An-Najah National University Commitment to Carbon Reduction Targets by 2028

Executive Summary

An-Najah National University stands ready to address the urgent global issue of climate change. Recognizing the pivotal role universities play in tackling this planetary challenge, we proudly reaffirm our commitment to join the international Race to Zero campaign.

This report outlines the concrete actions, strategies, and progress taken by the university toward achieving Net Zero Carbon by 2028, underscoring our leadership in sustainability and environmental responsibility that extends beyond campus boundaries to create global impact.

Introduction

An-Najah National University, located in Nablus, Palestine, is deeply committed to sustainable development and climate action. The university has adopted an accelerated target to achieve net-zero carbon emissions by 2028, aligning with global sustainability goals and Palestine's national climate commitments.

This report provides a comprehensive overview of our carbon management framework, strategies, and progress toward achieving this ambitious goal.

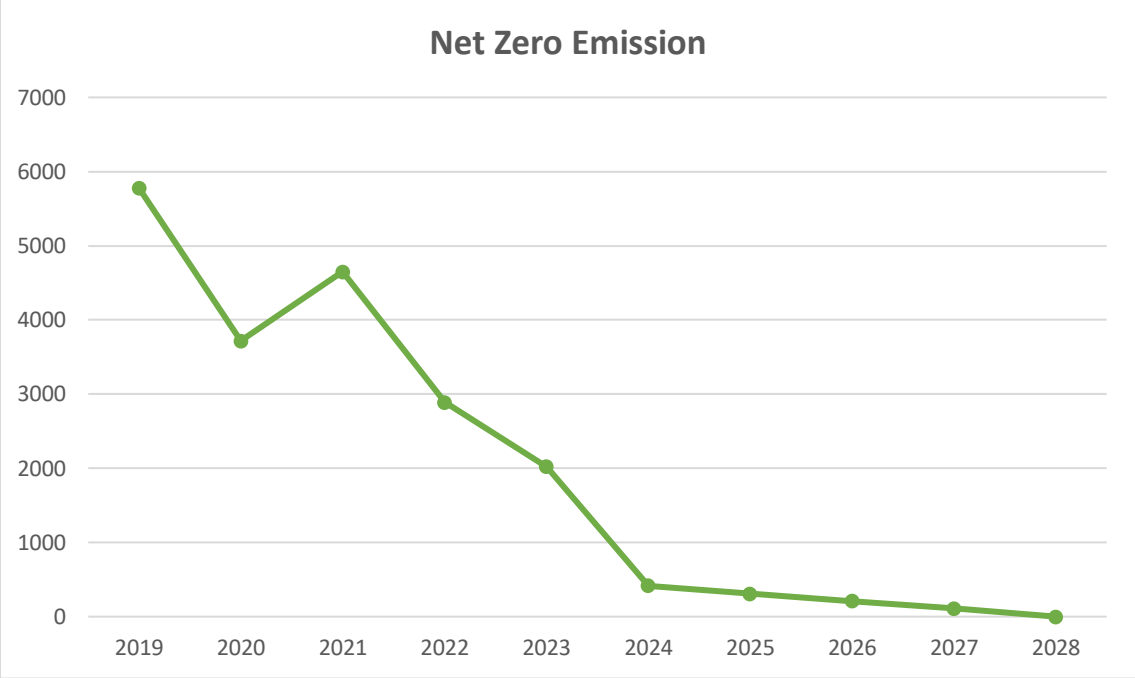
Current Carbon Emissions Profile

To build a data-driven foundation for its sustainability strategy, An-Najah National University conducted a comprehensive assessment of its carbon footprint, covering **Scope 1 (direct emissions), Scope 2 (indirect from purchased electricity), and Scope 3 (other indirect emissions).**

This baseline analysis captures emissions from energy use, transportation, waste, procurement, and operations. It provides the benchmark for tracking measurable reductions aligned with global reporting standards such as the Greenhouse Gas Protocol and ISO 14064.

Targets

2028: Achieve net-zero emissions



Our Last Conducted Inventory

Our Zero Carbon Plan has a 2028 target of net zero emissions and 93 percent reduction in gross carbon emissions compared to our 2019 baseline.

Strategies and Actions by Focus Area

1. Energy Efficiency

- Conduct regular energy audits to identify opportunities for optimization.
- Replace lighting with LED systems and upgrade HVAC and insulation for all buildings.
- Promote behavioral change through awareness campaigns and student-staff energy-saving initiatives.

- Operate a real-time **Energy Management System** to monitor and control energy use efficiently.

