



The Hashemite University
Sustainability/Climate Action Policy
2022-2026



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Introduction:

The Royal Decree to establish the Hashemite University was issued on 19 June 1991. Teaching at the university started on 16 September 1995. The total area of the university's campus is 8519 acres. The Hashemite University, often abbreviated HU, is one of the Jordanian state-run universities. It was established in 1995. The University is located in the vicinity of the city of Zarqa. As regards to the study systems, it applies the credit hour system. Each college has its own number of credit hours. It offers an international admission program, which allows non-Jordanian students to enroll at the university. The university comprises 19 colleges (faculties) and institutes. It offers (52) specialties at undergraduate level and (35) specialties at postgraduate level (doctorate, master, higher diploma, in addition to a number of professional diploma programs). Our institution has developed an environmental and energy management strategy to ensure an energy-efficient campus. Through this strategic approach, we continuously optimize our operations, reduce energy consumption, and embrace sustainability at the core of our academic pursuits.

At The Hashemite University, we firmly believe that sustainability is the cornerstone of our institution's growth and development. As a leading academic institution, we acknowledge our responsibility to address the pressing global challenges posed by climate change. We are committed to promoting sustainability, reducing our carbon footprint, and fostering a culture of environmental stewardship among our faculty, staff, and students. This Sustainability/Climate Action Policy outlines our strategic approach to combat climate change, conserve resources, and create a more resilient and sustainable campus.





A Vision for a Greener Tomorrow:

At Hashemite University, we envision a smart and green campus that exemplifies sustainability in all facets of its operations. Our dynamic approach to managing all sources of power on the grid enables seamless integration of renewable energy resources, further solidifying our stance as a university focused on innovation and environmental responsibility.

Sustainability/Climate Action Policy: Climate belief and Purpose

As a responsible and forward-thinking institution, at Hashemite University, one of our fundamental core beliefs is centered around climate action. We firmly acknowledge that climate change poses a systemic and urgent global challenge, necessitating a just transition towards achieving net zero carbon emissions. Embracing this belief, we are committed to embedding sustainability principles and practices throughout our learning and teaching, research, and operational activities. Through collective action, we aim to drive positive change and contribute significantly to building a more sustainable and resilient campus. Our dedication to this cause reflects our unwavering commitment to the well-being of our university community and the wider world.

At Hashemite University, our Climate Action Policy stands as a testament to our unwavering commitment towards advancing sustainability in every aspect of our institution. With a steadfast dedication to excellence, we strive to become a leading model for sustainability, integrating principles and practices that promote environmental responsibility across our campus. This encompasses not only our academic pursuits in learning, teaching, and research but also extends to our day-to-day operational activities.

As we forge ahead on our sustainability journey, this policy encompasses all members of our university community, including staff, students, contractors, service providers, customers, and visitors. Whether on campus or engaged in any university-related activities, we collectively embrace the responsibility of driving positive change and promoting sustainability. By adhering to this policy, we envision a resilient and sustainable future that aligns with our core values and upholds the principles we cherish at Hashemite University.



Sustainability/Climate Policy: Principles and Values

As an integral part of the Climate Policy at Hashemite University, we firmly adhere to the following core principles and values that underscore our commitment to sustainability:

- ✓ Engaging the University in Climate Action: Our policy emphasizes active involvement and collaboration across the university community to drive climate action initiatives and foster a culture of sustainability.
- ✓ Sustaining our Commitment to Effective Learning and Research: We recognize the pivotal role of education and research in addressing climate challenges. Our policy ensures the integration of sustainability principles into academic curricula and promotes research efforts dedicated to finding innovative solutions.
- ✓ Prioritizing Student Well-being and Empowerment: We strive to create a sustainable campus environment that nurtures their growth and inspires them to become responsible global citizens.
- ✓ Empowering and Valuing our Staff Members: Our dedicated staff members play a vital role in driving climate action. Through professional development opportunities and support, we encourage their active participation and contribution to our sustainability goals.
- ✓ Embracing a Global Perspective in Climate Initiatives: We recognize the interconnected nature of climate challenges and embrace a global perspective in our efforts. By collaborating with international partners, we seek to amplify our impact and address climate issues on a broader scale.
- ✓ Ensuring Quality and Accountability: Quality and effectiveness are paramount in our climate policy. We commit to upholding the highest standards in our sustainability initiatives and regularly assess and evaluate our progress.

