الأكاديمية العربية للعلوم والتكنولوجيا والنقل البحري
Arab Academy for Science, Technology & Maritime Transport

CLIMATE ACTION PLAN

2025–2030

Pathway to Net Zero

Measuring, planning and reducing greenhouse gas emissions across all AASTMT campuses

NET ZERO
2050

−32.8%
AASTMT Alexandria campuses, 2024 against the 2019 base year

−45%
emissions target for 2030 against the 2019 base year

38,253
tonnes CO_2e, carbon footprint of four campuses, 2024–2025

Arab Academy for Science, Technology and Maritime Transport
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Climate Action Plan 2025–2030: Pathway to Net Zero

This plan sets out how the Arab Academy for Science, Technology and Maritime Transport (AASTMT) measures, plans and reduces its greenhouse gas emissions on the way to net zero by 2050, and how it shares this work with local government and community groups.

AASTMT aims to reach net zero by 2050 at the latest, a commitment made under the UNFCCC Race to Zero campaign in 2022. In the published 2018–2024 series for the Alexandria campuses, emissions in 2024 were 32.8% below the 2019 base year, which meets the 2025 interim target of at least −30%; from 2024–2025, progress is tracked against the four-campus carbon footprint baseline (Section 2). The next milestones are at least −45% by 2030 and −50% by 2040, about 25% renewable electricity by 2025 and 40% by 2040, and at least 70% of campus waste diverted from landfill by 2030. Progress against the plan is shared every year with the governorates that host AASTMT campuses, Egypt's environmental authorities and community groups.

1. Introduction

Purpose. This plan is AASTMT's framework for climate action across its operations, education, research and community engagement. It draws on the 2024 and 2025 AASTMT Insights into Energy Consumption and Carbon Emissions, including the published 2018–2024 emissions series for the Alexandria campuses, and on the four-campus Carbon Footprint Report 2024/2025. It sets targets and actions for reducing emissions, and explains how AASTMT will measure them on one consistent basis across its campuses (Section 2).

Commitment. In 2022, AASTMT joined the UNFCCC Race to Zero campaign and made a public commitment, at the highest level of leadership, to achieve net-zero greenhouse gas emissions by 2050 at the latest. The commitment is structured around the four Race to Zero pillars: Pledge, Plan, Proceed and Publish. This plan is the “Plan” pillar.

Alignment. Sustainability is one of the four core pillars of the AASTMT Strategic Plan 2021–2026. The plan is aligned with the Paris Agreement, the IPCC 1.5°C pathway, Egypt's Vision 2030 and Egypt's National Climate Change Strategy 2050.

Status at the end of 2024. In the published series for the AASTMT Alexandria campuses, total emissions were 103,863 tonnes CO_2e in 2024, 3.0% below 2023 and 32.8% below the 2019 base year of 154,594 tonnes CO_2e. This meets the 2025 interim target of at least −30% one year early.

2. Scope and methodology

AASTMT accounts for its emissions under the GHG Protocol Corporate Standard, for the organisational boundary under its operational control, covering all campuses in Egypt:

- **Scope 1 (direct):** fuel combustion in university-controlled sources and refrigerant emissions from air-conditioning and refrigeration.
- **Scope 2 (indirect, energy):** purchased electricity, reported location-based, with on-site solar generation reported alongside.

• **Scope 3 (selected categories):** waste, paper, water, and transmission and distribution (T&D) losses from purchased electricity; the wider categories of the 2024–2025 carbon footprint assessment are added as that assessment is extended to all campuses.

Net-zero boundary: the 2050 target covers Scope 1, Scope 2 and the Scope 3 categories listed here (Scope 3 partial). Carbon credits do not count towards AASTMT's reduction pathway.

Base year and baseline. The published 2018–2024 series, reported in the 2024 and 2025 AASTMT Insights, covers the AASTMT Alexandria campuses (Abu Qir, Miami, Wabour El Maya and Gianaclis); its Scope 3 covers waste, paper, water and T&D losses only, and it shows a 32.8% reduction between the 2019 base year and 2024. The 2025 AASTMT Insights reports the 2024–2025 carbon footprint assessment as a more comprehensive institutional emissions baseline across four campuses, with a wider set of Scope 3 sources. From the 2025 inventory onwards, AASTMT will report its campuses with the method of that assessment, so that progress is measured on one consistent boundary.

Emission factors, data sources, assumptions and the T&D loss percentage used each year are listed in a factor registry annexed to the annual inventory. Prior years are restated only when a change in scope, boundary or emission factors materially affects the trend, and every change is recorded in a change log. In financial year 2024–2025, AASTMT also carried out a wider carbon footprint assessment of four campuses under the GHG Protocol and ISO 14064-1, which added staff and student commuting, business travel, food and other purchased goods and services, capital goods, fertilisers and leased assets to Scope 3 (Section 3). During the period of this plan, AASTMT will extend this wider assessment to all its campuses (Section 9).

3. Baseline and progress

Year	Total emissions (tonnes CO_2e)	Change against 2019
2019 (base year)	154,594	—
2022	112,250	−27.4%
2023	107,075	−30.7%
2024	103,863	−32.8%

2024–2025 · Carbon footprint	Scope 1 (t CO_2e)	Scope 2 (t CO_2e)	Scope 3 (t CO_2e)	Total (t CO_2e)
Abu Qir, Misr El-Gedida, Smart Village and South Valley campuses	2,855	10,440	24,958	38,253

The 2019–2024 figures are for the AASTMT Alexandria campuses; the 2024–2025 figures cover four campuses and a wider set of Scope 3 sources, including commuting, business travel, food and other purchased goods and services. The breakdown by campus is given below. Between 2019 and 2024, reductions were achieved across all three scopes through refrigerant management, about 95% LED lighting, smart building management systems, on-site solar generation, and waste and paper reduction.

Carbon Footprint Report 2024/2025 by campus

Campus	Scope 1 (t CO_2e)	Scope 2 (t CO_2e)	Scope 3 (t CO_2e)	Total (t CO_2e)
Abu Qir	2,470	4,361	10,767	17,598
Misr El-Gedida	177	1,391	8,859	10,427
Smart Village	88.9	4,380	3,695	8,164

Campus	Scope 1 (t CO_2e)	Scope 2 (t CO_2e)	Scope 3 (t CO_2e)	Total (t CO_2e)
South Valley	119.2	307.8	1,637	2,064
Total, four campuses	2,855	10,440	24,958	38,253

Under the direction of the President of AASTMT, a multidisciplinary committee coordinated by the Research and Innovation Center assessed the carbon footprint of four campuses (Abu Qir, Misr El-Gedida, Smart Village and South Valley) for financial year 2024–2025, following the GHG Protocol and ISO 14064-1. It covers Scope 1 (stationary and mobile combustion and fugitive emissions), Scope 2 (purchased energy, including outsourced cooling) and a wider set of Scope 3 sources: purchased goods and services, capital goods, water and wastewater, fertilisers, staff and student commuting, waste, business travel and leased assets.

Scope 3 makes up 65% of the footprint of the four campuses, Scope 2 27% and Scope 1 8%. Emissions are 1.73 t CO_2e per student, below the global average of 2.67 t CO_2e per student cited in the report. The main sources are commuting, the Abu Qir vehicle fleet, outsourced cooling at Smart Village, food at Abu Qir and refrigerant leakage at South Valley, where solar photovoltaics meet about 23% of electricity demand. This assessment extends the inventory to a wider range of Scope 3 sources, gives a detailed picture for each campus and sets the priorities in Sections 6 to 9.

Climate action in 2025

In 2025, the year the interim target fell due, AASTMT continued to deliver the plan in operations, government partnership, capacity building and community education:

• **Government partnership (October 2025):** the President of AASTMT and the Minister of Local Development and Acting Minister of Environment reviewed future plans in waste management, renewable energy and climate change measures.

• **Regional disaster risk planning (June 2025):** AASTMT hosted the first coordination meeting of the Arab Programme for Reducing Marine Disasters, organised with the Technical Secretariat of the Disaster Risk Reduction Mechanism of the League of Arab States, with delegates of Arab countries, regional and international organisations and the European Union.

• **Energy management capacity (October 2025):** the Productivity and Quality Institute delivered training on ISO 50001:2018 requirements and internal auditing of energy management systems.

• **Energy efficiency (2024–2025):** LED replacements brought LED lighting at the Alexandria campuses to about 97% in 2025, and irrigation has run on a solar irrigation unit since 2024 (2025 AASTMT Insights).

• **Climate education for communities and professionals (2025):** programmes on renewable energy, green hydrogen, photovoltaics and e-mobility, the carbon border adjustment mechanism and multi-hazard resilience, delivered with government bodies, UN agencies, NGOs and international partners.

4. Energy performance

The AASTMT Energy Research Unit and Energy Management Committee monitor electricity consumption on all AASTMT campuses. In 2025, AASTMT used 18,585,647 kWh of electricity across its campuses in Egypt, 2.47% (470,218 kWh) less than the 19,055,865 kWh used in 2024; in 2024, consumption had already fallen by 4.3% from 19,917,470 kWh in 2023. The AASTMT Alexandria campuses (Abu Qir, Miami, Wabour El Maya and Gianaclis), which use 55% of the total, used 10,235,637 kWh in 2025, 2.5% less than in 2024; between 2018 and 2024, their consumption had fallen by 17.33% from 12,698,059 kWh. Across all campuses, electricity use per square metre fell from 25.9 kWh/m² in 2024 to 25.3 kWh/m² in 2025, for a total floor area of 735,570 m².

Campus	2024 (kWh)	2025 (kWh)	Change
Alexandria (Abu Qir, Miami, Wabour El Maya, Gianaclis)	10,498,097	10,235,637	−2.5%
El Alamein	3,813,888	3,720,650	−2.4%
Cairo (Sheraton)	1,842,493	1,797,129	−2.5%
Smart Village	1,314,292	1,281,928	−2.5%
Port Said	874,862	853,326	−2.5%
Aswan	598,169	585,722	−2.1%
Dokki	114,064	111,255	−2.5%
Total	19,055,865	18,585,647	−2.5%

At the AASTMT Alexandria campuses, efficiency work saved 474,289 kWh of electricity in 2024 compared with 2023, through upgrades to lighting, irrigation, air conditioning, and motors and equipment; irrigation has run on a solar irrigation unit since 2024, and LED replacements continued in 2025, bringing LED lighting to about 97%. All on-site solar installations generated 79,632 kWh in 2025, 4.8% more than the 75,989 kWh generated in 2024. The renewable share of AASTMT's electricity supply from the national grid reached almost 26% in 2025, up from 25.1% in 2024, and energy from low-carbon sources rose from 17,494 GJ in 2024 to 17,682.84 GJ in 2025. Total energy density, including on-site solar, fell from 0.09363 GJ/m² in 2024 to 0.09135 GJ/m² in 2025.

5. Targets

Area	Target	Year
Net zero	Net-zero greenhouse gas emissions (Scopes 1, 2 and selected Scope 3)	2050 at the latest
Total emissions	At least 30% below 2019 (achieved in 2024 in the published series for the AASTMT Alexandria campuses: −32.8%)	2025
Total emissions	At least 45% below 2019	2030
Total emissions	At least 50% below 2019	2040
Renewable electricity	About 25% of campus electricity from renewable sources (renewable share of the national grid supply: almost 26% in 2025)	2025
Renewable electricity	40% of campus electricity from renewable sources	2040
On-site solar	Campus-specific PV feasibility studies for Abu Qir, Misr El-Gedida and Smart Village; expand on-site solar and report on-site generation separately from the grid renewable share	Every year
Energy efficiency	Reduce electricity use per square metre year on year from the 2024 level of 25.9 kWh/m² (25.3 kWh/m² in 2025)	Every year
Waste	At least 70% of campus waste diverted from landfill	2030
Waste	Total waste generation reduced by 15%	Before 2030
Waste	Zero-waste campus	2049
Education	At least 90% of undergraduate and postgraduate programmes with climate and sustainability learning outcomes	Ongoing
Scope 3	Extend the wider assessment (commuting, business travel, purchased goods and services and other categories), completed for four campuses in 2024–2025, to all campuses	By 2027

6. Renewable energy adoption

The implementation priorities in Sections 6 to 10 are delivered in stages, subject to technical feasibility and annual budget approval (Section 13).

Objective. Increase the share of renewable electricity used by AASTMT to about 25% by 2025 and 40% by 2040, while growing on-site generation.

Implementation priorities

• **Operate and expand on-site PV:** maintain the existing grid-connected stations, including those at the Abu Qir and Aswan campuses, restore output wherever it falls, and add feasible rooftop and car-park structures.

• **Metered reporting:** publish two figures every year — on-site solar generation as a share of total electricity use (PV kWh ÷ total kWh), and the total renewable share including the renewable share of the national grid — with availability, downtime and performance notes.

• **O&M excellence:** standardise panel cleaning, inverter checks and fault response to maximise output and keep savings.

• **Hybrid readiness:** evaluate battery storage and other clean options to improve self-consumption and peak management, through small pilots with clear KPIs.

• **Connection and safety compliance:** keep grid interconnection, protection and permits current for all sites, with single-line diagrams and inspection logs.

• **Procurement and design standards:** use lifecycle costing, minimum performance ratios, warranty requirements and end-of-life recycling provisions in all new renewable procurement.

KPIs and reporting

• Installed on-site PV capacity (kW) and annual generation (kWh), by campus.

• On-site solar share (%) and total renewable share (%) of electricity use, reported every year.

• Low-carbon energy used (GJ).

Governance. Facilities lead delivery; the Sustainability Office verifies and reports the data.

7. Energy efficiency

Objective. Reduce campus electricity use and the associated Scope 2 emissions through sustained operations and targeted upgrades, from the 2024 baseline of 25.9 kWh/m².

Implementation priorities

• LED persistence: maintain LED coverage, which reached about 97% in 2025, and replace failures like-for-like with high-efficiency lamps and drivers.

• **BMS optimisation:** standardise scheduling, set-points, alarms and occupancy modes across major buildings, with documented quarterly tuning cycles.

• **HVAC O&M:** coil cleaning, filter regimes, refrigerant leak checks and commissioning of controls to reduce run hours and improve COP/EER.

• **Sub-metering and data use:** expand electrical sub-meters in high-load areas (HVAC, lighting, laboratories) and use interval data to find and fix anomalies.

• **Operational guidelines:** after-hours shutdown checklists, plug-load controls and default power-saving settings for IT equipment.

• **Projects pipeline:** prioritise measures with clear payback, such as variable-frequency drives on fans and pumps, economiser fixes and demand-controlled ventilation; extend the irrigation and motor savings achieved in Alexandria in 2024 to other campuses.

KPIs and reporting

• Electricity use (kWh) and kWh/m² by campus, reported quarterly; Scope 2 emissions (tonnes CO_2e).

• Verified savings (kWh) by measure: lighting, HVAC, irrigation, motors and equipment.

• BMS actions and HVAC O&M tasks completed against plan; share of metered load under sub-metering (%) and anomalies resolved per quarter.

Governance. Facilities and the Sustainability Office co-own delivery; campus leads carry out tuning and O&M under a published annual schedule.

8. Direct emissions (Scope 1)

Objective. Reduce emissions from refrigerants and university-controlled fuel use.

• **Refrigerant management:** leak prevention and detection, recorded top-ups, and phased replacement of R22 systems with lower-impact alternatives.

• **Fuel use:** improve the efficiency of generators, boilers and university-controlled vehicles, and log fuel use by source.

KPIs. Refrigerant recharged (kg) by type; fuel used (litres) by source; Scope 1 emissions (tonnes CO_2e).

9. Sustainable resource management and Scope 3

Objectives. Divert at least 70% of campus waste from landfill by 2030, reduce total waste generation by 15% before 2030 and become a zero-waste campus by 2049, prioritising reduction, reuse and high-quality recycling and organics; widen the Scope 3 inventory.

Implementation priorities

• **Standardised sorting:** campus-wide, colour-coded bins with clear signage for paper, plastics and metals, glass, e-waste, organics and residual waste, placed in high-traffic and teaching areas.

• **Organics programme:** cafeteria food-scrap collection and back-of-house separation; composting on campus or certified off-site processing with quality controls.

• **Paper-use controls:** duplex and black-and-white printing by default, digital submissions, paper purchase caps and recycled-content paper.

• **Sustainable procurement:** requirements for minimal or recyclable packaging, reusable and durable products, and producer take-back for IT, e-waste and laboratory consumables, with end-of-life provisions in contracts.

• **E-waste stewardship:** secure collection, certified data wiping and documented downstream recycling or repair.

• **Water efficiency:** routine leak audits, low-flow fixtures where feasible and meter checks.

• **Data and logistics:** weigh collections by stream and campus, track contamination rates and keep recycler and composter manifests for audit.

• **Green commuting:** introduce electric or hybrid shuttle buses for staff and students, starting at Misr El-Gedida and Smart Village; provide secure bicycle parking and incentives for cycling and car-sharing; set up a digital ride-matching platform; and work with local authorities to improve public transport to campuses, as recommended by the Carbon Footprint Report 2024/2025.

• **Fleet, cooling and refrigerants:** assess electrification of the Abu Qir vehicle fleet, improve the efficiency of chilled-water cooling at Smart Village and strengthen refrigerant management at South Valley.

• **Sustainable food and wider Scope 3:** shift campus catering towards locally sourced, seasonal and plant-based options; reduce staff air travel where alternatives exist; and extend the wider Scope 3 assessment to all campuses by 2027.

KPIs and reporting

• Diversion rate (%) and landfill (kg per full-time equivalent), quarterly by campus.

• Paper purchased (kg per FTE) and recycled content (%); organics captured (kg) and contamination rate (%).

