

13 CLIMATE ACTION



ACTION PLAN



CLIMATE ACTION PLAN 2023-2030



2023-2030

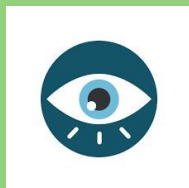


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Climate Action Plan for Baku State University (BSU)

Vision:



To become a globally recognized university leading the way in sustainability, driving the agenda towards achieving net-zero emissions through pioneering research, exemplary campus practices, and educating current and future leaders and decision-makers. Baku State University (BSU) aims to become a global leader in addressing climate change, fostering sustainability, and promoting environmental education.

Mission:



BSU is committed to reducing greenhouse gas emissions, enhancing climate change education and awareness, conducting cutting-edge research, and implementing sustainable practices across its campus to contribute to a more resilient and sustainable future.

- ✚ Foster positive change towards a sustainable world for all.
- ✚ Empower future sustainability leaders through research, teaching, and learning.
- ✚ Engage students, staff, and the wider community in active citizenship for sustainability.
- ✚ Minimize local, regional, and global environmental impacts across all university operations and infrastructure development.
- ✚ Promote health and well-being through sustainable living practices.

Values:



Compassion, Agility, Integrity, Respect, Discovery, Equity, Accountability, Sustainability. Our sustainability efforts are student-led, research-informed, and practice-focused. We are committed to a "just transition," recognizing the disproportionate impacts of unsustainability on marginalized communities and advocating for collaborative solutions.



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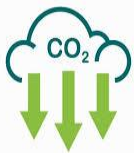


Strategic Goal:



Our primary strategic objective is to integrate sustainability goals and targets comprehensively throughout all aspects of the university, including education, research, operational activities, infrastructure development, and community engagement. By aligning our actions with these principles, we aim to foster a culture of sustainability and contribute meaningfully to building a better and more sustainable future for all.

GOALS:



Ambitious GHG Emissions Reduction:

- Set ambitious and quantifiable greenhouse gas (GHG) emissions reduction targets aligned with global climate objectives.
- Conduct regular and transparent evaluations of GHG emissions and provide comprehensive reports to track progress.



Comprehensive Education and Training:

- Conduct annual education programs and campaigns on climate change risks, impacts, mitigation, adaptation, and early warning systems.
- Integrate climate change education into university curricula at all levels, spanning various disciplines such as climate science, policy, law, ethics, sociology, economics, and culture.

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- Offer specialized master's degree programs in climate change adaptation and related fields to enhance the capacity of experts.



International Collaboration:

- Actively engage in international and regional projects related to climate change, such as the Erasmus+ Geospatial Engineering for Climate Change Adaptation of Coastal Ecosystems.
- Collaborate with national organizations like the Ministry of Ecology and Natural Resources to align curricula with international best practices.



Research and Innovation:

- Conduct cutting-edge research on sustainability, flood protection, early warning systems, and disaster prevention.
- Disseminate research findings through research papers and policy analyses to inform and support local and regional governments.



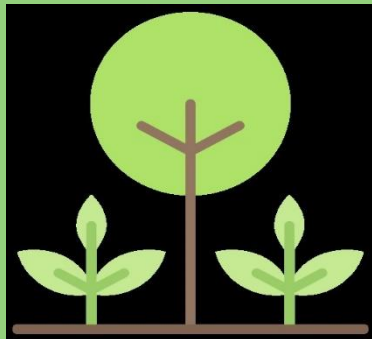
Promoting Climate Change Awareness:

- Collaborate with organizations to increase public awareness of climate change's impact on water resources and the environment.
- Advocate for biodiversity conservation and the creation of environmentally friendly spaces on campus.



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STRATEGIES AND ACTIONS:



Biodiversity and Green Spaces:

- Expand green areas on campus and establish sustainable landscaping practices.
- Advocate for the preservation of indigenous flora and fauna through habitat restoration and conservation initiatives.



Dissemination of Knowledge:

- Publish research papers, policy analyses, and educational materials to share knowledge on climate change and sustainability with a broader audience.
- Organize workshops, seminars, and exhibitions to disseminate research findings and engage stakeholders.



Enhanced Climate Education:

- Continuously update and expand curricula to incorporate the latest developments in climate science, policy, and adaptation strategies.
- Offer specialized training programs and workshops to equip students and professionals with the necessary skills to address climate change challenges effectively.



