AZERBAIJAN STATE OIL AND INDUSTTRY UNIVERSITY



CLIMATE ACTION PLAN





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1. INTRODUCTION

As a leading educational institution, Azerbaijan State Oil and Industry University (ASOIU) recognizes the urgency of climate change. Rising greenhouse gas concentrations threaten our planet with rising temperatures, extreme weather events, and ecological disruption. ASOIU underscores its dedication to sustainability through the implementation of its Climate Action Plan, which sets forth comprehensive strategies aimed at minimizing the university's carbon footprint and promoting environmentally responsible practices across all areas of operation.

Climate action refers to efforts to combat climate change. These efforts include reducing greenhouse gas emissions, shifting towards renewable energy sources, and promoting sustainable practices. International agreements, government regulations, and incentives for businesses and individuals all play a role in achieving climate action goals.

ASOIU has a rich story of academic history and a vision to be pioneer in oil field. We know that development should not be at the price of the environment. Our goal is to integrate environmental care into our fundamental principles and create a sustainable culture throughout the university.

Climate change threatens our social, economic, and environmental well-being. Educators and innovators must embrace their position as catalysts for constructive change. Our Climate Action Plan is based on the GHG Protocol Corporate Standard, which provides a reliable framework for measuring, controlling, and decreasing greenhouse gas emissions.

The aim of climate action is to mitigate the impacts of climate change by reducing greenhouse gas emissions, fostering sustainable practices, and adapting to the changing climate. It aims to protect the environment, biodiversity, and human wellbeing for current and future generations.

Our Climate Action Plan emphasizes ambitious targets aimed at significantly reducing greenhouse gas emissions and fostering a culture of environmental responsibility across the university community.

We recognize that achieving significant change takes bold initiatives and are open to creative solutions and revolutionary methods. Setting these objectives demonstrates our commitment to supporting national and global efforts to mitigate climate change.

Active participation from the university community is crucial for the success of our Climate Action Plan. Transformative transformation requires collaboration among students, professors, staff, and administration. We want to engage our community in sustainability projects by educating, creating awareness, and promoting inclusive conversation.

Collaboration and teamwork are essential to achieving our climate goals. ASOIU recognizes the importance of collective action and is committed to working alongside internal and external stakeholders to address the challenges of climate change effectively.

By working together, we can increase our influence and move towards a more sustainable future.

Our Climate Action Plan is a dynamic and adaptive plan. We will adapt our approach to new technology, scientific advancements, and changing social requirements. Our commitment to sustainability and a low-carbon future drives our continual improvement process.

This Climate Action Plan presents practical strategies and approaches aimed at effectively reducing greenhouse gas (GHG) emissions.

We will identify specific strategies to achieve our carbon reduction objectives, including energy efficiency programs, sustainable mobility, waste management, and water conservation. We will prioritize education, involvement, monitoring, reporting, and verification, together with financial assistance and risk management, to guarantee effective execution of our efforts.

The ASOIU community embraces the call to action given by climate change.

Taking bold and decisive climate action may have a long-term impact on the environment and create a precedent for others to follow. By committing to sustainability, we can create a better future for future generations and leave a beneficial impact on our university, society, and the environment.

2. ORGANISATIONAL PROFILE

Azerbaijan State Oil and Industry University is dedicated to cultivating highly skilled engineering professionals to serve the needs of our nation. On November 16, 1920 he Decree of the Azerbaijan Revolutionary committee was published on establishing the Polytechnic Institute in Baku. In September 2015, the university was renamed Azerbaijan State Oil and Industry University, expanding its mission to prepare qualified specialists not only for the oil sector but also for the broader national industry.

ASOIU aims to promote innovation, entrepreneurship, and sustainable practices among its students, professors, and staff, building on its academic tradition and vision for the future.

Mission

The mission of Azerbaijan State Oil and Industry University is to provide world - class education and research in petroleum, engineering, chemistry, geology and IT. The university pursues ambitious objectives to address the evolving needs and challenges of the modern era. Today, our university further strengthen its activities by producing highly skilled professionals, who meet the demands of our time, benefiting both our nation and the world, and strengthening the economy, all while upholding high standards in education and teaching.

Vision

ASOIU aims to become a regional leader in petroleum and engineering education. The institution aims to excel in academics, research, and innovation while promoting ethical principles, sustainability, and societal advancement. ASOIU aims for graduates to contribute to economic progress, environmental preservation, and social equality, making a good global effect.

Commitment to sustainability

ASOIU's commitment to sustainability means embracing practices that fulfill current needs while preserving resources and opportunities for future generations. It often includes environmentally responsible actions, resource efficiency, and social responsibility to create a balance between economic, environmental, and social factors for long-term well-being.

- Green Campus Initiatives: ASOIU encourages sustainable measures on campus, such as energy saving, trash reduction, and eco-friendly technologies. We seek to reduce our carbon impact and promote a sustainable learning environment.
- Eco-Ambassador Program: Additionally, ASOIU will establish an Eco-Ambassador

Program, where students and staff take leadership roles in advancing sustainability initiatives across campus.

• Curricular Integration: ASOIU integrates sustainability ideas throughout all academic programs to solve global concerns. Our goal is to provide students with the necessary information and skills to promote sustainable development.

- Research for Sustainability: ASOIU promotes research on sustainability, finding new solutions to environmental, social, and economic difficulties. We encourage professor and student research that promotes sustainable development and advances knowledge in related sectors.
- Community Engagement: ASOIU promotes environmental awareness and beneficial actions by actively engaging with the local and wider communities. We work with partners to meet social requirements and promote sustainable development in Azerbaijan and the region.

Key Stakeholders

ASOIU's Climate Action Plan depends on the collaborative engagement of diverse stakeholders to achieve meaningful and lasting transformation. We will incorporate climate change and sustainability education into all programs and courses, aiming to empower every student to become an advocate for sustainability.

The primary players in implementing the Climate Action Plan are:

- Students: ASOIU students are the driving forces behind environmental efforts. As future leaders, they actively advocate for sustainability and participate in green campus activities.
- Faculty and Staff: ASOIU's academics and staff promote sustainability in curriculum, research, and daily operations. Their passion and engagement are crucial for fostering a thriving campus community.
- Administrative Leadership: The university's administrative officials offer assistance, direction, and resources to promote sustainability activities. Their dedication to sustainability influences institutional policies and decision-making processes.
- Community Partners: Collaboration with government agencies, non-governmental organizations, enterprises, and educational institutions is crucial for expanding the effect of ASOIU''s sustainability programs and promoting systemic change.

Governance Structure

A governance structure for sustainability typically involves establishing policies, procedures, and organizational mechanisms to integrate sustainable practices into decision-making process. This may include dedicated sustainability teams, accountability frameworks, and regular assessments to ensure that environmental, social, and economic considerations are incorporated into the organization's operations and strategies.

• Sustainability Committee: The center for sustainability dedicated to advancing sustainable practices at ASOIU. It conducts research, provides education and training, promote sustainable policies, and collaborate with various stakeholders to foster a more sustainable and resilient future.

- Sustainability Advisory Board: The Sustainability Advisory Board comprises external experts, representatives from partner organizations, and significant stakeholders. They give strategic leadership, varied viewpoints, and advocate for sustainability at ASOIU.
- Working Group for Environmental Governance: This working group prioritizes environmental measures including energy efficiency, trash management, and sustainable campus construction. It develops policies, action plans, and strategies to minimize ASOIU's environmental effect.
- Working Group for Social Responsibility: The social responsibility working group prioritizes community participation, ethical behaviors, and social impact initiatives. ASOIU strives to help the society and promote responsible citizenship.
- Working Group for Industrial Collaboration: This working group encourages relationships with industries and enterprises to promote sustainable practices, research collaborations, and information sharing. It focuses on mutual advantages and sustainable economic progress.
- Working Group for Sustainable Research: The sustainable research working group promotes and supports research efforts addressing sustainability concerns. It encourages multidisciplinary research and information sharing for sustainable development.
- ASOIU's governance system prioritizes sustainability in university operations, academics, and campus life via cooperation, alignment, and stakeholder empowerment.
- Draw figure regarding sustainability committee.

Governance Structure of Sustainability at ASOIU



3. ASOIU GREENHOUSE GAS EMISSIONS



This section will thoroughly assess ASOIU's greenhouse gas emissions. It will consider emissions from the university's daily operations, activities, and suppliers. Data will be meticulously collected and analyzed to establish a baseline inventory for a specific year. The assessment will cover three scopes of emissions:

Scope 1: Direct emissions from university-controlled sources (e.g., on-site fuel combustion).

Scope 2: Indirect emissions from purchased energy (e.g., electricity).

Scope 3: Other indirect emissions throughout the university's value chain (e.g., business travel, waste).

Specific emission data for each scope will be presented after this explanation.

