



جامعة عجمان  
AJMAN UNIVERSITY

20  
23

# SDG 13 CLIMATE ACTION

13.4.1 Commitment to carbon neutral university



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# Introduction

As the global climate crisis intensifies, the urgency to reduce greenhouse gas emissions and transition to a low-carbon future has never been greater. Universities, as centers of knowledge and innovation, have a crucial role to play in driving this transition.

This report delves into the University's commitment to carbon neutrality and its progress towards achieving this goal. By examining the University's carbon neutrality target, the scope of its emissions reduction efforts, and the implementation strategies in place, we aim to assess its contribution to a more sustainable future.

To evaluate the University's performance, we will focus on the following key indicator:

- **Commitment to Carbon Neutral University (13.4.1):** This indicator assesses the University's target date for achieving carbon neutrality and the scope of its emissions reduction efforts, including direct emissions (Scope 1), indirect emissions from purchased energy (Scope 2), and other indirect emissions (Scope 3).

By analyzing this indicator, we can gain valuable insights into the University's leadership in climate action and its potential to inspire others to adopt sustainable practices.

# Message from our Cabinet Member

As we face the urgent challenge of climate change, our University is committed to taking bold and decisive action to reduce our carbon footprint.

By setting ambitious targets for carbon neutrality, we are demonstrating our leadership in sustainability and our commitment to a greener future. Achieving carbon neutrality for both Scope 1 and Scope 2 emissions is a significant milestone in our journey towards a sustainable campus. By implementing energy-efficient practices, reducing waste, and investing in solar power projects across campus, we are taking concrete steps to minimize our environmental impact. We believe that by setting a strong example, we can inspire our students, faculty, and staff to embrace sustainable practices and contribute to a more sustainable world.



**Ajman University  
is committed to  
become carbon  
neutral by 2030**

**PROF. MUSTAHSAN MIR  
EXECUTIVE DIRECTOR OF OIPE**

# 13.4.1 Commitment to carbon neutral university

## Ajman University's Climate & Sustainability Strategy 2022-2030

Ajman University is deeply committed to becoming a carbon-neutral institution. Our Climate & Sustainability Strategy 2022-2030 outlines a clear pathway to achieving this ambitious goal, aligning with the UAE's Green Agenda, Net Zero by 2050 Strategy, the National Climate Change Plan of the UAE 2017–2050, and the UN Sustainable Development Goals.

We have set a target to become carbon neutral by 2030, with a longer-term goal of reaching net zero emissions by 2050. This commitment is backed by our track record of achieving important sustainability milestones in recent years. Our dedicated team is driving forward a range of initiatives to reduce our greenhouse gas emissions across all scopes.

Scope 1 emissions from our own operations are being tackled through energy-efficient upgrades and a shift to renewable power. For Scope 2 emissions from purchased electricity, we are investing in on-site solar generation and procuring green tariffs. Scope 3 emissions from travel, procurement, and waste are being addressed through sustainable travel policies, supply chain engagement, and waste reduction initiatives.

Our progress towards carbon neutrality is being tracked and reported publicly in line with the Greenhouse Gas Protocol. We are committed to transparency and accountability in our climate action journey. By becoming a carbon-neutral university, we aim to make a significant contribution to national and global efforts to combat climate change.

Ajman University's commitment to carbon neutrality demonstrates its role as a leader in sustainable practices within the higher education sector.

The AU Climate and Sustainability Strategy 2022-2030 is a practical guide on how the University will deliver key climate commitments, such as reducing greenhouse gas emissions, supporting a carbon-neutral campus, reducing energy consumption, investing in energy optimization solutions and renewable energy, exploring new ways to decrease direct and indirect CO<sub>2</sub> emissions, minimizing the environmental impact rating of the University activities and processes, and creating awareness on taking action for climate change. The strategy considers how to achieve resilience to the impacts of climate change across University operations and supports a smooth and fair transition to a low and eventually zero carbon future.



