Carbon Reduction Action Plan

1. DOCUMENT METADATA

Title	Carbon Reduction Action Plan	Document ID	SRMAP-SDG-2024-PLCY-004
Hierarchy Level	L4 – University Policy	Status	Approved
Policy Owner	CLM Office	Effective Date	05-06-2024
Version	1.0	Next Review Date	05-06-2026

2. PLAN FRAMEWORK

2.1. Purpose & Objective

This Carbon Reduction Action Plan translates SRM University-AP's Carbon Management Policy into a practical, measurable and reviewable programme for reducing greenhouse-gas emissions. It establishes the required workflow for baseline preparation, prioritisation, target setting, implementation, monitoring and reporting.

This plan is the operating part of the University's process for carbon management and for reducing carbon dioxide (CO_2) and other greenhouse-gas emissions under SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action).

This Plan is in force from its Effective Date and operationalises the Carbon Management Policy. Targets, dates, budgets and expected savings are entered from the University's approved inventory, baseline and operational data; where a value is not yet quantified, the field states the date by which it will be. Progress and evidence for each action are recorded in the Action Register and summarised in the Implementation Status Record.

The Plan is guided by the following principles:

- Measure before claiming establish a documented baseline and identify the sources and scopes covered.
- Prioritise material sources and actions with credible reduction potential, lifecycle value and implementation feasibility.
- Prefer direct, durable emissions reductions before considering offsets or carbon credits.
- Assign each action an accountable owner, timeline, resource requirement, indicator and evidence record.
- Use transparent methods, disclose data gaps and avoid double counting of reductions.
- Review progress annually and revise actions when evidence, operations or technology changes.



2.2. Scope of Application

The Plan shall cover University-controlled or University-operated campuses and activities and shall state the boundary and reporting period explicitly. The initial inventory should cover material direct emissions (Scope 1), purchased-energy emissions (Scope 2), and progressively material value-chain emissions (Scope 3), consistent with the adopted accounting method.

- Baseline year/period: FY 2023–24 approved by CLM Office.
- Organisational boundary: University operations under operational control; any shared-control arrangements and exclusions to be documented.
- Primary data sources: electricity bills and meter data, fuel purchase/use records, DG-set logs where applicable, fleet data, refrigerant maintenance records, and other source records selected as material.
- Additional categories to assess: business travel, commuting, purchased goods and services, construction, waste and other material Scope 3 sources.
- Normalisation measures: use verified gross internal floor area, student/staff population or another suitable denominator only where the definition and records are reliable and consistent.
- Emission factors, global-warming-potential basis, calculation tools, assumptions and estimation methods shall be recorded in the inventory workbook.

2.3. Target-Setting Procedure

1. Compile and quality-check the institutional GHG inventory.
2. Identify major emission sources and explain material changes from the baseline period.
3. Assess reduction opportunities and estimate costs, feasibility, dependencies and expected emissions impact.
4. Propose near-term and longer-term targets, specifying baseline year, target year, scopes, metric and method.
5. Submit targets and resource requirements to the competent authority for approval.
6. Publish approved targets and a non-confidential summary of the Plan.
7. Review actual performance at least annually and update the Plan through documented approval.

2.4. Baseline Year and Annual Emissions-Reduction Pathway

The baseline year is FY 2023–24, approved by CLM Office, after validating the completeness and representativeness of the greenhouse-gas inventory. Baseline gross emissions with Scope 1, Scope 2 and included Scope 3 emissions reported separately in the Institutional GHG Inventory.



Reduction targets: near-term target – reduce gross Scope 1 and Scope 2 emissions per capita by 30% and the baseline by the FY 2028-2029; long-term target – [carbon neutrality / net-zero] by 2040, under the approved framework in the Carbon Management Policy. Offsets, if any, are reported separately from gross reductions.

2.5. Year-wise carbon-reduction table

Target and actual columns are completed from the approved baseline inventory and reduction targets, and each row is supported by an evidence reference in the last column.

Financial year	Role	Baseline emissions (tCO_2e)	Proposed reduction from baseline (%)	Target emissions (tCO_2e)	Actual emissions (tCO_2e)	Per Capita Emissions	Status / evidence
FY 2023–24	Baseline year						
FY 2024–25	Year 1						
FY 2025–26	Year 2						
FY 2026–27	Year 3						
FY 2027–28	Year 4						
FY 2028–29	Year 5						

2.5. Nodal Department and Responsibility

- Competent authority: approve targets, significant investments and material revisions as required.
- Designated coordinator: maintain the Plan, coordinate reporting, consolidate evidence and escalate barriers.
- Action owners: deliver assigned actions, maintain records and report status accurately.
- Finance and Procurement: support cost, investment and purchasing data and approved procurement measures.
- Facilities, Engineering, Transport, HR, Projects, IT, laboratories and other relevant offices: supply data and implement actions within their remit.
- All campus users: support approved actions and follow relevant operational guidance.

2.6. Existing Low-Carbon Measures

- On-site solar PV / renewable generation
- Energy-efficiency measures (LED, efficient HVAC, controls, metering)
- Low-carbon mobility (electric or shared transport, bicycles, charging points)
- Other measures (waste-to-energy / biogas, green buildings, tree cover)

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3. ACTION PORTFOLIO

The actions below form the University's action portfolio. Each action has an accountable owner (by designation), a target date, a resource estimate and an expected reduction in tCO_2e. Expected savings are stated only where supported by calculations or measurements; where an action is not yet quantified, the field states the date by which it will be.

3.1. Establish the GHG inventory and baseline

- Key tasks: Collect activity data; document boundaries, scopes, emission factors and assumptions; validate annual totals.
- Lead (accountable owner): CLM Office
- Timing: Within the first implementation cycle
- Monitoring indicator: Inventory completed and reviewed; material sources and data gaps documented
- Evidence / records: Approved inventory, source-data register and calculation workbook

3.2. Improve energy data coverage

- Key tasks: Map utility meters and bills; identify missing building-level or system-level data; develop a practical metering/data-improvement plan.
- Lead (accountable owner): Facilities / Engineering
- Timing: Prioritised annually
- Monitoring indicator: Share of buildings/energy uses covered by reliable data
- Evidence **/ records:** Meter register, bills, readings, data-gap plan

3.3. Reduce building electricity demand

- Key tasks: Review significant energy uses; implement justified lighting, HVAC, controls, scheduling, maintenance and equipment-efficiency measures.
- Lead (accountable owner): Facilities / Engineering and building managers
- Timing: Phased; priority based on energy review
- Monitoring indicator: Energy use and intensity; completed actions; verified savings where feasible
- Evidence / records: Audit/review findings, work orders, commissioning records, before/after data

3.4. Apply efficiency requirements to new builds and renovations

- Key tasks: Include applicable energy codes/standards in briefs and tenders; review design; document commissioning and handover.



- Lead (accountable owner): Planning, Design, Engineering and Project teams
- Timing: For every applicable project
- Monitoring indicator: Proportion of applicable projects reviewed; compliance evidence retained
- Evidence / records: Design checklists, tender clauses, certificates/reports where applicable

3.5. Manage generator and stationary fuel emissions

- Key tasks: Record fuel use and operating hours; review avoidable runtime and maintenance; consider feasible lower-emission alternatives consistent with reliability needs.
- Lead (accountable owner): Facilities / Engineering and Finance
- Timing: Annual review; operational changes as approved
- Monitoring indicator: Fuel consumption; runtime; tCO_2e by source
- Evidence / records: Fuel invoices, logbooks, maintenance records

3.6. Improve fleet and mobility emissions

- Key tasks: Compile fleet fuel and travel data; evaluate route efficiency, shared transport, active mobility, public transport and low-emission vehicles where feasible.
- Lead (accountable owner): Transport / Administration
- Timing: Annual review and phased implementation
- Monitoring indicator: Fleet fuel use; travel data coverage; selected mobility indicators
- Evidence / records: Fleet logs, travel records, plans and procurement records

3.7. Assess refrigerant management

- Key tasks: Maintain equipment/refrigerant register where practicable; record service, top-up and leakage events; improve maintenance and procurement practices.
- Lead (accountable owner): Facilities / Engineering and relevant laboratory/IT managers
- Timing: Initial register and annual update
- Monitoring indicator: Coverage of relevant equipment; leakage/service records
- Evidence / records: Asset register, maintenance reports, refrigerant records



3.8. Assess material Scope 3 categories

- Key tasks: Screen commuting, business travel, procurement, construction and waste; prioritise material categories and improve data collection.
- Lead (accountable owner): Procurement, Projects and Waste teams
- Timing: Screen initially; improve annually
- Monitoring indicator: Number of material categories assessed; data quality and coverage
- Evidence / records: Screening assessment, supplier/travel/waste data, calculation records

3.9. Integrate carbon criteria in procurement

- Key tasks: Identify high-impact categories and include lifecycle energy/carbon considerations in suitable specifications and evaluation criteria.
- Lead (accountable owner): Procurement with technical departments
- Timing: As procurement procedures are revised
- Monitoring indicator: Share of selected procurements with approved criteria
- Evidence / records: Tender documents, specifications, evaluation records

3.10. Awareness and engagement

- Key tasks: Provide guidance to staff, students and contractors on relevant energy, travel, waste and operational practices.
- Lead (accountable owner): Communications
- Timing: At least annual communication cycle
- Monitoring indicator: Activities delivered and participation where measured
- Evidence / records: Training materials, attendance or communication records

3.11. Monitor, verify and report progress

- Key tasks: Maintain an action register; check action completion; calculate reductions using documented methods; report results and limitations.
- Lead (accountable owner): Action owners
- Timing: Quarterly internal tracking; annual review
- Monitoring indicator: Actions on schedule; verified reduction estimates; report issued
- Evidence / records: Action register, management review, annual progress report



3.12. Evaluate renewable-energy options

- Key tasks: Assess on-site and purchased renewable-energy options, their technical feasibility and accounting treatment; document decisions and claims.
- Lead (accountable owner): Facilities / Engineering, Finance and competent authority
- Timing: Periodic feasibility review
- Monitoring indicator: Feasibility assessment and energy/emissions accounting evidence
- Evidence / records: Technical/economic assessment, contracts, generation records where relevant

3.13. Conduct an annual energy and environment audit

- Key tasks: Commission an annual energy and environment audit (internal team or external auditor); identify areas where energy wastage and emissions are highest; record corrective actions and track them to closure.
- Lead (accountable owner): Facilities / Engineering with the CLM Office
- Timing: Annual
- Monitoring indicator: Audit completed; share of audit actions closed on schedule
- Evidence / records: Audit report, corrective-action tracker, management-review minutes

3.14. Increase the share of low-carbon energy

- Key tasks: Record on-site renewable capacity and generation; calculate the annual share of energy from low-carbon sources; plan additions (rooftop solar, purchased renewable power) where feasible.
- Lead (accountable owner): Facilities / Engineering, Finance and competent authority
- Timing: Annual review; capacity additions as approved
- Monitoring indicator: Installed renewable capacity (kWp/MW); low-carbon energy share (%)
- Evidence / records: Generation records, meter readings, contracts, bills

4. RISK MANAGEMENT AND CORRECTIVE ACTION

- Data gaps or unreliable records: assign a data owner, document estimates and implement a time-bound data-improvement action.
- Budget or procurement delays: reprioritise actions, assess phased implementation and escalate material delays.



- Operational or research constraints: evaluate alternatives with the relevant technical and safety owners before changing operating conditions.
- Uncertain savings estimates: report assumptions and uncertainty; avoid presenting estimates as measured outcomes.
- Changes in emissions factors or accounting methods: document the change and assess whether historical results or the baseline need recalculation.
- Missed milestones: record reasons, corrective action, revised timeline and approving authority where required.

5. ROLES & RESPONSIBILITIES (RACI MATRIX)

Task / Activity	Designated Coordinator	Action Owners	Finance / Procurement	Competent Authority
GHG inventory and baseline	A	R	C	I
Target setting and approval	R	C	C	A
Delivery of actions	A	R	R	I
Progress tracking and reporting	A	R	C	I
Public disclosure and evidence	A	C	C	I
Annual review and plan updates	R	C	C	A

(R = Responsible, A = Accountable, C = Consulted, I = Informed)

6. DATA COLLECTION & MONITORING

Monitoring and Reporting Cycle:

- Monthly or quarterly: action owners update implementation status and submit available operational data according to the agreed collection calendar.
- Quarterly: the coordinating office reviews delays, data gaps, risks and actions requiring management intervention.
- Annually: update the GHG inventory; compare actual emissions with baseline and targets; document changes in boundaries, factors and activity; assess action outcomes; and report limitations.
- Annually: submit the Plan and progress summary to the designated management/approval body and publish a suitable non-confidential summary.

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- At least every three years: review target ambition, accounting methods and the overall action portfolio, or sooner where major operational changes justify it.

Key Performance Indicators (KPIs):

- Total gross emissions (tCO_2e) by Scope 1, Scope 2 and included Scope 3 categories.
- Emissions intensity (e.g., tCO_2e/m^2) where the denominator is verified and consistently defined.
- Percentage of identified material emissions sources with usable activity data.
- Progress against each approved target and baseline.
- Number of reduction actions completed, in progress, delayed or not started.
- Energy consumption and intensity measures aligned with the Energy Efficiency Policy.
- Number of applicable new-build/renovation projects reviewed against energy-efficiency requirements.
- Share of identified Scope 3 categories assessed and improved in data coverage.
- Verified or method-supported emissions reductions attributed to actions, with calculation details.
- Share of energy used from low-carbon sources (%) and installed on-site renewable capacity (kWp/MW).
- Completion of the annual energy and environment audit and the proportion of audit actions closed on schedule.
- Review and Version Control: The Action Plan shall be reviewed at least annually. Updates to targets, actions, ownership, milestones or methods shall be recorded with the reason for change, date and approval status.

7. VERSION HISTORY

Version	Date	Author/Editor	Summary of Changes
1.0	05-06-2024	CLM Office	Initial release.

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