



BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE (BITS)PILANI

("INSTITUTE")

Carbon Reduction Strategic Plan

Carbon Reduction Strategic Plan (Scope 1 & 2 Emissions)

Vision Statement

To position BITS Pilani as a frontrunner in national sustainability efforts by attaining carbon neutrality in Scope 1 and Scope 2 emissions by the year 2050.

Mission Statement

To significantly minimize the Institute's environmental footprint through strategic transformation of energy systems, resource utilization, and stakeholder engagement, thereby fostering an environmentally responsible and operationally efficient campus.

Core Values

Transparency: Maintain open and consistent communication on progress, challenges, and milestones with the entire institutional community.

Collaboration: Promote active participation from students, faculty, and staff, valuing collective input in sustainability initiatives.

Innovation: Leverage emerging technologies and inventive approaches to reduce emissions.

Adaptability: Continuously refine and enhance our approach based on evolving insights and advancements.

Strategic Priorities and Action Plans

1. Emissions Baseline Establishment (By 2025)

Comprehensive Audit: Undertake an exhaustive evaluation of Scope 1 and 2 emissions, encompassing energy consumption, institutional transportation, and infrastructure usage.

Baseline Setting: Designate 2025 as the reference year for long-term monitoring and reporting of emission reductions.

2. Enhancing Energy Efficiency (2025 Onwards)

Infrastructure Improvements: Retrofit buildings with LED lighting, automated motion sensors, and superior insulation and ventilation systems.

Equipment Modernization: Transition to energy-efficient laboratory instruments and appliances.

Behavioral Shifts: Launch educational initiatives to foster mindful energy usage among campus residents.

3. Renewable Energy Transition (2026–2045)

Solar Integration: Install photovoltaic systems on rooftops and designated open areas to harness solar energy.

Sustainable Fuel Alternatives: Investigate the use of biogas and other eco-friendly fuels for campus utilities.

4. Greening Campus Transportation (2026–2045)

Fleet Electrification: Replace internal combustion engine vehicles with electric or hybrid alternatives.

Active Travel Promotion: Advocate for pedestrian mobility, bicycle usage, and carpooling practices.

Charging Infrastructure: Establish electric vehicle (EV) charging stations at strategic campus locations.

5. Waste Management & Resource Optimization (2025 Onwards)

Recycling Expansion: Scale up recycling and composting efforts with additional infrastructure.

Digital Transition: Digitize administrative and academic workflows to curtail paper consumption.

Reuse & Responsible Disposal: Encourage sustainable repurposing of laboratory and office supplies.

6. Sustainable Procurement (2025 Onwards)

Environmentally Preferred Purchasing: Prioritize acquisition of products with high energy efficiency and minimal environmental impact.

Supplier Collaboration: Engage vendors who align with the Institute's sustainability values and maintain low-carbon operations.

7. Education, Awareness, and Participation (2025 Onwards)

Curriculum Enhancement: Embed sustainability and climate literacy within academic offerings and training programs.

Community Engagement: Host themed campaigns, events, and contests to cultivate a culture of environmental stewardship.

Acknowledgement & Incentives: Institute awards and recognition for outstanding sustainability contributions from individuals or teams.

8. Emissions Offsetting Strategy (2045–2050)

Carbon Offset Investments: Allocate resources to validated offset initiatives such as afforestation, renewable energy ventures, and third-party certified carbon offset programs to neutralize residual emissions.

Governance and Implementation Structure

Sustainability Task Force: Establish a cross-functional leadership group comprising students, academic staff, and administrative personnel to drive implementation.

Operational Plan: Define timelines, accountability mechanisms, and performance indicators for each action area.

Resource Mobilization: Secure financial and technical support through internal allocations, government grants, and strategic partnerships.

Performance Evaluation: Conduct systematic annual assessments to evaluate progress, refine methodologies, and address implementation bottlenecks.

Monitoring, Reporting, and Communication

Periodic Updates: Disseminate progress through institutional communication channels including the website, newsletters, and public forums.

Annual Sustainability Report: Publish a comprehensive yearly review detailing performance metrics, strategic achievements, and forward-looking priorities.

Quantitative Tracking: Monitor decreases in energy usage, emissions output, and waste generation using standardized audit protocols.

Stakeholder Feedback: Employ surveys and feedback mechanisms to gauge community awareness and participation.

Recognition of Progress: Publicly commemorate key milestones to maintain momentum and inspire ongoing commitment.