These core principles and values drive our Climate Policy at Hashemite University, guiding us towards a sustainable future and positioning our institution as a leader in climate action and environmental stewardship. Through collective commitment and action, we strive to create a greener, more resilient campus community and contribute to the global efforts in combatting climate change.



Categories of sustainability

The Climate Policy at Hashemite University revolves around six essential categories of sustainability. These categories form the bedrock of our commitment to fostering a climate-resilient and sustainable campus. Each category represents a key aspect that guides our climate action efforts, ensuring a comprehensive approach to address the challenges posed by climate change. Emphasizing these pillars, we aim to seamlessly integrate sustainability principles throughout our institution's academics, operations, community engagement, and more. By proactively implementing strategies aligned with each category, we aspire to make a significant and enduring impact on our university's climate resilience and contribute to global climate change mitigation and adaptation efforts

- ✓ Energy Management and Carbon Emission.
- ✓ Water management and sustainable solutions.
- ✓ Green buildings.
- ✓ Student Experience.
- ✓ Research and Education for Sustainability.
- ✓ Risk management.

Energy Management and Carbon Emission

Towards a net zero future

At Hashemite University, we are fully committed to move towards a future characterized by net zero emissions. To underscore this commitment, we have set forth climate-related objectives that demonstrate our dedication to environmental responsibility. Specifically, we aim to ensure that 100% of our delegated portfolios achieve net zero greenhouse gas emissions by the year 2040. Additionally, we are determined to achieve a significant 50% reduction in emissions by the year 2025. Through these ambitious targets, we actively embrace our role in addressing climate change and strive to make a positive impact on our campus and beyond. By prioritizing sustainability and taking collective action, we are paving the way towards a greener, more sustainable future for the Hashemite University community and the broader global stage.



Towards 100% energy independence

As an integral part of the Climate Policy at Hashemite University, our strategic initiatives have been carefully designed to pave the path towards 100% energy independence. To achieve this ambitious goal, we have implemented cutting-edge photovoltaic (PV) systems, efficiently harnessing solar energy to power significant portions of our campus. By incorporating these sustainable practices into our Climate Policy, we demonstrate our commitment to reducing our carbon footprint and promoting a greener, more environmentally conscious university. Through collective efforts, we are forging a resilient and sustainable future for our campus community and contributing to global climate action. Additionally, we have made the following climate and energy commitments:

- ✓ 100% of electricity energy committed to be from renewable energy resources net by 2022.
- ✓ Improving the energy efficiency of existing buildings, minimizing energy wastage and optimizing consumption by 2023.
- ✓ Increasing the energy efficacy in the campus by having Smart Energy Meter and Management System (AMI). Smart meter system based IoT technology for all the HU building is our new project. In 2021, we issued the project tender and started the implantation of it which will be completed by 2023. This project aims to remotely monitor and control building energy consumption and improve energy efficiency from heating and air conditioning, to lighting and security systems.
- ✓ Improving the renewable energy generation by 2024: SCADA system for the PV projects in HU: The systems shall include monitoring and control systems to measures and records systems performance parameters. In 2021, we issued a new tender to upgrade the current PV project and developed a SCADA system. In the project, SCADA system will perform all data acquisition, monitoring and control functions of the PV system. In order to improve the energy efficiency, all necessary information concerning process behavior, instrument and integrity controller, sequential control and alarm function shall be immediately available at the operation consoles.



Water Management and sustainable solution.