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Sustainable Programs Development:

- Implement initiatives to reduce energy consumption, promote renewable energy sources, minimize waste generation, and enhance water conservation efforts across campus.
- Serve as a model for other institutions by integrating sustainability principles into daily operations.



Public Awareness Campaigns:

- Organize public lectures, outreach campaigns, and community engagement events to raise awareness about climate change, sustainability, and environmental issues.
- Foster a culture of environmental stewardship and responsibility among students, faculty, staff, and the broader community.



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Monitoring and Evaluation:

Regularly monitor progress towards GHG emissions reduction targets, evaluate the effectiveness of education programs and initiatives, track research outputs and impacts, and assess the implementation of sustainable practices across campus. Adjust strategies and actions as needed to ensure alignment with the overarching goals and objectives of the Climate Action Plan.

By implementing this comprehensive Climate Action Plan, BSU aims to play a significant role in addressing climate change, fostering sustainability, and promoting environmental education, contributing to a more resilient and sustainable future for generations to come.





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Key Initiatives

Baku State University (BSU) is embarking on a journey of minimizing its impact on the environment

BSU is committed to achieving the ambitious target of Carbon Neutrality by 2030. Our first-ever Climate Action Plan (CAP) details BSU's Greenhouse Gas Emissions (GHG) and



establishes the framework for achieving this overarching vision. In this document, we provide our plans for achieving BSU's goals, and discuss BSU's GHG inventory.

Here are some key messages of this Climate Action Plan:

We're Becoming More Efficient

The majority of BSU's emissions come from buildings. This is one of the main reasons that we're focused on reducing building energy use and chilled water consumption. BSU has committed to identifying, planning, prioritizing, and implementing efficiency projects across campus that will enhance our campus buildings' operations, minimize energy and water use, and improve occupants' health and performance on campus.

We're Aligned

In the run-up to the Paris Agreement, Azerbaijan submitted its Nationally Defined Contributions (NDC) and as a contribution to global climate change prevention initiatives committed to achieving a **35 percent reduction in the GHG level by 2030 compared to the 1990 base year**. This entails significant investments in renewable energy and makes



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it one of the first countries in the region to launch a concrete initiative to achieve that climate commitment.

BSU is aligned with this strategic initiative and is actively engaged in exploring opportunities concerning enhanced building energy efficiency and the adoption of renewable energy sources. BSU has recently initiated a comprehensive audit process aimed at assessing the feasibility of achieving carbon neutrality for its campus. This audit entails a meticulous evaluation of the economic viability, regulatory compliance, and operational feasibility of these prospects, while concurrently addressing the three pillars of sustainability: economic, social, and environmental considerations.

We're Leading the Way

In alignment with BSU's broader vision, BSU aims to become a leading institution in sustainability in the region through actions aimed at achieving the Carbon Neutrality Goal.



Inventory Notes and Limitations

- BSU has developed its GHG inventory in alignment with BSU's methodology to ensure that the results are consistent and comparable.
- Emissions were calculated by multiplying BSU's usage by industry-established emissions factors.
- BSU measures emissions for this inventory in "metric tons of carbon dioxide equivalent" (MTCO₂e). This measurement accounts for the global warming potential of non-carbon dioxide emissions in addition to carbon dioxide itself.
- For accounting purposes and in alignment with BSU, BSU considers the fleet from the two contracted vendors as a Scope 1 emission because the vehicles are solely used for transporting BSU community members despite their operation by a third party.



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Greenhouse Gas Inventory



What we measure and how we track improvements in alignment with BSU and for BSU's 2030 carbon neutrality goal, BSU has developed a GHG inventory according to standard methodologies developed by the GHG Protocol Initiative to track progress. In line with our dedication to broader emissions reduction, our plan harmonizes with and follows a progressively cleaner, zero-

emission.

Emissions Sources

For GHG accounting purposes, BSU's most immediate emissions can be organized into two scopes:

Scope 1: emissions are direct emissions from BSU entities (e.g., on-site fuel combustion in BSU buildings and vehicles).

Scope 2: emissions are indirect emissions from purchased energy for BSU entities (e.g., grid electricity and purchased chilled water).

Emissions Reduction Strategies

BSU endeavors to achieve carbon neutrality by the year 2030. This includes BSU's emissions from activities across both the main campus and any additional sites. Scope 1 and 2 emissions include on-site power generation, fuel for vehicle use, purchased electricity, and chilled water.