2. Renewable Energy Integration

- **Achievement:** As of 2024, An-Najah National University's electricity consumption is supplied from **100% renewable energy** generated on campus.
- **Net-Positive Energy:** The university now produces surplus renewable energy, which supports **rural communities lacking electricity access** and contributes power to the national grid.
- **Next Steps (2025–2028):**
  - Maintain 100% renewable electricity through preventive maintenance and system optimization.
  - Expand energy storage and smart-grid management under the **Najah2Twin Digital Twin** initiative.
  - Integrate renewable-energy research and student innovation into academic programs.
  - Share best practices with national institutions to replicate the *Net-Positive Campus* model.

3. Sustainable Transportation

- Electrify the entire university vehicle fleet by 2027.
- Install additional **EV charging stations** and incentivize electric mobility.
- Promote walking, biking, and carpooling through infrastructure improvements and awareness programs.
- Introduce **Sustainable Mobility Week** campaigns and integrate eco-mobility education into curricula.

4. Waste Reduction and Recycling

- Implement a zero-waste strategy emphasizing **source reduction, composting, and recycling**.
- Place clearly labeled recycling bins across all campuses.
- Partner with local recycling firms to ensure responsible processing of materials.
- Reduce paper use through digitalization and promote circular-economy practices.

5. Green Building Standards

- Apply **green building principles** in all new projects, ensuring energy and water efficiency.
- Retrofit existing facilities to improve insulation and indoor air quality.
- Incorporate passive design elements such as daylighting and natural ventilation.
- Provide specialized training for architects and engineers on sustainable construction.

6. Education and Awareness

- Integrate climate change, energy management, and sustainability content into academic curricula.
- Organize lectures, seminars, and workshops to strengthen environmental literacy.
- Engage students and staff in volunteer projects such as tree-planting, clean-energy campaigns, and sustainability weeks.
- Communicate progress regularly through newsletters, social media, and annual sustainability reports.

7. Monitoring and Reporting

- Maintain a **Carbon Accounting System** to track Scope 1, 2, and 3 emissions in real time.

- Conduct **annual GHG inventories** and report publicly on progress toward Net Zero 2028.
- Use digital dashboards (e.g., **Najah2Twin**) for data visualization and transparent reporting.
- Apply data analytics to continuously refine energy and carbon-reduction strategies.

Progress Toward Targets

An-Najah National University has already surpassed major milestones on its path to Net Zero.
By **2024**, the university became a **100% renewable-energy campus**, with surplus solar power distributed to local rural communities — a landmark achievement in Palestine's higher-education sector.
Ongoing initiatives continue to lower direct (Scope 1) and indirect (Scope 3) emissions, positioning ANNU among regional leaders in carbon management and community-oriented sustainability.

Detailed Emissions Reduction by Scope

Scope 1 – Direct Emissions

Goal: 60% reduction by 2026; near-zero by 2028.
Actions:

- Replace diesel generators with solar + battery systems.
- Electrify campus fleet and phase out fossil-fuel vehicles.
- Enhance heating/cooling efficiency and insulation.
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Scope 2 – Indirect Emissions (Purchased Electricity)

Status: Fully neutralized by 2024.
Goal: Maintain 100% renewable electricity supply through 2028 and

beyond.
Actions:

- Continue producing surplus renewable energy.
- Integrate smart metering and digital twin analytics for optimization.
- Establish contingency planning for uninterrupted clean-energy operation.

Scope 3 – Other Indirect Emissions

Goal: 50% reduction by 2026; 70% by 2028.
Actions:

- Promote sustainable commuting and remote-work policies.
- Expand waste-segregation, composting, and green procurement systems.
- Increase online learning opportunities to reduce travel emissions.

Future Outlook and Commitment

Looking ahead, An-Najah National University remains unwavering in its **Net Zero 2028** commitment.
The university will:

- Maintain its **net-positive energy balance** through continuous investment in clean technologies.
- Develop **carbon offset projects** such as reforestation and green community programs.
- Strengthen regional partnerships to scale renewable-energy models in other Palestinian institutions.
- Advance innovation through research on smart grids, carbon capture, and green materials.

Conclusion

An-Najah National University's achievement of **100% renewable electricity by 2024** and its clear path to **Net Zero Carbon by 2028** demonstrate its leadership in sustainability and its dedication to the global fight against climate change.
Through data-driven management, innovation, and community collaboration, the university continues to set a national example of what a resilient, carbon-neutral higher-education institution can achieve.

Recommendations

- **Continuous Monitoring:** Ensure transparent reporting and external validation of GHG inventories.
- **Stakeholder Engagement:** Involve students, staff, and community partners in the Net Zero journey.
- **Investment in Innovation:** Prioritize R&D in renewable energy, storage, and digital monitoring tools.
- **Collaboration:** Strengthen partnerships with regional and global institutions to share best practices and expand the university's sustainability impact.