AMITY UNIVERSITY NET ZERO ROAD MAP

1. Introduction: Why Net Zero and Why Amity?

Climate change is no longer a distant threat but a present-day crisis. It affects the food we eat, the air we breathe, and the stability of our ecosystems. As the world scrambles to limit global warming, educational institutions stand at a pivotal crossroads. With their intellectual capital and societal influence, universities can lead by example.

Amity University, Gwalior, having already made commendable strides in sustainability, is ready to go further. This document presents a transformative vision to become a Net Zero Campus by 2035, built on a strong foundation of the Plan-Do-Check-Act (PDCA) methodology.

2. The PDCA Framework

PDCA is a dynamic, iterative management model that ensures systematic planning, effective execution, constant monitoring, and ongoing refinement. It ensures that sustainability at Amity is not a one-time project but an evolving institutional ethos.

3. PLAN: Vision, Baseline and Strategy (2024–2025)

Objective: Achieve Net Zero carbon emissions by 2035.

Baseline Snapshot (2024):

- Net Carbon Emissions: 2,025.44 tons CO_2e
- Renewable Energy Share: 11.26%
- Total Trees: 14,357
- Carbon Intensity: 1.10 tons CO_2e/student/year
- Total Energy Consumption: 3.4 million kWh

Strategic Focus Areas:

1. Carbon Emissions Reduction
2. Renewable Energy Generation
3. Biodiversity and Carbon Sequestration

4. Sustainable Mobility
5. Water and Waste Management
6. Scope 3 Emissions Mapping
7. Student and Faculty Engagement

Documentation and Structures:

- Net Zero Implementation Plan
- Drafting of Green Procurement and Transport Policies
- KPI & Sustainability Dashboard

4. DO: Implementation of Interventions (2025–2031)

1. Renewable Energy Transition

- Expand solar capacity from 307 kWp to 1 MWp.
- Explore power purchase agreements (PPA) for hybrid renewable solutions.

2. Green Campus Infrastructure

- All new buildings to follow GRIHA/IGBC norms.
- Retrofit old infrastructure with energy-efficient systems.
- Install building-wise smart energy meters.

3. Sustainable Transportation

- Install EV charging stations.
- Introduce electric shuttles and e-bikes for intra-campus mobility.

4. Biodiversity Enhancement

- Annual plantation of 1,000 native trees.
- Develop an urban forest patch.
- Maintain a digital inventory of trees via online dashboard and track carbon sequestration.

5. Water and Waste Management

- Expand STP capacity; aim for 100% greywater reuse.
- Install sensor-based, AI-controlled irrigation.

- Establish composting units and e-waste collection points.

6. Capacity Building and Green Culture

- Green Credits Program for students and staff.
- Sustainability curriculum in UG/PG programs.
- Green Action Lab to incubate campus sustainability projects.

5. CHECK: Monitoring and Evaluation (2026 Onwards)

Monitoring Systems:

- Real-time Carbon Dashboard (Energy, Emissions, Waste, Water)
- Annual third-party carbon audit and verification (ISO 14064 compliant)
- Departmental sustainability scorecards

Key Performance Indicators (KPIs):

- % Renewable Energy Use
- Carbon Intensity (tons CO_2e/student)
- Waste Diversion Rate (%)
- Water Reuse Rate (%)
- Scope 3 Coverage (%)
- Tree Survival Rate (%)

Reporting:

- Annual Net Zero Progress Report
- Sustainability Highlights in NAAC/NIRF submissions
- External validation from recognized green ranking bodies

5. ACT: Corrective Action and Innovation (2027–2035)

Continuous Improvement:

- Annual policy review and realignment
- Technology upgrades as per market evolution

- SOP modification based on audit findings

Innovation Labs:

- Centre for Net Zero Innovation and Circular Economy
- Student-led climate tech incubator

Strategic Collaborations:

- MNRE, MoEFCC, UNDP for grants and pilot projects
- Local ULBs for water and waste co-management
- CSR and Industry partners for co-investment