Scope 1:

- **Transportation**
- **Backup generator**
- **Natural gas**

Scope 2:

- **Purchased electricity**
- **Chilled water for buildings**

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SUMMARY OF BSU'S GHG EMISSIONS REDUCTION GOALS

BSU will employ strategies to reduce energy in academic and office buildings through conservation and efficiency methods. Energy-saving strategies will include building retrofits, operational innovations through building management systems, advanced controls, active monitoring, and operator engagement.

BSU's green campus buildings will have significant health benefits. In fact, medical studies show that cognitive function doubles in offices with better indoor air quality. Therefore, our students, faculty, and staff perform better — academically and professionally — in a more comfortable indoor environment with cleaner air.

ULTIMATE GOAL

CARBON NEUTRALITY BY 2030

This goal pertains to the Baku State University campus.



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The Case for Carbon Neutrality

Carbon Neutrality would result in multiple tangible and intangible benefits and future-proof BSU's assets against future risks:

CHAMPIONING THE CLIMATE CHALLENGE

Universities are drivers of positive change and looked up to for leadership. BSU rises to the challenge and establishes itself as a regional and global climate trendsetter.



ANTICIPATING FUTURE TRENDS AND REGULATIONS

Moving forward, market and regulatory changes can present pressures and risks to BSU. Stringent climate regulations include carbon tax, higher or time-of-use tariffs, and other forms that would increase costs in the long run.

IMPROVING THE QUALITY OF LIFE FOR CAMPUS USERS

Optimization, upgrade, and maintenance of assets like Air Handling Units and lighting can lead to improved cognitive function and well-being of campus users.

MEETING STAKEHOLDER EXPECTATIONS

BSU community is evaluating the university's environmental and social sustainability engagement. A climate action plan communicates the University's commitment to these issues and helps attract climate-conscious talent.

EXTENDING THE LIFE OF BSU ASSETS

Prolonging asset life through better maintenance and asset management. Thereby improving environmental performance and optimizing the asset lifecycle costs.

OPERATIONAL SAVINGS

With electricity tariffs likely to rise, there are strong incentives to reduce energy dependence on the grid and other sources. Energy efficiency, renewables, and other measures can present significant operational savings, especially given future uncertainty.



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Sustainable Development Goals 2030

With the goal to preserve and enhance Baku's natural heritage while maximizing resource efficiency and improving everyone's quality of life, Baku State University (BSU) acknowledges the importance of sustainability. The university aligns its efforts with Sustainable Development Goals 2030, ensuring integration of the three pillars of sustainability: Environmental, Economic, and Social vision.

BSU focuses on five priority areas outlined in Baku's Environment Vision 2030:

1. Climate Change
2. Clean air and noise pollution
3. Water resources
4. Biodiversity, habitats, and cultural heritage
5. Waste management



By aligning with these priority areas, BSU aims to contribute to the broader sustainability goals of Baku. The university's current goals for greenhouse gas reduction plans are in line with Sustainable Development Goals 2030, with targets and initiatives designed to address climate change, promote environmental conservation, and enhance the well-being of the community.

Through research, education, and community engagement, BSU plays a vital role in advancing sustainability initiatives and fostering a culture of environmental responsibility within Baku and beyond. By working towards the objectives outlined in Sustainable Development Goals 2030, BSU demonstrates its commitment to creating a more sustainable and resilient future for all.



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NET ZERO 2050



In November 2021, during the 26th UN Climate Change Conference of the Parties (COP26) held in Glasgow, United Kingdom, Azerbaijan renewed its voluntary obligations by **reducing the amount of greenhouse gas emissions by 40% by 2050** and declaring the liberated territories a “net zero emission” zone.

The Net Zero initiative leads Azerbaijan to achieve net-zero emissions by 2050, marking a significant milestone as one of the first nations in the region to pursue such an ambitious goal. This initiative aligns with global

efforts outlined in the Paris Agreement, which seeks to limit the rise in global temperature to 1.5°C compared to pre-industrial levels. By committing to Net Zero by 2050, Azerbaijan demonstrates its dedication to reducing greenhouse gas emissions and combating climate change.

Key sectors, including energy, play a crucial role in Azerbaijan's efforts to address climate change. The country has prioritized the energy sector, investing in clean energy projects both domestically and internationally for over 15 years. These investments contribute to the transition towards renewable energy sources and help to reduce reliance on fossil fuels, thereby mitigating carbon emissions.

