



**BAKU  
ENGINEERING  
UNIVERSITY**

# **SUSTAINABILITY PLAN 2023 – 2030**

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**RANKED #551-600**

QS Europe University Ranking in

**NEAR ZERO**

Carbon reduction emissions (until 2040)

**ZERO WASTE**

Food court and residence student dining location

**5,094**

Undergraduate and graduate students



# Message from the President



Dear Members of the BEU Community,

I am pleased to present Baku Engineering University's (BEU) Sustainability Plan 2023-2030. This plan was developed in consultation with the Sustainability Committee and Student Community to respond to key areas and feedback from our faculty, staff, and students where the university can make the biggest sustainability impact, be it in our operations, teaching, and learning, or the area of research.

This plan establishes key themes, goals, and strategic actions that will guide the university over the next five years in our efforts to become a leader in addressing the complex challenges associated with climate change and sustainability.

As an institution, BEU has converged academic theory with innovative research through its laboratories thanks to its long-standing commitment to sustainable operations, waste recycling, alternative energy modes, and practice through real market-based experience that dates back to the early 2000s.

Since that time, BEU has made significant progress through several key programs covering a wide array of subject areas including STEM, Environmental Engineering, and Business Management across all levels of education including Bachelor's, Master's, and Dual-Degree programs.

Together, over the next seven years, BEU will continue to work as a community of academic and practical centers of gravity for a sustainable and environmentally resilient university.

Sincerely,

Yagub Piriye

Rector

# BEU Sustainability

BEU, as a distinguished research and teaching institution, has a responsibility to take initiatives in addressing the challenges arising from climate change and in developing sustainable solutions and demonstrating the environmental, economics, and social opportunities that the university campus can provide.

Our vision is to be a leading Azerbaijani university that forms and extends sustainability in society and contributes to the well-being of the community in which BEU operates. By renewing our Sustainability Plan, BEU is committed to continuous environmental and sustainable improvement, and enhanced performance in all of our academic activities, innovative research projects, and day-to-day operations. BEU believes that a robust commitment to sustainability will help reduce BEU's negative environmental footprint while ensuring that both social and economic benefits of future generations of students, staff and faculty can be in coexistence with sustainable behavior.

BEU's sustainability plan also provides a basis in supporting the university's long-term goal of instilling sustainability in academic curricula, research and teaching and ensure holistic view through the lenses of our campus.

Through this plan, the university embraces the opportunity to both live and teach sustainability by innovative research, experiment and accomplishments through trial and error.

BEU has had separate sustainability initiatives ever since it has been founded. Most recently, BEU leadership has decided to develop its overall Sustainability Plan covering the years of 2023-2030. By establishing key initiatives, innovative experiments and scientific research the BEU leadership, its academic staff and student community has been in the centerpiece of sustainable engagement. Well before the adoption of its first sustainability plan, BEU has already made progress through a number of key programs including; the creation of a university program in Environmental Engineering, on-campus laboratories that serve innovative ideas to develop alternative energy resources and reduce carbon emissions.

BEU is continuously taking initiatives to achieve zero waste, create renewable energy sources, provide sustainable food and dining, and ultimately renovate its campus facilities and premises to become energy efficient.

This plan has been developed with the help of university community, faculty, staff and students. We emphasize the reduction of negative environmental impact and utilization of resources available for a sustainable usage.





# Global Contributions

The BEU has a comprehensive definition of sustainability where people and the environment come first. This includes fairness for all, economic security, and creating a positive future for everyone, by adding necessary productivity sustainable innovation. The university is now working on turning this broad vision into specific goals that can be tracked and achieved on campus.

Many confuse "sustainability" with "sustainable development." The Brundtland Commission Report, a key document on the environment, famously defined sustainable development as progress that fulfills current needs without harming future generations' ability to meet their own.

The Brundtland Commission Report, titled Our Common Future, emphasizes the interconnected nature of sustainability's social, environmental, and economic aspects. The report argues that our failure to achieve sustainable development often stems from neglecting economic and social justice. This neglect, the Commission suggests, prevents individuals from having equal opportunities to improve their lives.

Economic, environmental, and social aspects. Similarly, educators often refer to the "Three E's" of sustainability: economy, ecology, and equity.

