich natural resources, including oil, gas and minerals, which contribute to economic growth.

The country is diversifying its economy by investing in non-resource sectors such as agriculture, tourism and technology. Kazakhstan attracts foreign investment and develops trade relations with other countries.

Social Justice: Kazakhstan is committed to ensuring universal access to education, health care and social services. The country strives to reduce inequality and improve living standards for all citizens. Kazakhstan supports gender equality and human rights.

Environmental sustainability: Kazakhstan is implementing measures to reduce greenhouse gas emissions and transition to renewable energy sources. The country is taking measures to conserve water resources and manage waste. Kazakhstan protects its rich biodiversity and ecosystems by creating national parks and reserves.

Kazakhstan 2050 Strategy: This long-term development strategy sets



ambitious goals for the sustainable development of the country.

Green Economy: Kazakhstan is committed to transitioning to a green economy based on the principles of sustainability and environmentally friendly technologies.

Sustainable water management: Kazakhstan is implementing water management projects, such as the construction of dams and canals, to meet water and irrigation needs.

Waste Management: The country is implementing waste management systems to reduce the amount of waste sent to landfills.

Renewable energy: Kazakhstan is investing in solar and wind energy development to diversify its energy sector and reduce carbon emissions.

Despite progress, Kazakhstan faces a number of challenges on the path to sustainable development:

- Dependence on fossil fuels makes the transition to a green economy difficult.
- Droughts and water shortages remain major challenges for agriculture and water supplies.
- It is necessary to improve energy efficiency and introduce environmentally friendly technologies.
- Inequality and poverty persist, requiring additional efforts for social justice.

Kazakhstan cooperates with international organizations and other countries on issues of sustainable development. The country participates in global initiatives such as the Paris Agreement on climate change and the UN Sustainable Development Goals. Sustainable development is critical to the future of Kazakhstan. By taking an integrated approach to economic growth, social justice and environmental protection, a country can ensure a sustainable and prosperous future for its citizens.

UNIVERSITY STRATEGY TO ACHIEVE CARBON NEUTRAL

The purpose of this strategy is to set out a comprehensive approach to achieving carbon neutrality at the university by 2035. Carbon neutrality refers to achieving a balance between greenhouse gas emissions from university operations and their absorption or removal from the atmosphere.

This strategy covers all university operations, including:

- Campus buildings
- Vehicles and travel
- Procurement of goods and services
- Investments
- Educational and research activities

This strategy is based on the following principles:

*Science and data:*making decisions based on scientific research and greenhouse gas emissions data.

Cooperation and partnership: Engaging students, faculty, staff, partners and the local community in efforts to reduce emissions.

*Innovation and technology:*using advanced technologies and innovative solutions to reduce emissions and increase efficiency.

*Equity and Inclusion:*ensuring that efforts to achieve carbon neutrality are fair and inclusive for all stakeholders.

*Accountability and Transparency:*Regular reporting of progress and transparency regarding emissions calculation methodology.

The University will implement the following reduction strategies to achieve carbon neutrality:

Energy efficiency: Improving the energy efficiency of campus buildings, lighting systems and equipment.

*Renewable Energy:*Transition to renewable energy sources such as solar and wind energy to meet the university's energy needs.

*Sustainable transport:*Encouraging sustainable transportation options such as public transit, cycling and walking, and introducing electric vehicles into the university's fleet.

*Sustainable Procurement:*Prioritize sustainable products and services and collaborate with suppliers to reduce emissions in the supply chain.

*Behavior Change:*Raise awareness and encourage behavior change among students, faculty and staff to reduce emissions on and off campus.

The University is strongly committed to achieving carbon neutrality and recognizes the need for urgent action to address the climate crisis. This strategy provides a comprehensive plan of action to achieve this goal and ensure a sustainable future for the campus and the community at large.

