



# CLIMATE ACTION PLAN

AN-NAJAH NATIONAL UNIVERSITY



## Introduction

As climate change continues to reshape communities and ecosystems worldwide, universities hold a crucial responsibility in leading transformative climate action. **An-Najah National University (ANNU)** recognizes this global urgency and is committed to achieving carbon neutrality well ahead of international timelines.

Located in Nablus, Palestine, ANNU serves as a regional hub for climate resilience, sustainability innovation, and green technology adoption. This Climate Action Plan (2024–2028) outlines the University’s commitments toward Net Zero emissions by 2028 and incorporates the reported results of its 2025 Carbon Footprint Report.

Aligned with the **United Nations Sustainable Development Goals (SDGs)**—particularly **SDG 7 (Affordable and Clean Energy)**, **SDG 11 (Sustainable Cities and Communities)**, and **SDG 13 (Climate Action)**—this plan provides a roadmap to accelerate decarbonization, embed climate literacy, and strengthen the University’s contribution to Palestine’s green transition.

### 1. Vision

An-Najah National University envisions a **carbon-neutral institution by 2028**, serving as a model of sustainability and innovation in higher education. Through data-driven management, renewable energy transformation, and inclusive engagement, ANNU strives to eliminate direct carbon emissions (Scope 1 & 2), minimize indirect emissions (Scope 3), and foster a culture of climate leadership across all campuses.

### 2. Baseline Assessment (2019–2025)

| Indicator                                          | 2019 (Baseline) | 2025 (Latest) | % Change         |
|----------------------------------------------------|-----------------|---------------|------------------|
| <b>Total GHG Emissions (tCO<sub>2</sub>e)</b>      | 5,774.139       | 381.30        | <b>–93.4%</b>    |
| <b>Scope 1 (Direct)</b>                            | 515.188         | 239.07        | <b>–53.6%</b>    |
| <b>Scope 2 (Electricity)</b>                       | 4,970           | 0             | <b>–100%</b>     |
| <b>Scope 3 (Indirect)</b>                          | 288.951         | 142.23        | <b>–50.8%</b>    |
| <b>Electricity Generated from Renewables (kWh)</b> | 173,442.57      | 4,580,168     | <b>+2,540.7%</b> |

| Indicator                      | 2019 (Baseline)          | 2025 (Latest)            | % Change |
|--------------------------------|--------------------------|--------------------------|----------|
| Electricity Purchased (kWh)    | 7,131,400.8              | 0                        | -100%    |
| Gross Campus Area              | 540,404.5 m <sup>2</sup> | 540,404.5 m <sup>2</sup> | —        |
| Vehicle Fleet                  | 14 fossil-fueled / 1 EV  | 5 fossil-fueled / 10 EV) | —        |
| Total Energy Consumption (kWh) | 7,304,843.4              | 1,400,278                | -80.8%   |

### Conclusion:

In 2025, ANNU reported total Scope 1–3 emissions of 381.30 tCO<sub>2</sub>e, 93.4% below its 2019 baseline of 5,774.139 tCO<sub>2</sub>e. Scope 2 emissions remained zero and purchased electricity was zero. Renewable electricity generation reached 4,580,168 kWh, exceeding reported energy consumption of 1,400,278 kWh. Further reductions in Scope 1 and Scope 3 emissions remain central to the Net Zero 2028 goal.

## 3. Objectives

### 3.1 Greenhouse Gas (GHG) Reduction

- **Achieve full Net Zero emissions by 2028** across all campuses.
- Maintain annual GHG reductions exceeding **90%** versus the 2019 baseline.
- Implement smart data-driven monitoring of Scope 1–3 emissions via Najah2Twin.

### 3.2 Energy Efficiency and Renewable Energy

- Sustain **100% renewable electricity generation** through expanded solar PV, solar water heating, and biogas systems.
- Improve building energy efficiency by **30%** through retrofits and automation.

### 3.3 Water Management

- Reduce total freshwater consumption by **25% by 2028** through rainwater harvesting, greywater recycling, and smart irrigation.
- Install smart water meters and leak-detection sensors campus-wide.

### *3.4 Waste Management*

- Reduce waste sent to landfills by **50% by 2028**.
- Implement full recycling and composting infrastructure in all campuses.

### *3.5 Sustainable Mobility*

- Replace all on-campus vehicles with electric or hybrid vehicles by **2026**.
- Establish EV charging infrastructure and expand car-sharing and e-shuttle systems.
- Reduce private vehicle use by **40%** through parking management and incentives.

### *3.6 Climate Literacy and Research*

- Embed **climate and sustainability education** into every academic discipline by 2026.
- Expand climate-related research under the **Global Health and Environment Centers**.
- Develop postgraduate programs on **Climate Studies and Sustainable Energy**.