Jordan is one of the most water stressed countries in the world and facing significant economic development challenges due to limited water resources. The Ministry of Water and Irrigation estimated water deficit by around 18% of the total water demand in Jordan. Therefore, the World Health Organization (WHO) reported that the situation in Jordan is very critical, where it has been estimated that there are around 1.4 million Syrian refugees in Jordan that has increased the water demand by about 20%. The Hashemite University is facing water shortages due to its geographic location with the arid lands in Jordan. Within the context of the Climate Policy at Hashemite University, specific challenges arise due to the campus's location in an area with annual rainfall of less than 160 mm. This highlights the importance of adopting water-efficient practices to reduce consumption. Therefore, we have made the following climate and Sustainable commitments

- ✓ Water saving: In light of these challenges, the environmental sustainability policy at Hashemite University places emphasis on curtailing fresh water consumption and irrigation demands. By implementing water use efficiency measures and water saving awareness the university seeks to achieve a commendable 20% reduction by 2020. This proactive approach aligns with our climate policy's overarching objective of promoting responsible water management, enhancing sustainability, and contributing to a climate-resilient campus.
- ✓ Upgrading the water infrastructure to minimize the water losses 25% by 2030.
- ✓ Upgrading the solar-powered water desalination plant which established June 2019 by the Hashemite University, to produces 80 m³ of water per hour by 2030.
- ✓ All new building must include water harvesting systems.

Green buildings.

One of the main commitments at the Hashemite University is that all new buildings must be smart and green. The Climate Policy at Hashemite University places a strong emphasis on energy/water management and sustainability, with a clear focus on enhancing energy/water efficiency and transitioning towards a sustainable future. This is achieved through the adoption of energy and water-saving practices, along with innovative building techniques and renewable energy sources. Notably, the university has made significant strides in the development of new smart and green buildings, encompassing an expansive area of more than 70,000 m². These cutting-edge buildings



are equipped with smart technologies, utilizing sensors to remotely monitor and control various systems, including HVAC, lighting, and security. By being at the forefront of Smart Building applications, Hashemite University provides integrated solutions that enhance building management, ultimately improving efficiency, sustainability, and comfort. This ambitious project, completed in 2020/2021, reflects the university's dedication to staying at the forefront of technological advancements in pursuit of sustainability goals. In line with the objective of achieving 100% energy independence, Hashemite University has successfully implemented photovoltaic (PV) systems in each of the newly constructed expansion projects. These renewable energy installations play a pivotal role in reducing the university's reliance on conventional energy sources and contribute significantly to our commitment to a sustainable and climate-resilient campus. The new green building included new water harvesting systems. By embracing these initiatives and technologies, we are paving the way towards a greener and more energy and water-efficient future for Hashemite University.

The smart and green buildings project achieves long-term economic and environmental sustainability for the HU. The energy saving practices in this project are divided into two main categories: Smart building design and optimal energy techniques. Firstly, the design of the new building focused on harnessing the natural resources to create comfortable conditions for the building users, as described in Table 1. Secondly, optimal energy saving techniques for the electromechanical system are used in the new buildings to create comfortable conditions for building users and reduce the energy and water needs, as described in Table 2.

Table 1: The main smart building design techniques used throughout the project.

Technique	Description
Building envelope and materials	The building materials, thermal insulation, windows (types, size location and double glazing) and doors, were designed based on the international green construction guidelines. The design of the buildings to minimize the thermal loss and achieve sustainable buildings.
Building Orientation	The location and orientation of buildings to maximize the benefits of the sunlight and create high living conditions around the buildings.
Louvers and sun-breakers	The south-facing windows were fitted with extruding louvers. This is mainly to minimize the direct sunlight during summer days and maximize during winter days from entering the building.
Skylights	Skylights technique was used in the new buildings to reduce the need for electricity and lighting, by using natural skylight.
Shading	This technique aimed to create an acceptable outdoor thermally areas by building massing, photovoltaic solar canopies and carparks and trees.



Table 2: The main smart and optimal techniques for green campus.

Technique	Description
Lighting	In the new buildings, LED lights are used. In general, the LED light is more comfortable for building users compared to other fluorescent lights with 25% energy reduction.
Heating, ventilation and air conditioning (HVAC)	A highly energy efficient HVAC system based on hybrid central and variable refrigerant flow (VRF) systems is used to decrease the energy losses, gas emissions and energy costs.
Building-Integrated Controllers	Control workstation and sensors employed to automatic control of lights and HVAC systems and to reduce the energy consumption and losses.