The United Nations' 2030 Agenda for Sustainable Development, outlined in their publication 'Transforming our world', is a 15-year plan that builds on prior initiatives. It emphasizes a balanced approach to sustainability, encompassing economic, social, and environmental aspects. This agenda is comprised of 17 Sustainable Development Goals and 169 associated targets.



# The Plan at a Glance

## LEADERSHIP



- Strive for continuous improvement in environmental compliance.
- Achieve remarkable ratings in sustainability by 2030.
- Make annual and public reports ready on the university's sustainability impacts and progress.
- Foster transparency by involving community stakeholders in sustainability reporting and progress updates.

## TEACHING AND LEARNING



- Monitor the adequacy and quantity of courses and programs that enable students to understand and apply sustainability knowledge.
- Make sure that all students graduating from BEU practice sustainability principles through their degree program or wider initiatives.

## INNOVATIVE RESEARCH



- Track the number of research programs with links to campus sustainability and environmental impact.
- Monitor SDG related key words and SDG themes of research articles and promote scientific rigor in research activities.
- Track the sustainability impact (funding, awards, contracts etc.) of research programs and initiatives.

## ENERGY AND CARBON FOOTPRINT



- Meet the objectives and targets identified in the BEU Sustainability Policies and Plan.
- Achieve a near zero reduction in Scope 1 and 2 carbon emissions by 2040, 100 per cent by 2050, (based on a 2023 baseline).
- Increase renewable or alternative energy projects on campus.
- Reduce annual energy consumption.



## SUSTAINABLE BUILDINGS

- Improve energy efficiency of BEU premises and make sure that new buildings and renovations are sustainability certified.





## WATER

- Achieve annual water consumption reduction (intensity).



## WASTE

- Achieve a zero-waste campus.
- Achieve a zero-construction waste campus.
- Ensure that community stakeholders are engaged waste reduction activities.



## TRAVEL AND TRANSPORT

- A new Sustainable Transportation Strategy for the campus.
- Add university-owned electric vehicles to the fleet.
- Promote Active Transportation modes (Bike and Walk) amongst staff, faculty and students.
- Promote Public Transportation (Bus and Train) usage amongst staff, faculty and students.



## FOOD AND DINING

- Provide catering services and utilize food waste with sustainability in mind.



## COMMUNITY ENGAGEMENT

- Increase quantity and extended outreach of sustainability-oriented seminars, training, and events on campus.
- Increased student engagement within and outside the campus area.
- Research and innovative activities, including startups in efficient energy generation, consumption, physics, and social sciences

# Leadership

## Goal 1.1: Foster a culture of sustainable leadership.

### STRATEGIC STEPS:

- a. Set “the tone at the top” for proactive commitment to Sustainable Development.
- b. Set clear objectives and targets to start with sustainability performance, one step at a time.
- c. Ensure that key messages are understandable and correctly linked in the strategic plan.
- d. Be compliant with legislative requirements, standards and agreements.
- e. Promote cross-sectional collaboration within BEU (Academic, Research and Administrative functions) to realize steps depicted in the Sustainability Plan.
- f. Identify opportunities and assess risks to enhance existing sustainability initiatives across BEU programs and activities.
- g. Provide necessary soft and hard tools to support BEU’s sustainability program.

## Goal 1.2: Practice sustainability as put forward in the Sustainability Plan.

### STRATEGIC STEPS:

- a. Prioritize key strategic directions to develop a university-wide Sustainability Policy with the end goal of achieving desired outcomes.
- b. Ensure that sustainability policies, strategies, procedures and practices are supportive of sustainability plan.
- c. Consider the goals and steps listed in the sustainability plan in recruitment and onboarding stages.
- d. Ensure that the university’s risk identification techniques include sustainability related risks and opportunities.
- e. Explore opportunities for the adoption of socially responsible investment decisions.

## SUSTAINABILITY IN ACTION

BEU has applied to QS Sustainability ranking in 2024.

The BEU leadership believes that its long-term sustainability goals will be reached relatively quickly.

This belief is driven by the quality of education and university’s research basis and scientific reputation.