University Sustainable Development Strategy

The purpose of this strategy is to outline the university's comprehensive approach to sustainability, covering environmental sustainability, social justice and economic vitality. Sustainable development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

This strategy is based on the following principles:

Systems approach: Recognizing the interconnectedness of environmental, social and economic systems and the need for an integrated approach to sustainable development.

Science and data: Make decisions based on research and data to inform sustainable development strategies and actions.

Cooperation and partnership: Involvement of students, faculty, staff, alumni, local communities and partner organizations in efforts to promote sustainable development.

Innovation and technology: Using advanced technologies and innovative solutions to solve sustainable development problems.

Equity and inclusion: Ensuring that sustainability efforts are fair and inclusive for all stakeholders.

Accountability and Transparency: Regular reporting of progress and transparency regarding sustainability methodology and indicators.

University Carbon Management Plan

The overarching goal of the Carbon Management Plan is to outline the university's comprehensive approach to reducing greenhouse gas emissions and achieving carbon neutrality by 2035.

The University makes decisions based on scientific research and greenhouse gas emissions data. *Accountability and Transparency:* Regular reporting of progress and transparency regarding emissions calculation methodology.

- **Energy efficiency:**

Improving the energy efficiency of campus buildings, lighting systems and equipment.

Implementation of energy management systems to optimize energy use.

Encouraging the use of energy-efficient home appliances and electronics.

- **Renewable Energy:**

Transition to renewable energy sources such as solar and wind power to meet campus energy needs.

Studying the possibilities of using geothermal energy and biomass energy.

Collaborate with local utilities to purchase renewable energy.

- *Sustainable transport:*

Encouraging sustainable transport options such as public transport, cycling and walking.

Introduction of electric vehicles into the university vehicle fleet and installation of charging stations on campus.

Optimizing travel routes and encouraging carpooling.

- *Waste management:*

Reduce waste generation by encouraging reuse, repair and recycling.

Implement comprehensive recycling and composting programs.

Explore the possibilities of using waste for energy or other sustainable purposes.

Universities play an important role in promoting sustainable development through teaching, research and community engagement. Here are some ways our university can contribute to sustainable development:

- *Education:*

Integrating sustainable development principles into all curricula.

Proposal of specialized courses and programs on sustainable development.

Providing practical opportunities for students to participate in sustainable development projects.

- *Research:*

Conducting research to address sustainability issues such as climate change, biodiversity loss and social justice.

Establishing centers of excellence and research networks on sustainable development.

Collaborate with industry and government to translate research into real-world solutions.

- *Public Engagement:*

Partnering with local communities to address sustainability issues.

Organizing public events, workshops and volunteer programs to raise awareness about sustainable development.

Providing expertise and resources to support sustainable development efforts in the region.

- *Operating activities:*

Incorporate sustainable practices into their operations, such as energy efficiency, waste reduction and the use of renewable energy.

Earning sustainability certifications such as STARS or LEED.

Serve as a model for other organizations and communities by demonstrating a commitment to sustainable development.

University Infrastructure and Environmental Management

The university is committed to making buildings modern and energy efficient using environmentally friendly materials and design. Use effective energy, lighting and heating and cooling management systems. Find alternative energy sources, such as solar panels and geothermal energy, to meet energy needs. An effective water management system that includes rainwater harvesting and recycled water for irrigation and other non-potable purposes.



Environmental management is the most pressing issue of our time. The University implements environmental policies and procedures covering all aspects of the University's activities.

A waste reduction, reuse, recycling and composting program to reduce waste going to landfills.

Using environmentally friendly cleaning products and other materials to reduce environmental impact.

Monitor and evaluate environmental performance to track progress and identify areas for improvement.

Create awareness and educate the university community about the importance of environmental stewardship and sustainable behavior.



By building green infrastructure and implementing effective environmental management systems, universities can play a leading role in promoting sustainability, reducing environmental impacts and providing healthy and sustainable environments for their communities.

SKU Carbon Management Plan

The goal of this University's 2035 Carbon Management Plan is to outline a comprehensive approach to reducing greenhouse gas (GHG) emissions and achieving carbon neutrality by 2035.

The plan is based on the following principles:

Science and data: making decisions based on scientific knowledge about GHG emissions and measures to reduce them.

Hierarchy of emission reduction measures: priority is given to emission reduction measures such as energy efficiency and renewable energy sources over offsets.

Collaboration and Partnership: Engaging students, faculty, staff, alumni, the local community, and partner organizations in working together to reduce emissions across campus and beyond.

Innovation and technology: Using advanced technologies and innovative solutions to accelerate progress in reducing GHG emissions.

Equity and Inclusiveness: Ensuring that carbon management efforts are fair and inclusive for all stakeholders.

Accountability and Transparency: Regular reporting of progress and transparency regarding the methodology for calculating GHG emissions.

The University's plan to reduce greenhouse gases to a minimum:

Energy Efficiency: Improving the energy efficiency of campus buildings, lighting systems and equipment.

Renewable Energy: Transition to renewable energy sources such as solar and wind energy to meet campus energy needs.

Sustainable Transport: Encouraging sustainable modes of transport such as public transport, cycling and walking, and electrifying the University's transport fleet.

Sustainable Purchasing: Prioritizing sustainable goods and services such as recycled paper, energy-efficient appliances and environmentally friendly cleaning products.

Waste Management: Reduce waste generation by encouraging reuse, repair and recycling, and explore opportunities to use waste for energy or other environmentally sustainable purposes.

The University will regularly monitor its progress towards carbon neutrality. Monitoring results will be used to adapt and improve the university's emission reduction strategies. Progress and results will be publicly reported in accordance with recognized GHG reporting standards.

The University is strongly committed to achieving carbon neutrality by 2035 and recognizes the need for urgent action to address the climate crisis. This 2035 Carbon Management Plan is a comprehensive action plan to achieve this goal and ensure a sustainable future for the campus, local community and society at large. Kazakhstan Carbon Management Plan until 2035

Our country's plan to maintain a strategy to reduce emissions of pranic gases:

Energy: Transition to renewable energy sources, increasing energy efficiency and implementing carbon capture and storage (CCUS) technologies.

Industry: introduction of energy efficient technologies, transition to cleaner raw materials and implementation of CCUS.

Transport: Encouraging sustainable modes of transport such as public transport, cycling and walking, and electrifying the transport fleet.

Agriculture: Adopting sustainable farming practices such as agroforestry and precision agriculture, and reducing methane and nitrous oxide emissions.

Forestry: forest conservation and restoration, and sustainable management of forest resources.

Waste: Implement comprehensive waste management systems, including recycling, composting and waste disposal programs.

Education at SKU named after. M.Auezova

South Kazakhstan University named after M. Auezov (SKU) has a long and distinguished history in the field of education. Founded in 1943, the university provides high-quality education in a wide range of disciplines. YKU is committed to providing high quality education. The university is accredited by the National Accreditation Center of the Republic of Kazakhstan and is recognized as one of the leading universities in the country. University's teaching staff consists of highly qualified professionals and scholars who are passionate about teaching and research.

Innovative teaching methods

Auezov university uses innovative teaching methods to improve student learning. The university has implemented a blended learning system that combines traditional classroom teaching with online learning. YCU also offers a wide range of practical training and internship opportunities to prepare students for their future careers.

The international cooperation

University has partnerships with a number of international universities and organizations. The university participates in student and faculty

exchange programs, joint research and other initiatives aimed at developing international cooperation and academic exchanges.

University provides its students with a comprehensive, high-quality education that prepares them for success in their careers and in life in general.

SKU's contribution to sustainable development

South Kazakhstan University named after M. Auezov (SKU) plays an important role in promoting sustainable development in Kazakhstan and beyond. The University takes a comprehensive approach to sustainability, spanning education, research and community engagement.

SKU integrates sustainability principles into all academic programs, preparing students to address sustainability issues in their future careers.