Student Experience

Within the context of the Climate Policy at Hashemite University, our paramount focus is to enhance the student experience by fostering a learning environment that emphasizes sustainability.

To achieve this goal, the following priority actions have been identified:

- ✓ All projects in the campus must have a direct positive capacity building and social impact.
- ✓ We are committed to empowering our students to become responsible and active participants in the local community, engaging in initiatives that promote sustainability and contribute positively to the environment.
- ✓ Volunteering and Community Engagement: We encourage students to actively participate in volunteering activities that align with our sustainability goals, fostering a spirit of community engagement and social responsibility.
- ✓ Through diverse opportunities, we promote student engagement in sustainability-related initiatives, enabling them to develop a comprehensive understanding and practical skills in this critical field.
- ✓ Active collaboration with student clubs and organizations fosters a strong network of sustainability advocates, amplifying our collective impact and driving meaningful change.
- ✓ Ensuring our campus is accessible and safe for individuals with disabilities or special needs reflects our commitment to inclusivity, ensuring everyone can actively participate in sustainability efforts.

Through the implementation of these priority actions, our Climate Policy reinforces Hashemite University's dedication to providing a transformative student experience that nurtures sustainability values and equips graduates with the skills and mindset needed to address pressing climate challenges and contribute positively to a more sustainable future.



Research and Education for Sustainability.

One of the main aims for the Hashemite University is to encourage and improve scientific research and projects to serve local community and industry and to elevate research quality and educational outcomes. As a key component of the Climate Policy at Hashemite University, our Research and Education for Sustainability is devoted to empowering staff and students with comprehensive knowledge and skills in sustainability while promoting cutting-edge research to inform our sustainable practices. The following priority actions guide our endeavors:

- ✓ The university appropriates 5% of its budget to scientific research in term of the sustainability goals
- ✓ Collaborating closely with faculties, we prioritize the inclusion of sustainability education within diverse academic curricula, ensuring that sustainability principles are seamlessly integrated across disciplines.
- ✓ We are committed to offering a range of teaching and learning opportunities that equip staff and students with essential sustainability skills, enabling them to contribute effectively to sustainability efforts within and beyond the university.
- ✓ Recognizing the importance of interdisciplinary cooperation, we encourage students to develop versatile skills that prepare them to work across disciplinary boundaries, fostering innovative and holistic solutions to sustainability challenges.
- ✓ Providing platforms for active involvement, we encourage students to participate in sustainability-focused activities, promoting a sense of responsibility and ownership in building a sustainable campus community.
- ✓ Leveraging social media, website, conferences, and seminars, we actively promote and share sustainability best practices, inspiring collective action and continuous improvement.
- ✓ Building a collaborative environment, we establish networking platforms that encourage interdisciplinary research, facilitating impactful collaborations on sustainability-focused projects.
- ✓ We actively engage and support undergraduate and postgraduate students in their sustainability research, nurturing a culture of research-driven inquiry and innovation.



Risk analysis and management.

At Hashemite University, we recognize climate change as a critical and systemic priority due to its potential impact on our institution's investments and overall resilience. To effectively manage these risks, we employ various sophisticated tools and strategies:

- Risk Management Tools: By utilizing location data, we assess our campus's exposure to various physical risks and perils arising from climate change. This analysis allows us to identify areas that may be more susceptible to climate-related hazards and develop appropriate mitigation measures.
- In line with our commitment to climate resilience and sustainability, we will implement the following measures:
 - ✓ Action Plans and Sub-strategies: We will develop comprehensive action plans and sub-strategies that complement our climate policy. These plans will outline specific, measurable, relevant, and time-bound actions to effectively integrate sustainability practices across the university.
 - ✓ Recognizing the urgency of addressing climate risks, we will prioritize key focus areas over the next five years. This prioritization ensures effective implementation of climate mitigation and adaptation measures.
 - ✓ The university will submit annual reports that showcase our achievements, progress on indicators, and relevant sustainability activities. This transparent reporting ensures accountability and promotes a culture of continuous improvement.

Through robust risk analysis and proactive risk management strategies, Hashemite University aims to foster a climate-resilient campus community and contribute to broader sustainability efforts in addressing climate change challenges.