### Goal 1.3: Reporting in sustainability reporting.

#### STRATEGIC STEPS:

- a. Provide key performance indicators to facilitate tracking, evaluating and reporting sustainable activities.
- b. Plan and perform necessary reporting procedures and compare with analogous rating metrics for operational improvement in sustainability.
- c. Annually monitor and evaluate the implementation of the Sustainability Plan.
- d. Communicate to staff, faculty, students and the wider BEU community on the university's sustainability performance.
- e. Hold annual meetings of Sustainability Committee on the progress against the Sustainability Plan.

#### KEY TARGETS:

- Zero chance of environmental non-compliance and stay legally in conformity with regulations.
- Achieve a higher QS Sustainability rating by 2026.
- Report annually and publicly on the university's sustainability impacts and progress.
- Follow global best practices.
- Engage community stakeholders in reporting and decision-making processes.

#### RELEVANT SUSTAINABLE DEVELOPMENT GOALS:

- Goal 4      Quality Education
- Goal 9      Industry, Innovation and Infrastructure
- Goal 16     Peace, Justice and Strong Institutions
- Goal 17     Partnerships for the Goals





# Teaching and Learning

BEU empowers students to become sustainability leaders, fostering lifelong adaptation for a sustainable future through teaching and learning.

BEU will deepen sustainability integration across formal teaching and learning, offering specialized interdisciplinary programs to equip students with the knowledge and skills to thrive in future sustainability careers.

BEU fosters campus-wide sustainability engagement, empowering all students to become lifelong sustainability contributors, regardless of their major.

## Goal 2.1: Develop appropriate subjects and courses.

### STRATEGIC STEPS:

- Ensure that sustainability-focused and sustainability-related curriculum activity are active and present.
- Promote a range of undergraduate sustainability-related courses and programs.
- Promote a range of postgraduate sustainability-related courses and programs.
- Encourage curriculum innovation by facilitating collaboration and interdisciplinary approaches.
- Ensure curricula are aligned to sustainability plan.

## Goal 2.2: Integrate sustainability into teaching and learning practices

### STRATEGIC STEPS:

- Promote and share practical resources about sustainable teaching practices.
- Share effective and sustainable teaching practices across the university.
- Develop initiatives to integrate sustainability practice into curriculum and academic programs.

## Goal 2.3: Increase sustainability awareness among all students.

### STRATEGIC STEPS:

- Involve students in campus activities, working groups and other volunteer projects.
- Produce resources that enhance learning about sustainability outside the formal curriculum.
- Explore the possibility of assessing the sustainability awareness of all students.
- Develop a focused experiential-learning experience for students and ensure on and off campus opportunities.

### KEY TARGETS:

- Monitor the number of courses and programs that enable students to understand and apply sustainability knowledge.
- Ensure that students get exposed to sustainability principles through their degree program and other activities

### RELEVANT SUSTAINABLE DEVELOPMENT GOALS:

- Goal 4      Quality Education
- Goal 8      Decent work and economic growth
- Goal 13     Climate Action





## SUSTAINABILITY IN ACTION

Across Carleton, the teaching and studying of sustainability occurs through a broad range of courses and programs. Carleton is committed to ensuring all our students gain the knowledge and understanding to become global citizens in a sustainable world. Sustainability-specific undergraduate and graduate programs currently include:

- Master's in Environmental Engineering and all related subjects supporting Sustainable Development
- Bachelor of Environmental Engineering and all related subjects supporting Sustainable Development

BEU graduates have a variety of practical learning opportunities, beyond their 4th year capstone programs. BEU engineering students take part and win important prizes in international competitions.



# Innovative Research

Research and Development is in the core of BEU's future progress.

Our team of researchers have interdisciplinary programs where engineering, environmental sciences, quantitative decision making and applied sciences are consolidated for a shared sustainable goal.

BEU believes in the rigor of science and depth of research in finding effective path to sustainable progress.

## Goal 3.1: Support Excellence in sustainability-related Research.

### STRATEGIC STEPS:

- a. Ensure BEU sustainability-research knowledge is communicated to the broader community.
- b. Engage researchers from multiple disciplines to enhance global and regional sustainability.
- c. Cultivate internal and external collaborations to advance interdisciplinary research on sustainability.
- d. Build upon BEU's expertise and capacity in research to ensure BEU becomes known as a center of excellence in sustainability.
- e. Continue to develop community-based research opportunities and work alongside key partners to embrace our capital advantage.