As Azerbaijan continues to implement new measures to reduce emissions, it remains committed to ensuring economic growth and sustainability. By embracing innovative solutions and fostering collaboration between government, industry, and civil society, Azerbaijan strives to create a greener, more resilient future for generations to come.



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COP29 in Baku

The 29th session of the Conference of the Parties (COP) to the UN Framework Convention on Climate Change (UNFCCC) will be hosted by Azerbaijan in Baku. With commitments and partnerships between many nations, progress towards sustainable development and climate action plans will be made. Azerbaijan particularly places importance on inclusivity, with developed and developing countries, public and private sectors, and youth approaching the issue of climate change in unity.

In preparation for COP29, Baku State University (BSU) has taken proactive steps to align its efforts with national and global climate initiatives:

UNIVERSITIES CLIMATE NETWORK

BSU is actively involved in the Universities Climate Network (UCN), a platform aimed at encouraging youth engagement in climate action. Chaired by BSU, the UCN comprises more than 20 universities and higher education institutions in Azerbaijan. Through UCN, BSU collaborates with other universities to share knowledge, best practices, and innovative solutions for climate action, amplifying the impact of collective efforts towards a sustainable future.

ENVIRONMENTAL VISION

BSU's commitment to sustainability aligns with Azerbaijan's environmental vision, which aims to preserve and enhance the country's natural heritage while maximizing resource efficiency and improving quality of life. By integrating the principles of environmental, economic, and social sustainability, BSU contributes to national efforts in areas such as climate change mitigation, clean air and noise pollution reduction, water resource management, biodiversity conservation, and waste management.



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GHG REDUCTION PLANS

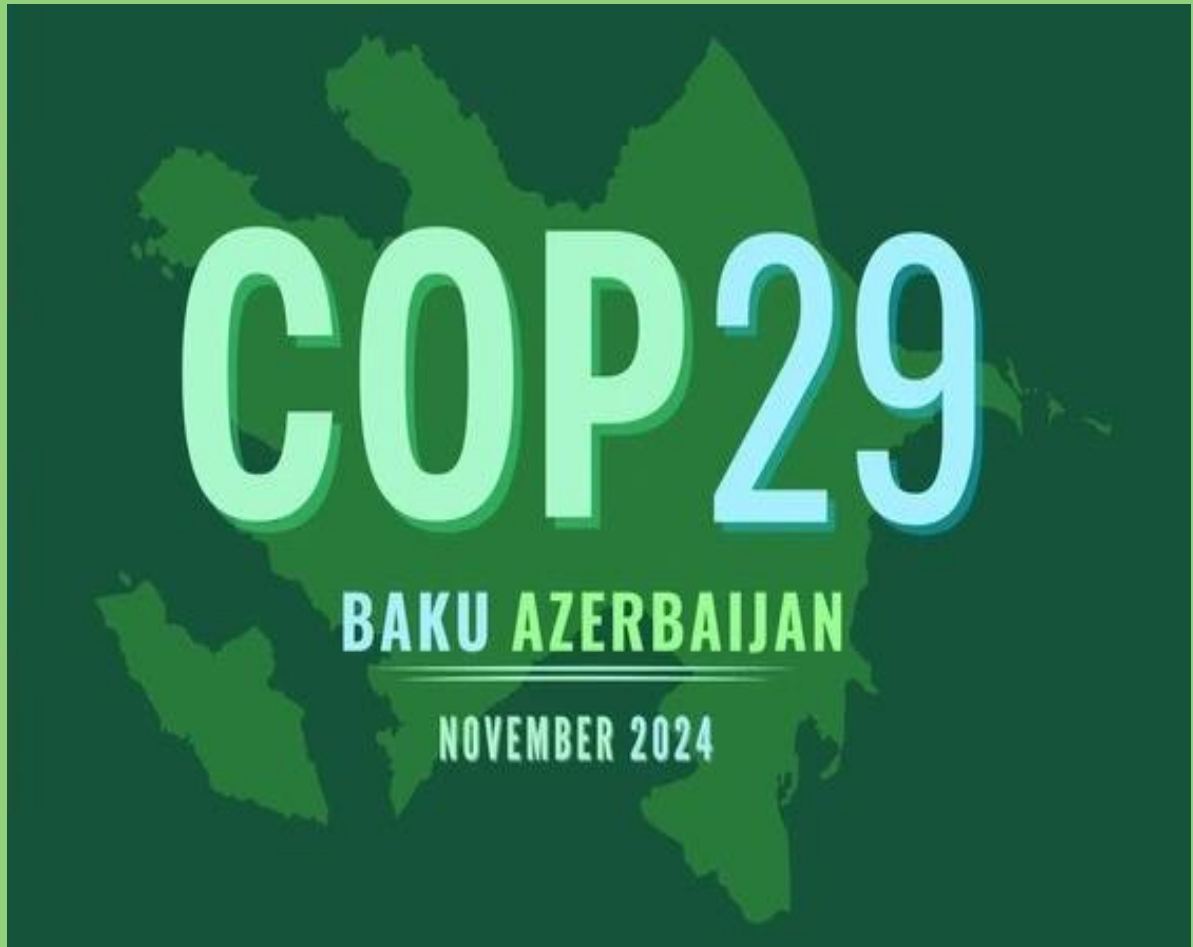
BSU is dedicated to reducing greenhouse gas emissions in alignment with national and international goals. As part of its climate action plan, BSU implements strategies to minimize its environmental impact, optimize energy usage, and promote sustainability across its campus and operations. These efforts support Azerbaijan's commitment to achieving net-zero emissions by 2050 and contribute to the global fight against climate change.