The university offers specialized courses and programs on sustainable development, such as Sustainable Development and Green Economy.

University provides hands-on opportunities for students to participate in sustainable development projects such as environmental initiatives and energy conservation programs.

Research

Auezov university conducts research on various aspects of sustainable development, such as renewable energy, water management and climate change adaptation.

The university is home to a number of research centers dedicated to scientific developments in the field of sustainable development. SKU researchers collaborate with national and international organizations to address sustainable development issues.



Public Engagement

SKU partners with local communities to implement sustainability projects such as recycling programs and biodiversity conservation projects.

The university hosts public events, workshops and conferences on sustainability issues, raising awareness and encouraging public participation.

SKU is a member of various networks and organizations for sustainable development, such as the Global Network of Universities for Sustainable Development (GNESD).

Operating activities

SKU incorporates sustainable practices into its operations, such as energy efficiency, waste reduction and the use of renewable energy.

YCU encourages sustainable behavior among its students, faculty and staff by conducting awareness campaigns and providing opportunities to participate in sustainability initiatives.

By contributing to sustainable development, SKU plays an important role in creating a fairer, more prosperous and sustainable future for Kazakhstan and the world at large.

The university implements its contribution to maintain sustainable development. The Rae Kwon Chung Center for a New Climate Economy and Sustainable Development is the first institute in Central Asia and the CIS to implement a new model of economic development based on the principles of sustainable growth, green technologies and reducing the impact of climate change on the environment. The decision to open this center was made on October 31, 2022 within the framework of a signed memorandum between the Chairman of the Board - Rector of the NJSC "South Kazakhstan University named after M. Auezov" Kozhamzharova Daria Perneshovna and Nobel Prize laureate, Advisor to the UN Secretary-General on Climate Change, Professor Rae Kwon Chung at the entrance of the III Nobel Festival.



Purpose of the center:

- Research and Educational Institute
- Introduction of new principles of economic development:
 1. Sustainable growth
 2. Green technologies
 3. Reducing your carbon footprint

4. Ensuring food security
5. Reducing the impact of climate change on the environment.



The main mission of the center is development and implementation of educational programs and research projects in the field of green economy and sustainable development, as well as reducing the carbon footprint, ensuring food security and reducing the impact of climate change on the environment.

Rae Kwon Chung Center for New Climate Economy and Sustainable Development

About center

Rae Kwon Chung Center for New Climate Economy and Sustainable Development is the first institute in Central Asia and the CIS to introduce a new model of economic development based on the principles of sustainable growth, green technologies and reducing the impact of climate change on the environment.

The decision to open this center was made on October 31, 2022 with in the framework of a signed memorandum between the Chairman of the Board—Rector of the NAQ M.Auezov South Kazakhstan University Kazhamzharova Daris Perreshovna and Nobel Prize laureate, Advisor to the UN Secretary—General on Climate Change, Professor Rae Kwon Chung during the III Nobel Festival.

The purpose of the center:

Research and Educational Institute.

Introduction of new principles of economic development:

1. Steady growth
2. Green technologies
3. Reducing the carbon footprint
4. Ensuring food security

Reducing the impact of climate change on the environment.

In order to understand and implement sustainable lifestyle thinking, activities are underway to introduce "green incentives" and develop research projects for universities, through influencing behavior patterns and decision-making. This is relevant because Universities play a key role in shaping the leaders of tomorrow. At the moment, students and staff of Auezov University have expressed interest in becoming sustainable and promoting a sustainable lifestyle on and off campus. The Center for a New Climate Economy and Sustainable Development named after Rae Kwon Chung works together with the growing demand for additional knowledge and the development of

About the center

The mission of the center

Chairman of the Center

Lectures by Rae Kwon Chung

The Center's projects

The UN Sustainable Development Goals

UN goals with the University

SDG University Strategy

The University's SD policy

Library

Center for Inclusive Education

Calendar of SDG events

EcoFirst Ecological Club