## Goal 3.2: Encourage sustainable Research practices.

### STRATEGIC STEPS:

- a. Adopt methods and metrics to measure research outcomes and positive impacts relating to sustainability research.
- b. Encourage sharing effective sustainable research practices across the university.
- c. Recognize examples of research practices that support the sustainability program at the university.

## Goal 3.3: Link research potential to sustainable campus operations and planning.

### STRATEGIC STEPS:

- a. Increase the use of university sustainability initiatives and facilities as a resource for academic inquiry (research, teaching and learning).
- b. Increase campus-based sustainability educational programs.
- c. Ensure university plans its operations to overcome scrambles and see explore opportunities through research and learning.

SUSTAINABILITY IN ACTION

Research Partnerships

- BEU cooperates with SMEs in research and automation. An agreement on cooperation was signed between Baku Engineering University (BMU) and "BS-Avtomatika" LLC. The agreement aims at cooperation on the mutual use of material and technical bases and human resources of both parties in the training of specialists in automation, electronics and energy-oriented specialties at the university. In addition, it is planned to involve the leading and leading specialists of MMC in the teaching process, as well as in the management of students' final works and master's theses.
- Exhibitions of new startups formed on the basis of sustainability-based ideas put forward by students is regularly held at Baku Engineering University (BEU) Technopark. Participants draw special attention to the landscape of the global startup ecosystem and emphasized the purposeful steps taken by the state to support innovative policies and entrepreneurial initiatives. Noting that innovation has become an integral part of the sustainable planning of higher education institutions and organizations for future development, the activities for the development of startups at BEU is being strengthened.

- Baku Engineering University (BEU) holds scientific seminars regularly on the outcomes or future plans stemming from research activities. Recently, BEU Baku Engineering University (BEU) has held the next scientific seminar on "Estimation of the lower limit of neutrino mass". In the report, the determination of the mass of neutrino and antineutrino, the exact value of the mass, and the existence of the neutrino, which are the most important problems of modern physics and cosmology, were discussed. Moreover, extensive information was given about the experiments on determining the mass of neutrino and antineutrino and their results in various scientific laboratories around the world.
- BEU regularly holds awareness days on Campus through numerous projects. Recently BEU has held an event on the "CAMPAIGNers" project implemented within the framework of the "Horizon 2020" program of the European Union (EU). The main goal of the project is to direct the active participation of people in the direction of reducing the effects of climate change.

KEY TARGETS

- Track the number of research programs and initiatives with links to campus sustainability operations and planning.
- Increase the number of communications on university sustainability research provided to the broader community.
- Track the impact (funding, awards, contracts etc.) of research programs and initiatives as related to sustainability.

RELEVANT SUSTAINABLE DEVELOPMENT GOALS:

- Goal 6      Clean Water and Sanitation
- Goal 7      Affordable and Clean Energy
- Goal 9      Industry, Innovation and Infrastructure
- Goal 13     Climate Action
- Goal 14     Life below Water
- Goal 15     Life on Land

# Sustainable Operations

BEU acknowledges the environmental impact of its operations and will continue to work towards a future where both assets and infrastructure embody sustainability principles and best practices in sustainable innovation.

## Energy and Carbon Footprint

**Goal 4.1: Make BEU a leader in addressing carbon reduction and actively pursue a zero-carbon future.**

### STRATEGIC STEPS:

- a. Pursue the strategic objectives as identified in the BEU Sustainability Plan 2030.
- b. Minimize greenhouse gas emissions associated with the assets and operations of the university campus. Reduce to near-zero emissions by 2040.
- c. Increase the use of on-campus renewable energy sources.
- d. Reduce energy consumption through implementing energy monitoring and conservation measures.
- e. Implement innovations, upgrades, preventative maintenance and best practice solutions towards energy management and environmental protection.
- f. Actively engage the campus community in energy efficiency and share data for a broader user base.