Through active participation in COP29 and continued collaboration with national and international partners, BSU demonstrates its commitment to addressing the climate crisis and supporting the goals of sustainable development.

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Be a Part of The Journey

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1. Reduce your Plastic Footprint

Example: Grab your reusable from the campus and your lunch boxes from dining halls!



2. Go Paperless

Example: Avoid print-outs for classes and in-person meetings as much as possible.



3. Recycle

Example: Make sure to recycle, and recycle properly, consulting bin signage.



4. Power Down

Example: Switch off lights and power down electronics when they are not in use.



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5. Move Around

- **Example:** Explore BSU`s outdoor spaces and consider taking the stairs if you can to avoid using the elevator. Find out more wellness best practices.



6. Minimize Food Waste

Example: When at the store, buy only what you need. When eating at the dining halls, ask for smaller portions to prevent plate waste.

7. Make difference

Example: Inform your non-environmentally aware friends about the dangers of climate change and the simple behaviours they can adopt in their regular lifestyle to help make a difference (like eating less meat, cycling/walking to lectures rather than getting the bus, etc).



Be a part of the change.

Be a part of the transformation.

Be a part of the journey.



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What is Carbon Neutrality?

Carbon neutrality refers to achieving a balance between the amount of carbon emissions produced and the amount removed from the atmosphere. Net zero emissions, on the other hand, requires reducing greenhouse gas emissions to the point where any remaining emissions are offset by carbon removal technologies or other means. In other words, carbon neutrality allows for some emissions to remain as long as they are balanced by removals, while net zero requires complete elimination of emissions or their offsetting.

BSU Climate Action Plan aims to reduce the University's scope 1 and 2 emissions to achieve carbon neutrality or net zero emissions.



Infrastructure

A sustainable future begins with the groundwork: the infrastructure that sustains our dynamic campus community. Embracing innovative and environmentally conscious solutions within our buildings, energy systems, and transportation networks is crucial for diminishing our environmental footprint and nurturing a flourishing, resilient Baku State University (BSU) for future generations. Moreover, safeguarding existing assets, such as BSU's campus woodlands, will guarantee that the University can capitalize on past and present achievements while preserving the distinctive culture and natural environment of its campuses.



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Future Goals for Baku State University (BSU) in Addressing Climate Change and Sustainability:



1. **Biodiversity and Green Spaces:** BSU should continue advocating for biodiversity conservation and the creation of environmentally friendly spaces on its campus. This can include initiatives to expand green areas, establish more sustainable landscaping practices, and promote the preservation of indigenous flora and fauna.
2. **Dissemination of Knowledge:** BSU should focus on disseminating its research findings and knowledge on climate change, sustainability, and related topics to a broader audience. This can involve publishing research papers, policy analyses, and educational materials accessible to policymakers, professionals, and the public.
3. **Enhanced Climate Education:** BSU can further enhance its climate change education efforts by continuously updating and expanding its curricula to

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- incorporate the latest developments and best practices in climate science, policy, adaptation, and mitigation strategies. This includes offering specialized training programs, workshops, and seminars to equip students and professionals with the necessary skills and knowledge to address climate change challenges effectively.
4. **Sustainable Programs Development:** BSU should continue developing and implementing sustainable programs and initiatives across its campus operations. This can involve initiatives to reduce energy consumption, promote renewable energy sources, minimize waste generation, and enhance water conservation efforts. By integrating sustainability principles into its daily operations, BSU can serve as a model for other institutions and contribute to broader sustainability goals.
 5. **Public Awareness Campaigns:** BSU should continue its efforts to raise public awareness about climate change, sustainability, and environmental issues through targeted outreach campaigns and initiatives. This can involve organizing public lectures, workshops, exhibitions, and community engagement events to engage a diverse audience and foster a culture of environmental stewardship and responsibility.