This comprehensive strategy outlines a clear path for achieving our climate goals. Learn more about key initiatives like:

- Reducing greenhouse gas emissions
- Creating a carbon-neutral campus
- Lowering energy consumption
- Investing in energy-saving solutions and renewable energy
- Exploring innovative methods to minimize CO2 emissions
- Reducing the environmental impact of university operations
- Raising awareness about climate action

The strategy also addresses building resilience against climate change impacts and transitioning towards a low-carbon future.

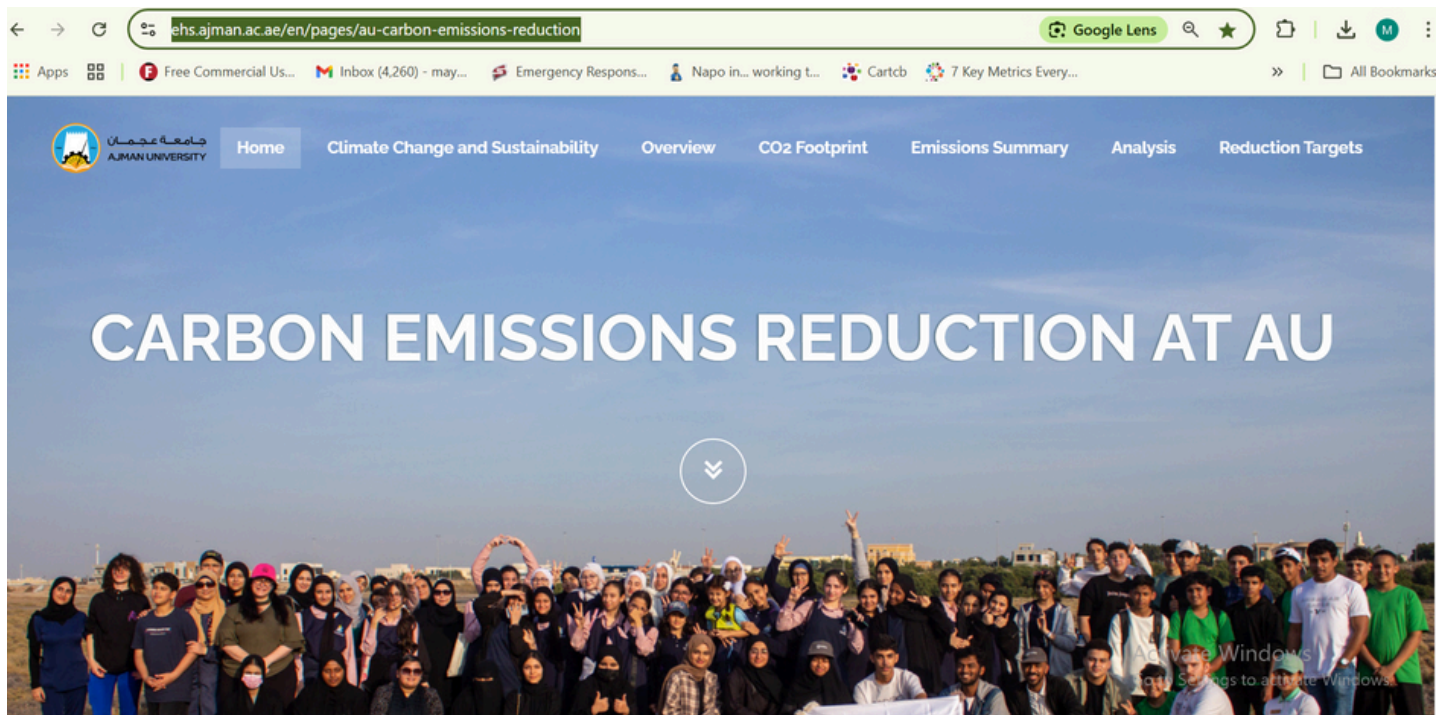


<https://sustainablecampus.ajman.ac.ae/en/>

[https://www.ajman.ac.ae/upload/files/ehs/AU\\_Climate\\_Sustainability\\_Strategy\\_Document\\_2022\\_2030.pdf](https://www.ajman.ac.ae/upload/files/ehs/AU_Climate_Sustainability_Strategy_Document_2022_2030.pdf)

<https://www.educationracetozero.org/current-signatories>

<https://ehs.ajman.ac.ae/en/pages/au-carbon-emissions-reduction>



## Ajman University's Strategic Commitment to Carbon Neutrality

Ajman University recognizes the critical role that higher education institutions must play in addressing the urgent threat of climate change. The constant release of greenhouse gases and the subsequent increases in global concentrations will cause significant climate changes with far-reaching impacts, including increased health risks, decreased biodiversity, and more frequent extreme weather events.