### *3.7 Community Engagement*

- Launch annual “**Najah Climate Week**” for outreach and education.
- Partner with municipalities, schools, and NGOs to promote urban sustainability and reforestation.

## **4. Key Initiatives**

### *A. Renewable Energy and Smart Energy Systems*

- Expansion of solar PV to 4 MWp capacity across campuses by 2026.
- Deployment of the **Najah2Twin Smart Energy Management System** to monitor building-level consumption and renewable generation.
- Integration of **energy storage systems** to stabilize supply and improve resilience.

### *B. Green Buildings and Efficiency*

- All new buildings to comply with the [Palestinian Green Building Guideline \(2024\)](#).
- Retrofit older structures (lighting, HVAC, insulation) to achieve **30% energy savings**.

- Implement smart occupancy sensors and climate-responsive design.

### *C. Sustainable Transport*

- Electrification of all campus shuttles and logistics vehicles.
- Installation of EV charging stations and e-bike parking in all campuses.
- Launch of **Green Mobility Campaign** (Walk, Ride, Share).

### *D. Water Management*

- Large-scale **rainwater harvesting systems** for irrigation and cleaning.
- **Greywater recycling** units in the New Campus and Faculty of Medicine.
- Conversion of green areas to drought-tolerant native species.

### *E. Waste Management*

- **Campus-wide waste sorting**: paper, plastic, metal, glass, organics.
- **Composting units** to manage food and garden waste.
- **“Zero Single-Use Plastic”** initiative by 2026.

### *F. Research and Innovation*

- Funded projects on **Water–Energy–Food (WEF) Nexus, Renewable Energy Storage, and Urban Climate Adaptation**.
- Establishment of a **Carbon Research and Innovation Hub** for emissions data analytics and offset design.
- Promotion of **Green Labs Initiative** to optimize resource use in research facilities.

## **5. Engagement and Collaboration**

- Establishment of **Climate Action & Energy Committee** (2023) under the Deanship of Scientific Research.
- Collaboration with **Palestinian Energy Authority, UNESCO, and Erasmus+ partners** on carbon literacy and renewable energy.
- Student engagement through the **Sustainability Ambassadors Program** and **Green Campus Volunteers**.
- Public education through open lectures, workshops, and community-based projects.

## **6. Monitoring and Reporting**

- Real-time monitoring of GHG data through the **Najah2Twin IoT Dashboard**.

- Annual publication of the **Carbon Footprint and Climate Progress Report** (since 2019).
- Third-party validation of emission data and renewable generation performance.
- Annual review of progress and recalibration of targets by June each year.

## 7. Financing and Implementation

- **Green Financing:** Leverage national and international funding mechanisms (UNDP, IsDB, EU Green Deal, Erasmus+, Horizon,,,etc).
- **Private Partnerships:** Collaborate with renewable energy companies for co-investment models.
- **Cost Savings:** Use savings from energy independence to reinvest in climate innovation.
- **Corporate & Alumni Sponsorships:** Encourage the private sector and alumni network to support reforestation, student projects, and clean technology initiatives.

## 8. Green Investments and Divestment Policy

ANNU commits to **divesting from fossil-fuel and carbon-intensive sectors** and redirecting investments toward:

- Renewable energy and clean technologies.
- Sustainable agriculture and eco-innovation startups (through **InnoPark**).
- Green construction, low-carbon transport, and circular economy ventures.

## 9. Net Zero 2028 Roadmap

| Year | Milestone                                     | Expected Outcome                                                                                                |
|------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| 2024 | Zero reported Scope 2 emissions               | Renewable electricity generation exceeded reported campus consumption                                           |
| 2025 | 2025 reported: 93.4% GHG reduction from 2019  | 381.30 tCO <sub>2</sub> e total emissions; 4,580,168 kWh renewable generation; 1,400,278 kWh energy consumption |
| 2026 | Full EV transition & zero single-use plastics | 95% GHG reduction                                                                                               |

| Year | Milestone                               | Expected Outcome                                                     |
|------|-----------------------------------------|----------------------------------------------------------------------|
| 2027 | Smart optimization phase                | Net negative emissions pilot (carbon-positive buildings)             |
| 2028 | <b>Full Net Zero Emissions Achieved</b> | Carbon-neutral certification and community sharing of surplus energy |

## 10. Commitment Statement

An-Najah National University affirms its **unwavering commitment** to climate action as a driver of academic excellence, community resilience, and national progress.

By achieving **Net Zero by 2028**, the University not only sets a benchmark for Palestine but also demonstrates how higher education institutions can lead regional transformation through **science, innovation, and sustainability-driven governance**.