By pursuing these future goals, BSU can continue to play a significant role in climate action, sustainability, and environmental education both locally and on the global stage, contributing to a more resilient and sustainable future for generations to come.

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Short-Term (By 2025):

- **Objective 1:** Develop and implement a climate research centre by the year 2025.
- **Objective 2:** Organize and convene the inaugural global conference on climate action, aiming to attract delegates from a minimum of five nations, to be accomplished by the year 2025.
- **Objective 3:** Encourage behavior changes among faculty, staff, and students to reduce energy consumption.
- **Objective 4:** Optimize space utilization and encourage the use of laptops over desktop computers.
- **Objective 5:** Participate in energy efficiency programs

Mid-Term (By 2027):

- **Objective 1:** Seek financing opportunities such as energy savings allocation and partnerships with state funding sources.
- **Objective 2:** Establish a Sustainability Office and develop a comprehensive communications plan targeting various stakeholders.
- **Objective 3:** Analyze Scope 3 emissions and prioritize resilience measures to adapt to changing climate conditions.
- **Objective 4:** Replace gasoline and diesel vehicles with EVs.
- **Objective 5:** Incorporate new technologies for energy efficiency enhancements.

Long-Term (By 2030):

- **Objective 1:** To attain a 30% decrease in greenhouse gas emissions relative to the baseline by the year 2030.
- **Objective 2:** Achieve active membership in a minimum of three international climate accords or initiatives by the year 2030, thereby gaining recognition as a prominent participant
- **Objective 3:** Recapture waste heat for heating and cooling purposes.
- **Objective 4:** Deploy ground-source or water-source heat pumps in new construction.

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GLOSSARY

This glossary serves as a reference guide for key terms and concepts found in the Climate Action Plan. It provides clear and concise definitions to ensure readers have a comprehensive understanding of the strategies, technologies, and policies involved in the plan. The glossary aims to foster a shared vocabulary and facilitate effective communication among stakeholders working towards a sustainable future.

Biodiversity: The variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.

Carbon Dioxide: A colorless, odorless gas that is present in the atmosphere and is formed when any fuel containing carbon is burned. It is breathed out of an animal's lungs during respiration, is produced by the decay of organic matter, and is used by plants in photosynthesis.

Carbon Footprint: The total amount of greenhouse gas emissions directly and indirectly associated with an organization, individual, or activity

Carbon Neutrality: Achieving a net-zero balance of greenhouse gas emissions through a combination of emission reductions and offsetting measures, such as carbon sequestration or renewable energy investments

Climate Change: A long-term shift in global or regional climate patterns, often attributed to an increase in atmospheric greenhouse gas concentrations produced by human activities

General Climate Action and Sustainability Cap A strategic document outlining the policies, goals, and actions Indiana University will undertake to mitigate its greenhouse gas emissions and adapt to the impacts of climate change



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(Climate Action Plan):

GHG (Greenhouse Gas):

Gases that trap heat in the Earth's atmosphere, contributing to climate change. Examples include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O)

Scope 1 emissions:

Direct greenhouse gas emissions that come from sources owned or controlled by an organization, such as the combustion of fossil fuels in vehicles, equipment, and facilities

Scope 2 emissions:

Indirect greenhouse gas emissions that result from the generation of purchased electricity, heat, or steam used by an organization in its owned or controlled sources. These emissions are produced of-site by the entity that generates the energy but are attributed to the organization that consumes the energy

Scope 3 emissions:

Other indirect greenhouse gas emissions that occur in an organization's value chain, including emissions from business travel, waste disposal, transportation and distribution, and the use of purchased goods and services. Scope 3 emissions are often the most challenging to quantify and manage, as they involve activities not directly controlled by the organization

Sustainability

The ability to be maintained at a certain rate or level. the ability to be maintained at a certain rate or level.

Sustainable Development Goals

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity.