MITS

MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE

(Deemed to be University under Section 3 of UGC Act, 1956)

ENERGY CONSERVATION AND ENERGY CONSUMPTION REDUCTION POLICY AND ACTION PLAN

Document field	Details
Policy Number	MITSU/SDG/ECERP/2026/02
Effective Date	Oct 2026
Review Date	Oct 2028
SDG Mapping	SDG 7 - Affordable and Clean Energy

1. Policy Statement

MITS Deemed to be University commits to reducing avoidable energy consumption through systematic measurement, energy-efficient operations, maintenance, procurement, staff and student engagement, and periodic performance review. The University will prioritise safe, reliable and functional academic facilities while implementing improvements supported by verifiable records.

2. Objectives

- Create and maintain a reliable annual energy baseline for electricity, rooftop solar generation and on-site generator energy, with separate records for any other relevant fuels.
- Identify unnecessary energy use in classrooms, laboratories, offices, hostels and shared facilities within the approved reporting boundary.
- Implement and monitor energy-efficiency improvements in lighting, cooling, computers, equipment and building operations.
- Set institutionally approved energy-reduction targets after baseline verification and track results against defined indicators.

3. Scope

This policy applies to MITS-managed academic, administrative, laboratory and associated campus facilities. Operational records shall identify which buildings and energy sources are included. Solar electricity produced, consumed or exported shall be recorded separately to avoid double-counting; reduced grid purchases alone shall not be represented as reduced total energy demand.

4. Existing Campus Measures and Planning Context

Institutional records describe LED lighting and daylighting practices, star-rated air conditioning, efficient computers and monitors, routine preventive maintenance, and rooftop solar photovoltaic installations. The current panel inventory reported for policy preparation is 478 modules of 315 W and 404 modules of 620 W, providing a combined rated DC capacity of 401.05 kWp (882 modules). This rated capacity shall not be used as a substitute for measured annual solar generation or verified energy savings.

An earlier institutional energy and climate inventory reports 2,377 energy-efficient lamps out of 2,406, 216 energy-efficient air conditioners out of 216, and 2,220 efficient computers/monitors out of 2,220. The Electrical/Estate Sections shall validate these figures and record the date, device definitions and location coverage before adopting them as the current asset register.

5. Energy Management Commitments

- Metering and data quality: collect monthly electricity bills and readings, separate solar generation, export and self-consumption where measured, and record DG electricity production and fuel consumption.
- Buildings and lighting: maintain efficient lighting, daylight use, switching controls and periodic inspections; assess further control improvements based on feasibility and documented savings.
- Air conditioning and equipment: prioritise preventive maintenance, sensible operation schedules and efficient replacement when justified by safety, usability and lifecycle cost.
- Laboratories and IT: establish equipment shutdown procedures outside required operating hours; protect essential experiments, server operation and safety systems.
- Procurement and upgrades: evaluate energy performance in equipment purchases, retrofits and replacements and document the expected and measured energy impact.
- Awareness: conduct periodic energy-conservation communication for students, teaching staff, non-teaching staff and facility operators.

6. Implementation Action Plan

The following activities are proposed for execution following approval. Completion claims will be entered only after responsible officers submit supporting records.

Proposed action	Lead and timing	Evidence to retain
A1. Validate energy baseline and boundary	Electrical / Estate / Accounts; within 3 months	Annual statement, readings and bills
A2. Update building-wise equipment inventory	Estate / Electrical; within 6 months	Asset register and meter map
A3. Identify wastage and prioritise upgrades	Electrical / Estate / EEE; within 6 months	Audit or inspection and action list
A4. Implement feasible lighting/HVAC controls	Estate / Electrical; phased, annual review	Orders, invoices and before/after evidence
A5. Conduct energy-conservation awareness	SDG Cell / NSS; at least annually	Circulars, reports and photos
A6. Evaluate progress and revise targets	SDG Cell / IQAC / Estate; annually	Reviewed KPI sheet and minutes

7. Monitoring and Performance Indicators

- Annual grid electricity purchased (kWh), onsite solar generation (kWh), onsite solar consumption (kWh), exports (kWh), and DG electricity generated (kWh).
- Total energy used (kWh-equivalent / GJ), including qualifying fuels, calculated with a transparent method and without counting the same energy twice.
- Building electricity intensity (kWh/m²/year) using a verified building floor-area denominator; where useful, compare like-for-like buildings and operating hours.
- Annual absolute and normalized changes against the approved baseline; document campus expansions and major occupancy/operating changes.

- Number of assessed improvement measures, completed upgrades, estimated and measured savings, and status of corrective actions.

A numerical annual reduction target shall be approved only after the baseline and reporting boundary have been verified. Any target and progress statement must state the baseline year, period, unit and calculation method.

8. Institutional Responsibilities

Responsible unit	Role
Estate / Electrical Maintenance	Collect meter and asset records; implement and verify energy-saving measures.
Accounts / Purchase	Provide billing and procurement evidence; support lifecycle-cost assessments.
Departments / Laboratories	Implement equipment operating practices and identify avoidable loads.
SDG Cell / IQAC	Coordinate awareness, annual review, evidence consolidation and policy reporting.
Competent University Authority	Approve implementation priorities, targets and policy amendments.

9. Review, Record Retention and Approval

The SDG Cell, in coordination with the Estate and Electrical Sections, shall compile an annual review noting planned actions, completed work, measured performance, deviations and pending approvals. Supporting records shall be maintained under institutional document-control procedures. This policy shall be reviewed every two years, or earlier if required by institutional or regulatory changes.

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Annex A. Reported Annual Electricity Statement

The figures below are transcribed from an institutional Energy & Climate compilation. They are retained as provisional planning data pending reconciliation with electricity bills, solar meter records, generator logs and the agreed campus boundary. They are not certified energy-savings results. Reported totals combine grid electricity with solar and DG generation; solar exports and self-consumption must be confirmed to avoid double-counting.

Year	Grid (kWh)	Solar produced (kWh)	DG generated (kWh)	Reported total (kWh)
2022	273,993	190,029	48,070	512,092
2023	341,962	207,495	43,590	593,047
2024	404,452	198,535	74,400	677,387
2025	472,778	205,048	66,950	744,776

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