As a responsible and forward-looking institution, Ajman University is strategically committed to carbon neutrality. The AU Strategic Plan 2022-2027 has added the objective of carbon neutrality under the main goal of Institutional sustainability. This objective is cascaded as a Key Performance Indicator (KPI) for several offices at Ajman University.

Our Sustainability Manager leads the Carbon Neutrality/ Campus Decarbonization Pillar of the UAE Universities Climate Network, further demonstrating our commitment to collaborative climate action within the higher education sector. We believe that universities have a critical role to play in modeling sustainable practices, building awareness, and developing the solutions that will be needed to combat climate change.

The Intergovernmental Panel on Climate Change (IPCC) has concluded that the planet has already warmed by 1°C since the pre-industrial era, leading to rising sea levels and more extreme weather events. Climate change disproportionately affects vulnerable populations in developing countries and disadvantaged communities worldwide. To prevent the catastrophic consequences of more than 1.5°C warming, we must make significant changes to our behavior at all scales, reducing our reliance on fossil fuels, investing in renewable energy, and building resilience in our cities and infrastructure.

By becoming a carbon-neutral university, Ajman University is taking a leading role in contributing to national and global efforts to combat climate change. We are committed to tracking and reporting our progress transparently in line with the Greenhouse Gas Protocol, demonstrating our accountability in this critical area. Through our strategic commitment to carbon neutrality, we aim to reshape our future, ensure sustainability and resilience, and preserve our environment for generations to come.

<https://www.cop28.com/en/ucn-events>

**UNIVERSITIES CLIMATE NETWORK**

## Carbon Neutrality Pillar

### Objectives & Goals

- Assist universities in establishing CO<sub>2</sub> baseline emissions
- Enhance climate change knowledge and awareness through increased carbon literacy
- Facilitate participation in relevant climate action networks at national, regional, and international levels
- Share the best carbon reduction practices among universities
- Showcase the best projects, ideas, and innovations and highlight the overall progress of the pillar at COP29

**Campus Carbon Neutrality**

Ms. Julia Carlow

Ms. Maya Haddad



## MANGROVE



## PLANTING



## WASTE RE-USE



## CARBON OFFSET



## CLEAN UP



## CAMPAIGNS



## Calculation of Carbon Footprint By Using Greenhouse Gas Protocol (GHG PROTOCOL)

Ajman University is committed to tracking and reducing its greenhouse gas emissions in line with the Greenhouse Gas Protocol (GHG Protocol). The GHG Protocol is the most widely used international standard for accounting for greenhouse gas emissions. It provides a framework for organizations to quantify their emissions across three scopes: Scope 1 (direct emissions from owned or controlled sources), Scope 2 (indirect emissions from purchased electricity, heat, steam or cooling), and Scope 3 (all other indirect emissions, such as business travel, procurement, and waste). By using the GHG Protocol, Ajman University can accurately calculate its carbon footprint, identify areas for reduction, and track progress towards its goal of carbon neutrality. This transparent and rigorous approach to emissions accounting demonstrates the university's commitment to accountability and leadership in climate action.

After identifying all the activities and processes that generate GHG including CO<sub>2</sub> and its related gases from emission sources 1, 2, and 3, the carbon footprint of Ajman University has been calculated using 2020 as the base year.

Ajman University has applied the Greenhouse Gas Protocol (GHG PROTOCOL) to report emission sources. The GHG Protocol Corporate Accounting and Reporting Standard provides requirements and guidance for companies and other organizations preparing a GHG emissions inventory. The GHG Protocol is the internationally recognized standard for greenhouse gas accounting on the corporate level. It was developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). Gases that trap heat in the atmosphere are called greenhouse gases (GHG). Since these gases get trapped in the atmospheric layer instead of being released into space, they cause global warming.