Scope 1 Emissions

Scope 1 emissions at ASOIU mainly stem from activities directly within our authority and include two primary sources:

Stationary Combustion GHG Emissions:

These emissions result from the burning of fuels for heating, electricity generation, and other

processes on our campus. In 2023, approximately 882,623.91 kg CO2 was emitted from stationary combustion activities at ASOIU.

Mobile Combustion GHG Emissions:

These emissions arise from the university's vehicle fleet and transportation activities. In 2023, ASOIU emitted 43,399.68 kg CO2 from mobile combustion.

Scope 2 Emissions:

Scope 2 emissions are indirect GHG emissions resulting from purchased electricity consumption. In 2023, ASOIU's electricity consumption led to approximately 1,161,678 kg CO2 emissions.

Scope 3 Emissions:

Employee Commuting GHG Emissions:

The daily commute of ASOIU's faculty and staff contributed around 144,560 kg CO2 emissions in 2023.

Waste GHG Emissions:

Managing waste is crucial for reducing our GHG emissions. In 2023, ASOIU's waste generated approximately 58,749 kg CO2 from organic waste decomposition in landfills.



Scope 1 (Stationary Combustion)

Short-Term (2022-2025)

- Introduce energy-conserving strategies, upgrade equipment for greater efficiency, and finetune heating, ventilation, and air conditioning (HVAC) systems.
- Conduct assessments of campus buildings' energy usage to pinpoint areas where efficiency can be enhanced.
- Investigate options for incorporating renewable energy sources, such as solar panels and geothermal heating, to decrease overall energy consumption.

Mid-Term (2026-2035)

- Embrace environmentally-friendly construction standards for new projects and major remodels to ensure structures are energy-efficient and have low carbon footprints.
- Continue integrating renewable energy into the campus energy supply to diminish dependence on fossil fuels.
- Assess the viability of combined heat and power (CHP) systems to enhance energy efficiency further.

Long-Term (2036-2050)

- Consistently monitor and evaluate energy consumption and greenhouse gas emissions to refine and enhance strategies for carbon reduction.
- Implement carbon-neutral heating and cooling systems throughout all campus buildings.
- Assess advanced heating and cooling technologies to maximize energy efficiency. Allocate resources toward energy storage technologies to facilitate grid integration and optimize the use of renewable energy.

Scope 1 (Mobile Combustion)

Short-Term (2022-2025)

- Investigate cleaner fuel alternatives for automobiles and gradually shift towards fuels with lower emissions.
- Encourage carpooling and alternative modes of transportation to decrease the number of single-passenger vehicles.
- Launch eco-driving initiatives to educate individuals about fuel-efficient driving behaviors.

Mid-Term (2026-2035)

- Progressively transition the transportation fleet to electric vehicles (EVs) to mitigate emissions.
- Expand the electric vehicle charging infrastructure across campus and explore vehicle-togrid (V2G) technology to bolster sustainability efforts.
- Optimize vehicle fleets for improved fuel efficiency and assess the feasibility of autonomous electric vehicles.

Long-Term (2036-2050)

- Complete the conversion of the transportation fleet to entirely electric vehicles (EVs) for emission-free transportation.
- Collaborate with transportation authorities to further advance sustainable mobility and reduce traffic-related emissions.
- Involve the campus community in adopting sustainable commuting practices and advocate for active modes of transportation.

Scope 2 (Electricity Consumption)

Short-Term (2022-2025)

- Deploy energy-conserving strategies, such as utilizing LED lighting and upgrading to energy-efficient appliances, to curtail electricity usage.
- Conduct an audit of electricity usage to pinpoint areas of high energy consumption and opportunities for enhancing efficiency.
- Collaborate with electricity providers to investigate eco-friendly energy alternatives and bolster the advancement of renewable energy initiatives.

- Engage the campus community in energy-saving endeavors through awareness initiatives and educational campaigns.

Mid-Term (2026-2035)

- Continue to augment the proportion of renewable energy sources in the electricity provision to minimize emissions.
- Explore the potential for power purchase agreements (PPAs) with renewable energy suppliers to reinforce sustainability objectives.
- Assess the feasibility of implementing onsite solar installations and other renewable energy technologies. Promote energy-efficient practices and encourage behavioral changes among students, faculty, and staff.

Long-Term (2036-2050)

- Attain a 100% renewable electricity supply to eradicate greenhouse gas emissions associated with electricity consumption.
- Invest in onsite renewable energy generation to meet a substantial portion of electricity requirements.
- Deploy smart grid technology and energy storage solutions to optimize the utilization of renewable energy.
- Forge enduring partnerships with renewable energy providers to secure a sustainable electricity supply.

Scope 3 (Employee Commuting)

Short-Term (2022-2025):

- Promote active transportation like walking or cycling for short-distance commutes.
- Conduct a survey on commuting habits to grasp the current travel patterns of faculty and staff.
- Introduce a ride-sharing scheme to decrease single-occupancy vehicle trips.

Mid-Term (2026-2035):

- Offer incentives for eco-friendly commuting, such as subsidies for public transport or bikesharing schemes.
- Explore telecommuting possibilities and flexible work setups to cut down on commuting emissions.
- Develop carpooling and vanpooling programs to facilitate shared commuting among staff.

Long-Term (2036-2050):

Work with local authorities to enhance public transportation options and infrastructure. Involve the campus community in eco-friendly commuting initiatives and awareness drives. Formulate a long-range strategy to enhance campus accessibility for sustainable commuting choices.

Scope 3 (Waste Management)

Short-Term (2022-2025)

Perform a waste assessment to pinpoint areas for waste minimization and recycling enhancement. Decrease the use of disposable plastics and advocate for eco-friendly packaging across campus. Forge alliances with recycling facilities and waste management firms.

Mid-Term (2026-2035)

Implement waste segregation and recycling programs to reduce landfill contributions.

Encourage the integration of circular economy practices to minimize overall waste generation.

Promote a campus-wide culture that embraces circular economy principles to significantly reduce waste output.

Long-Term (2036-2050)

Collaborate with local authorities to improve public transportation systems and infrastructure.

Engage the campus community in promoting eco-friendly commuting through initiatives and awareness campaigns.

Develop a long-term plan aimed at increasing campus accessibility and encouraging the use of sustainable transportation options.

4. GHG EMISSIONS REDUCTION STRATEGY

ASOIU's three-phase plan targets net-zero emissions by 2050:

- Short-Term By 2028, ASOIU aims to reduce Scope 1 emissions by 10%, Scope 2 emissions by 15%, and Scope 3 emissions by 5%, using specific energy-saving technologies and efficiency measures.
- **Mid-Term** In the medium-term, by 2030, ASOIU targets a 30% reduction across all scopes and will regularly evaluate progress toward achieving net-zero emissions by 2050.
- Long-Term (2036-2050): Carbon neutrality with carbon-neutral heating/cooling, energy storage, grid collaboration, and continuous optimization. This phase fosters a campus-wide culture of sustainability, responsibility, and innovation.

5. MAJOR DIRECTIONS TO TRANSFORM OUR INFRASTRUCTURE

1. Responsibly manage our campus growth

Our campus activity and day-to-day operations are managed by environmental stewards ASOIU takes a very hard look at upbringing its managers and change agents with sustainably nurtured mind-set.



2. Renew our aged utility infrastructure

Regularly building brand new utility infrastructure is our ultimate goal in keeping our brick and mortar fresh.



3. Build resilient systems

We will ensure that our infrastructure is well integrated with cutting-edge renewable solutions.



Switching to lower-carbon fuel sources by 2030

6. BUDGET AND FUNDING

Investing in a Sustainable Future

To reach its target of carbon neutrality by 2050, ASOIU plans to invest in various projects encompassing energy efficiency, the adoption of renewable energy, sustainable transportation, waste management, and educational outreach. The table below outlines the estimated financial commitments needed for each aspect of the Climate Action Plan:

Initiative	Scope	Estimated Cost (USD)
Energy Efficiency Upgrades	Scope 1	700.000 \$
Renewable Energy	Scope 2	1.000.000 \$
Integration		
Sustainable Procurement	Scope 3	245.000 \$
Virtual Collaboration Tools	Scope 3	80.000 \$
Waste-to-Energy	Scope 3	575.000 \$
Technologies		
Educational Outreach	All Scopes	185.000 \$
Programs		
Total Estimated Budget		2.785.000 \$

The projected budget serves as a basis for ASOIU's financial strategy; however, it's important to acknowledge that these numbers may change due to evolving technology, market fluctuations, and new possibilities for cost efficiency.

ASOIU acknowledges that significant financial resources are necessary to achieve carbon neutrality and emphasizes the importance of a collaborative approach. The university plans to explore various funding avenues and establish strategic partnerships to facilitate the implementation of its Climate Action Plan.

Internal Funding: ASOIU intends to allocate a portion of its own resources towards supporting the Climate Action Plan. This commitment to sustainability could be integrated into the annual budget, ensuring steady progress towards the defined objectives.