## Sustainable Buildings and Biodiversity

**Goal 4.2: Promote social, economic and environmental sustainability through development and operations.**

### STRATEGIC STEPS:

- a. Develop, renovate and maintain buildings in a cost-effective and environmentally sustainable fashion.

## Goods and Services

**Goal 4.3: Ensure sustainable procurement of goods and services.**

### STRATEGIC STEPS:

- a. Establish policies, procedures and guidelines that promote sustainable procurement.

## Waste and Water Recycling

**Goal 4.4: Achieve zero-waste levels.**

### STRATEGIC STEPS:

- a. Minimize solid-waste generated within university premises and campus area by reducing, reusing, recycling, recovering, treating and disposing waste and water.
- b. Work with departments and vendors to eliminate single-use plastics.
- c. Calculate, monitor and reduce the output of solid wastes, liquid wastes and airborne contaminants.



# Sustainable Operations

## Travel and Transport

**Goal 4.5: Commit to a sustainable manner and contribute to a low carbon future.**

### STRATEGIC STEPS:

- Encourage sustainable and active forms of transportation (cycling and walking) by staff, faculty and students.
- Minimizing the carbon impact of the university - owned vehicle fleet.
- Plan air travel and reduce redundant trips.

- Encourage sharing platforms and use carpooling and use car sharing among staff, faculty and students.
- Purchase high-quality video conferencing equipment and make it available across campus.

## Food and Dining

**Goal 4.6: Employ sustainable food systems.**

### STRATEGIC STEPS:

- Increase sustainable catering, service and food consumption and food-waste utilization procedures to achieve sustainable food systems.



## KEY TARGETS:

### ENERGY AND CARBON FOOTPRINT

- Develop, renovate and maintain buildings in a cost-effective and environmentally sustainable fashion.
- Employ the most effective use of existing and new space and facilities.
- Conduct risk and life-cycle cost analysis.
- Stay abreast of environmental laws and regulations.

### SUSTAINABLE BUILDINGS

- Develop, renovate and maintain buildings in a cost-effective and environmentally sustainable fashion.

### WASTE AND WATER RECYCLING

- Achieve annual water consumption reduction (intensity). Minimize solid-waste generated within university premises and campus area by reducing, reusing, recycling, recovering, treating and disposing waste and water.
- Work with departments and vendors to eliminate single-use plastics.
- Calculate, monitor and reduce the output of solid wastes, liquid wastes and airborne contaminants

## TRAVEL AND TRANSPORT

- Encourage sustainable and active forms of transportation (cycling and walking) by staff, faculty and students.
- Minimizing the carbon impact of the university - owned vehicle fleet.
- Plan air travel and reduce redundant trips

## FOOD AND DINING

- Increase sustainable catering, service and food consumption and food-waste utilization procedures to achieve sustainable food systems.

## RELEVANT SUSTAINABLE DEVELOPMENT GOALS:

- Goal 7 Affordable and Clean Energy
- Goal 9 Industry, Innovation and Infrastructure
- Goal 11 Sustainable Cities and Communities
- Goal 12 Responsible Consumption and Production



# Community Engagement

Sustainability progress hinges on community engagement. BEU cultivates a university-wide culture of sustainability and empower staff, faculty, and students through coordinated programs, fostering collaboration and maximizing community engagement.

## Goal 5.1: Engage Community via raise awareness of the university’s sustainability milestones.

### STRATEGIC STEPS:

- a. Use every means to engage the community through academic, social and research activities.
- b. Update university’s sustainability website to disseminate sustainability activities more understandably and timely.
- c. Increase the use of social media as a communication platform.
- d. Add sustainability to student orientation activities.

## Goal 5.2: Open up opportunities for staff, faculty and students to engage in sustainable progress

### STRATEGIC STEPS:

- a. Facilitate and support social and volunteering initiatives by linking them to a common cause through indoor and outdoor activities to promote self-motivation among community members in sustainability.

### KEY TARGETS

- Use every means to engage the community through academic, social and research activities.
- Update university’s sustainability website to disseminate sustainability activities more understandably and timely.

### RELEVANT SUSTAINABLE DEVELOPMENT GOALS:

- Goal 12 Responsible Consumption and Production
- Goal 13 Climate Action





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