The Hashemite University

Carbon Emissions report

2022-2023

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Introduction:

This Carbon Emissions Report presents an overview of the greenhouse gas (GHG) emissions generated by Hashemite University for the years 2022 and 2023. As a responsible and forward-thinking institution, we are committed to tracking, measuring, and mitigating our carbon footprint. This report provides a transparent account of our progress in reducing carbon emissions and advancing our sustainability goals.

Methodology:

Our carbon emissions calculations follow internationally recognized protocols and methodologies, including the Greenhouse Gas Protocol. Scope 1 and 2 emissions are considered in our assessment, encompassing direct and indirect emissions from owned or controlled sources and purchased energy consumption. The carbon intensity of energy sources is taken into account to ensure accurate emissions quantification.

Data Sources:

Data for this report is sourced from various departments and facilities within the university, including energy consumption records, travel data, and procurement activities.

Scope 1 and 2 estate-based emissions

As part of our ongoing commitment to sustainability and environmental accountability, Hashemite University diligently monitors and reports its carbon emissions. This yearly reporting for scope 1 and 2 estate-based emissions, we present data for the 2022 and 2023 in the following table:

	Scope 1 CO2 (tonnes)	Scope 2 CO2 (tonnes)	Total CO2 (tonnes)
2022	860	0	860
2023	810	0	810
CO2 reduction (tonnes)	50	0	50

Scope 1 emissions

The emissions derived from the consumption of heating oil for our heating units and the emissions resulting from business travel have been accurately calculated and assessed. By meticulously measuring these sources of emissions, we gain valuable insights into our carbon footprint and can implement targeted strategies to mitigate our impact on the environment. Through this rigorous approach to emissions calculation, we affirm our commitment to sustainability and take proactive steps to address our carbon footprint responsibly.

Scope 2 emissions

The Hashemite University has successfully achieved net zero carbon emission in 2022/2023 by having 100% renewable energy resources to cover the electricity energy needs at the campus. The PV systems at the campus reduced carbon footprint, by reducing its annual CO2 emissions, and reducing the need to import, transfer, refine, and burn of oil, annually.

Comparative Analysis and Reduction Strategies:

Comparing the data from 2022 and 2023, a 50 tonnes reduction in our overall carbon emissions. This achievement is a result of our proactive efforts to implement sustainable practices and energy efficiency measures across campus. Noteworthy strategies employed to reduce carbon emissions include:

- ✓ Energy Efficiency: Implementation of energy-saving initiatives, including building retrofits, lighting upgrades, and optimizing HVAC systems, to decrease energy consumption and associated emissions. 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 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
- ✓ Renewable Energy Adoption: Increased deployment of renewable energy sources (PV systems) to meet our energy needs sustainably and reduce dependency on fossil fuels. SCADA system for the PV projects in HU: The systems shall include monitoring and control systems to measures and records systems performance parameters. In 2022, 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.
- ✓ Sustainable Transportation Initiatives: Promotion of alternative transportation options, encouragement of public transport and electrical vehicles use, and incentivization of carpooling to reduce commuting-related emissions.
- ✓ Waste Management Enhancements: Enhanced waste recycling and composting programs to minimize landfill emissions and foster a circular economy approach.

- ✓ 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.
- ✓ Increasing the green areas at the campus by 10% every year.