Grants and Funding Programs: ASOIU will actively pursue grants and funding opportunities offered by international organizations, government agencies, and foundations that promote

sustainability initiatives. These grants can expedite the execution of specific projects and enhance ASOIU's efforts in reducing emissions. ASOIU will fund research initiatives aimed at developing new sustainable technologies, focusing on **carbon capture**, **renewable energy**, and **energy storage** solutions. We will also collaborate with global research institutions to advance innovative solutions to mitigate climate change.

Industry Partnerships: Collaboration with private sector entities can be mutually beneficial. ASOIU aims to form partnerships with energy companies, technology providers, and waste management firms to access innovative solutions, expertise, and potential co-financing opportunities.

Public-Private Partnerships (PPPs): ASOIU recognizes the potential of PPPs as a valuable mechanism for funding large-scale sustainable infrastructure projects. The university may explore PPPs with local authorities and private companies to develop renewable energy projects or sustainable transportation solutions. ASOIU will explore additional funding opportunities, including **green bonds, impact investments**, and **sustainability-focused venture funds**, to support its Climate Action Plan initiatives.

Alumni and Donor Contributions: ASOIU expects support from its dedicated alumni and donors who may be interested in contributing to the university's sustainability initiatives. Fundraising campaigns and donor engagement strategies will be employed to attract financial backing for specific projects.

Carbon Offsetting and Trading: ASOIU will investigate carbon offsetting opportunities, such as backing renewable energy projects or investing in carbon credits to offset its remaining emissions.

7. CONCLUSION

The Climate Action Plan of Azerbaijan State Oil and Industry University (ASOIU) demonstrates a comprehensive commitment to sustainability and climate action. The plan provides a comprehensive approach to minimize greenhouse gas emissions across all three scopes and outlines a framework for ASOIU's transition to a carbon-neutral institution by 2050. ASOIU commits to adopting the Global Reporting Initiative (GRI) standards for sustainability reporting, ensuring transparency and accountability in its climate action progress. We will publish an annual sustainability report outlining our emissions, energy use, and efforts toward carbon neutrality.

ASOIU aims to pioneer sustainable practices in higher education, promoting a greener and more resilient future for both the university community and society.

ASOIU's Climate Action Plan is based on an ambitious vision: to establish a sustainable and carbonneutral campus community that serves as an example of environmental responsibility.

ASOIU acknowledges that attaining carbon neutrality requires active engagement from all stakeholders. Collaboration with students, teachers, staff, local communities, business partners, and worldwide allies enhances ASOIU's approach to sustainability. The institution enables its community to make significant change via inclusive collaborations and information exchange, establishing a culture of climate awareness and collective action.

ASOIU is taking climate change seriously:

Planning for the future: We're proactively assessing risks and developing measures to adapt to a changing climate. This includes improving our infrastructure, water management, and health and safety practices, while also increasing our use of renewable energy. These efforts will make ASOIU more resilient to extreme weather events and ensure we can continue delivering high-quality education.

Investing in a sustainable future: ASOIU's Climate Action Plan prioritizes innovation and sustainability. We're integrating renewable energy sources, building energy-efficient facilities, and adopting sustainable procurement practices. This not only reduces our carbon footprint but also fosters a culture of innovation and creates a brighter, more sustainable future.

Transparency and accountability: ASOIU is committed to openness and accountability in its sustainability efforts. ASOIU regularly monitors its emissions data and key performance indicators to track progress and identify areas for improvement. This information is open to public.

ASOIU understands that achieving carbon neutrality involves enormous financial resources and strategic alliances. Identifying possible financing sources, such as grants, industrial collaborations, and green investments, helps ASOIU successfully implement its sustainability programs.

ASOIU, a prominent higher education institution, understands its responsibility in developing future leaders. Climate-resilient curricula and research projects prepare graduates to address global issues and promote sustainable development.

In conclusion, Azerbaijan State Oil and Industry University (ASOIU) remains committed to sustainability and climate action. The Climate Action Plan aims to achieve a sustainable and carbonneutral future, highlighting ASOIU's commitment to environmental stewardship and global climate leadership. ASOIU's revolutionary path inspires collaboration across higher education institutions to combat climate change and create a more sustainable future. ASOIU aims to leave a positive environmental legacy via collaboration with its community and partners, helping current and future generations to prosper in a resilient and sustainable future. By 2050, ASOIU aims to not only achieve carbon neutrality but to also become a global model for climate action and sustainability in higher education. Our commitment to sustainability will be woven into the fabric of our institution, from research to teaching and community engagement.