The present Corporate Carbon Footprint discloses all emissions as CO<sub>2</sub> equivalents (CO<sub>2</sub>e) and includes six other greenhouse gases that are regulated by the Kyoto Protocol:

- METHANE (CH<sub>4</sub>)
- NITROUS OXIDE (N<sub>2</sub>O)
- SULFUR HEXAFLUORIDE (SF<sub>6</sub>)
- HYDROFLUOROCARBONS (HFCS)
- PERFLUOROCARBONS (PFCS)
- NITROGEN TRIFLUORIDE (NF<sub>3</sub>)

The United States Environmental Protection Agency (EPA) has defined GHG Emissions into three scopes: Scope 1 – direct, reporting company Scope 2 – indirect, upstream activities Scope 3 – indirect, upstream and downstream activities

## Ajman University Greenhouse Gas Inventory Report (2020-2023)

Ajman University (AU) is committed to environmental responsibility and achieving net-zero carbon emissions. This Greenhouse Gas (GHG) Inventory Report is a key outcome of the assessment phase within Axosomatic's Net-Zero Carbon Intelligence solutions framework. It quantifies AU's annual GHG emissions for the past three fiscal years: September 2020 – August 2021 (2020-2021), September 2021 – August 2022 (2021-2022), and September 2022 – August 2023 (2022-2023).

The data presented adheres to a declared boundary and scope, ensuring transparency and accurate representation of AU's operational emissions for the specified reporting periods.

### Report Significance:

This report serves several critical purposes:

- Establishes a robust framework for carbon accounting: Utilizing the GHG Protocol Standards, the report outlines a rigorous and accurate approach to carbon accounting and reporting for AU.
- Comprehensive Emissions Coverage: The report encompasses all of AU's GHG emissions, including those generated from upstream activities and employee commuting.
- Performance Evaluation: It provides a foundation for evaluating AU's performance concerning GHG emissions and fosters transparency.
- Resource Optimization: By quantifying emissions, the report facilitates data-driven strategies for optimizing resource use and operational efficiency.
- Knowledge Building and Alignment: The report fosters internal learning and awareness of AU's environmental impact, aligning with its strategic goals and serving as a best practice example for other entities.

Sustainability Benchmarking: Data from this report can be used to track progress towards AU's sustainability goals and inform future strategies for improvement.

### **GHG Inventory Report for Year (2020-2022):**

[https://ehs.ajman.ac.ae/upload/files/ehs/AU\\_GHG\\_Inventory\\_Report\\_-\\_Final\\_\(2020\\_-\\_2022\).pdf](https://ehs.ajman.ac.ae/upload/files/ehs/AU_GHG_Inventory_Report_-_Final_(2020_-_2022).pdf)

### **GHG Inventory Report for Year (2022-2023):**

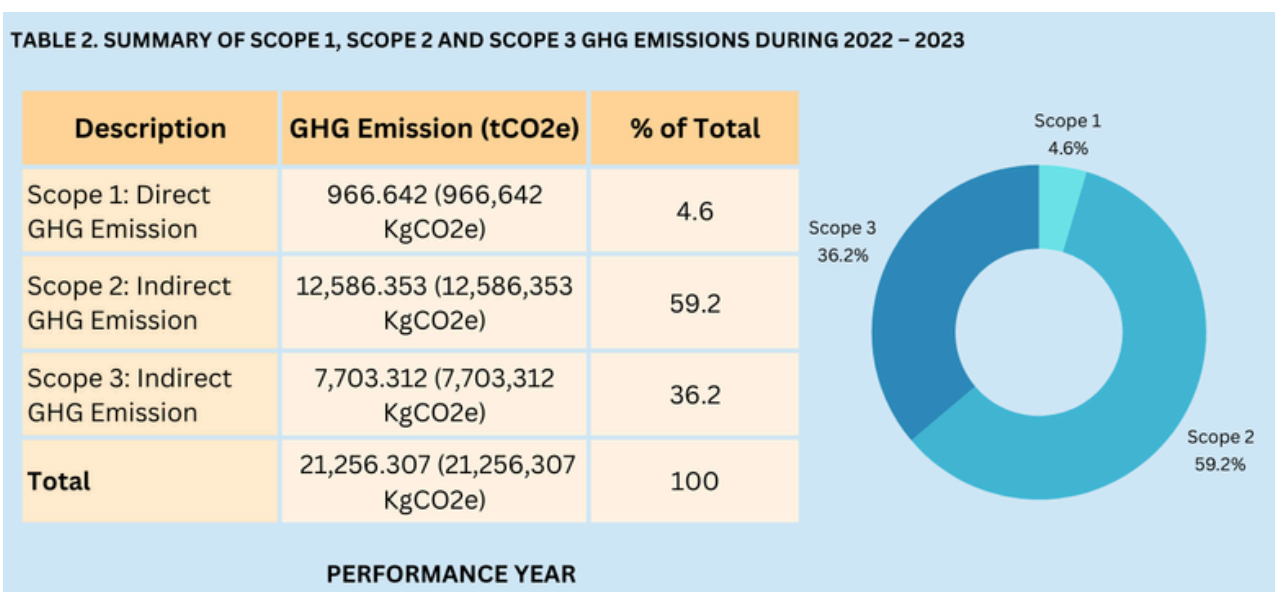
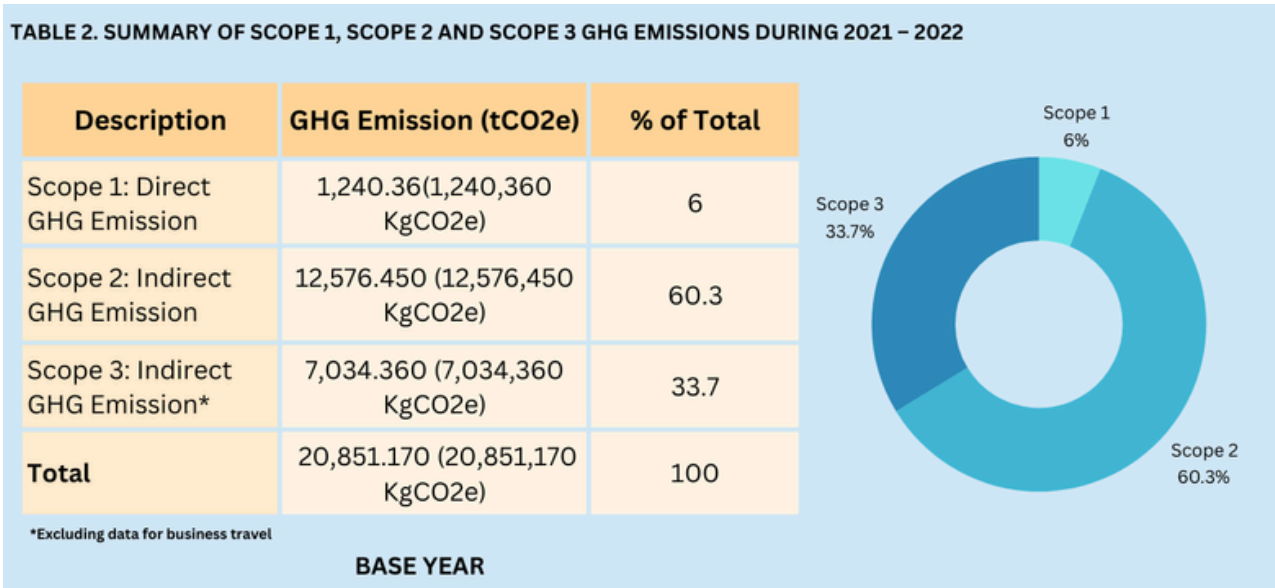
[https://ehs.ajman.ac.ae/upload/files/ehs/AU\\_GHG\\_Inventory\\_Report\\_-\\_Final\\_\(2022\\_-\\_2023\).pdf](https://ehs.ajman.ac.ae/upload/files/ehs/AU_GHG_Inventory_Report_-_Final_(2022_-_2023).pdf)

Scope Definition:

Aligned with the GHG Protocol Standard and World Resources Institute (WRI) definitions, emissions are categorized into three scopes: Scope 1, Scope 2, and Scope 3. The GHG Protocol represents the most recognized and meticulous approach to emissions accounting, widely adopted by public and private sectors.

Scope 1, Scope 2 and Scope 3 Summary

The following tables list, respectively, the summary of Scope 1, Scope 2 and Scope 3 GHG emissions attributed to Ajman University during the periods 2021 – 2022 and 2022 – 2023, expressed in tCO<sub>2</sub>e (Metric Ton of CO<sub>2</sub> equivalent).



## Summary Findings (Years: 2020-2021 and 2021-2022)

### Summary of Scope 1 Findings

Scope 1 direct GHG emissions attributed to Ajman University, occurred from the stationary combustion of LPG, and the mobile combustion of petrol and diesel-operated cars, buses, pickups, trucks, and mobile dental clinics owned by AU. Below is a summary of the findings

1. The GHG emissions from all sources, stationary and mobile, during the year 2020 – 2021 are lower than those during 2021 – 2022. This could be attributed to the fact that the period 2020-2021 was the lockdown period in the UAE. Teaching and administrative work were conducted online.
2. However, the GHG emissions from the consumption of LPG are the same in both periods. The reason is that the College of Dentistry, which consumes the LPG, was operational during the lockdown years.
3. The carbon emissions from the mobile combustion of diesel, in both years, are higher than the carbon emissions from the combustion of petrol. This may be attributed to the number of buses used for transportation.
4. The carbon emission from the consumption of LPG is the highest, compared to the mobile of combustion of petrol and diesel.

### Summary of Scope 2 Findings

Scope 2 indirect GHG emissions attributed to Ajman University, occurred from the consumption of electricity and water.

The following table summarizes the electricity and water consumptions at AU during the periods of 2020 – 2021 and 2021 – 2022, with the associated carbon emission expressed in metric tons of CO2 equivalent.



## Summary of Scope 3 Findings

Scope 3 indirect GHG emissions attributed to Ajman University, occurred from the consumptions of upstream activities listed in the following table:

**TABLE 3 .LIST OF UPSTREAM ACTIVITIES 2021 – 2022**

Activity	Emission Sources	Status
Purchased goods and services	Food & Beverages, Printing Papers, Toilet Papers, Tissue Papers, Water and Cloud Services	Included
Capital goods	IT Equipment, Office Furniture, Medical Equipment	Included
Fuel -and energy-related activities	Transmission and Distribution (T&D) losses of purchased electricity	Included
Upstream T&D	T&D of purchased good and capital goods	Included
Waste generated in operations	Wastewater, General Waste, Medical Waste, Food Waste, Paper Waste	Included
Business travel	Travel and accommodation of employees/ contactors	Not Included
Employee commuting	Employee commuting from and to AU	Included



## Summary Findings (Year: 2022-2023)

### Summary of Scope 1 Findings

Scope 1 direct GHG emissions attributed to Ajman University, occurred from the stationary combustion of LPG, and the mobile combustion of petrol and diesel-operated cars, buses, pickups, trucks, and mobile dental clinics owned by AU. Below is a summary of the findings:

1. The GHG emissions from all sources, stationary and mobile, during the year 2022 – 2023 are lower than those during 2021 – 2022, by 22%.
2. GHG emissions from LP are lower in 2022-2023 due to the lower consumption of LPG.
3. Similarly, the emission from mobile combustions is lower in 2022-2023 due to lower consumption of petrol and diesel. These emissions could be further reduced by replacing the existing vehicles with EVs and/or hybrid cars. Research by the European Energy Agency found that the carbon emission of an electric car is around 17 – 30% lower than driving a petrol or diesel car. This means that the GHG emissions of 144.26 tCO<sub>2</sub>e (table 15), would be reduced by 34 tCO<sub>2</sub>e.
4. The emissions from the mobile combustion of diesel, in both years, are higher than the emissions from the combustion of petrol. This may be attributed to the number of buses used for transportation.
5. The emission from the consumption of LPG and refrigerant leakage is the highest, compared to the mobile of combustion of petrol and diesel.

### Summary of Scope 2 Findings

Scope 2 indirect GHG emissions attributed to Ajman University, occurred from the consumption of electricity from 13 buildings:

1. The GHG emissions due to purchased electricity remain almost the same as in the baseline year, albeit with an increase of 0.1%.
2. The GHG emissions of 58% of the sources are above 1000 tCO<sub>2</sub>e.
3. The GHG emissions of 50% of the sources in the performance year are less than those in the Baseline year.

Ajman University has secured the following achievements in emission reductions in the performance year (2022-2023), in reference to the baseline year (2021-2022):

1. The emission related to the consumption of LPG has been **reduced by 32%**.
2. The emission related to the consumption of petrol has been **reduced by 19%**.
3. The emission related to the consumption of diesel has been **reduced by 11%**.
4. The emission related to capital goods has been **reduced by 10.59%**.
5. The emission related to energy-related activities has been **reduced by 2.18%**.
6. The emission related to the waste generated in operations has been **reduced by 23%**.
7. The scope 1 emission has been **reduced by 22%**.
8. The emission of scope 1 + scope 2 has been **reduced by 1.91%**.
9. The total emission (scope 1, 2, and 3) has been **reduced by 1.04%**.

## CO2 Reduction Targets

Ajman University has set an ambitious target to reduce its Scope 1 and 2 greenhouse gas emissions by at least 2050. This commitment reflects our recognition of the urgent need to combat climate change by decreasing our direct emissions from university activities (Scope 1) and the indirect emissions from our purchased energy (Scope 2).

Setting clear, time-bound targets for Scope 1 and 2 emissions reduction is a crucial step in our journey to carbon neutrality. While the specific goals, timelines, and strategies may vary, all these targets share a common purpose: to transition Ajman University to a low-carbon economy and reduce our dependence on fossil fuels. This transition will involve a range of measures, including improving energy efficiency, investing in renewable energy, and implementing sustainable procurement practices.

By achieving these targets, Ajman University will make a significant contribution to national and global efforts to limit warming to 1.5°C above pre-industrial levels, as recommended by the Intergovernmental Panel on Climate Change (IPCC). We are committed to tracking our progress transparently and to continually refining our strategies to ensure we meet our emissions reduction goals. This will involve regular monitoring and reporting of our emissions, as well as seeking opportunities for innovation and improvement in our sustainability practices.

In addition to our Scope 1 and 2 targets, Ajman University is also committed to addressing its Scope 3 emissions. These include emissions from business travel, procurement, waste, and other indirect sources. While more challenging to measure and influence, Scope 3 emissions represent a significant portion of our overall carbon footprint. We are implementing strategies to reduce Scope 3 emissions, such as promoting sustainable travel options, engaging with suppliers on their emissions performance, and minimizing waste and emissions throughout our supply chain. By taking a comprehensive approach to emissions reduction across all scopes, Ajman University is demonstrating its commitment to achieving carbon neutrality and contributing to a more sustainable future.

Through our commitment to reducing Scope 1, 2, and 3 emissions, Ajman University is demonstrating its leadership in climate action within the higher education sector. We recognize that universities have a critical role to play in modeling sustainable practices, building awareness, and developing the solutions that will be needed to combat climate change. By achieving carbon neutrality, we aim to create a sustainable and resilient future for our students, staff, and the wider community.

Net Zero Emissions by 2050: where Ajman University aims to balance its emissions with equivalent carbon removal or offsetting activities.

Percentage Reduction Targets: to reduce emissions by 50% by 2030 and 100% by 2050 compared to the baseline year of 2020-2021.

Energy Efficiency Improvement: to improve the energy efficiency of buildings by aiming for a 25% reduction in energy consumption over the next 2 years.

Fleet Electrification Targets: to transition to electric vehicles (EVs) or other low-carbon alternatives, by aiming for 50% of fleet to be electric by 2030.

Renewable Energy Transition: Ajman University plans to transition to 100% renewable energy sources for electricity consumption (Scope 2) by 2040.





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**We thank you for your continued support in our efforts to contribute to the SDGs.**

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