• E-waste processed (kg) with certified downstream documentation; water use (m^3 per FTE) and corrective actions closed.

• Scope 3 categories covered in the inventory (number).

Governance. The Sustainability Office sets policy and reports; Facilities runs operations and hauling contracts; Procurement sets supplier standards and take-back. Each campus names a waste lead for training, spot checks and monthly walk-throughs.

10. Climate education and research

Academic goal. At least 90% of undergraduate and postgraduate programmes with climate and sustainability learning outcomes.

Implementation priorities

• **Curriculum mapping and updates:** keep a central map of courses with sustainability learning outcomes and refresh syllabi every year to cover climate mitigation and adaptation, energy systems, the circular economy and environmental ethics.

• **Module toolkit:** ready-to-use lecture packs, case studies and assessment rubrics for non-environmental majors, including business, IT, logistics, maritime, health and design.

• **Capstones and studios:** at least one applied sustainability project per programme, such as building efficiency audits, waste analytics, renewable micro-siting or resilience planning.

• **Graduate programmes:** sustain and strengthen climate-focused postgraduate study, with practitioner seminars and co-supervised theses.

• **Faculty development:** short clinics on SDG-aligned outcomes, systems thinking and data tools for emissions and resource analysis.

• **Research:** prioritise renewables, green hydrogen and maritime decarbonisation, sustainable transport, urban and coastal resilience, water and materials efficiency, and emissions accounting.

KPIs and reporting

• Programme coverage (%) and course coverage (%) with assessed sustainability outcomes.

• Applied projects per year; faculty completing integration clinics; student research outputs.

• Practitioner talks and clinics delivered with industry, government or NGOs.

Governance. The Vice President for Education sets policy; deans and programme directors deliver; the Sustainability Office provides toolkits, KPIs and the annual audit; the Research Office supports student projects and dissemination. Programme accreditation cycles include a sustainability checkpoint.

11. Sharing the plan with local government and community groups

Objective. Share this plan, its targets and its progress with local government and community groups, and work with them so that AASTMT's climate action supports the cities and communities that host its campuses.

11.1

Publishing the plan

- The plan, the annual greenhouse gas inventory and the progress report are published on the AASTMT website and announced on AASTMT's official channels.

11.2

Local and national government

- Each year the plan and its progress are presented to at least one host governorate, rotating among Alexandria, Port Said, Matrouh, Aswan, Cairo and Giza, and to the Egyptian Environmental Affairs Agency.
- AASTMT works with the Ministry of Environment and the Ministry of Local Development on climate action. This builds on the roadmap agreed with the Minister of Environment in October 2024 — capacity building for ministry climate change units, a Climate Change Information Centre and the “Together to Reduce Carbon” initiative — and on the waste management, renewable energy and climate measures reviewed with the Minister of Local Development and Acting Minister of Environment in October 2025.

11.3

Community groups

- An annual stakeholder workshop shares the plan with community groups and NGOs, including AASTMT's partners in climate education and renewable energy training, and collects their feedback.
- Partnership MOUs with municipalities and NGOs for urban greening, waste systems, flood-risk preparedness and energy awareness.
- Climate workshops for residents, school leaders and small businesses on waste reduction, energy efficiency, water conservation and sustainable mobility.
- Joint resilience projects such as neighbourhood tree planting, drainage clean-up and mapping, community recycling hubs and household energy audits.
- Student service-learning: waste audits, PV pre-feasibility studies and energy awareness in public buildings, coordinated with the Sustainability Office.
- Small grants with partners for pilot projects such as organics, micro-forests and school retrofits.

11.4

Recording and feedback

- Each presentation is recorded with its date, the organisations attending and the feedback received. A summary is published on the AASTMT website and the feedback is considered in the annual review of the plan.

KPIs and reporting

• Presentations of the plan to government bodies and community groups (number, with organisations attending).

• Active partnerships and MOUs signed or renewed; workshops delivered and participants reached per semester.

• Joint projects completed with quantified outputs (trees planted, bins installed, drains cleared, households audited); student service-learning hours.

• A semester engagement dashboard summarising activities and outcomes.

Governance. The Sustainability Office coordinates and Public Relations and Outreach supports; the Deanship of Student Affairs manages student participation; faculties supervise service-learning; municipal and NGO focal points co-lead delivery. An annual partnership review assesses results and sets the next year's engagement calendar.

12. Action plan

Objective	Action	Target	Timeline	Responsible
Net zero	Annual GHG inventory against 2019; progress report	−45% by 2030; −50% by 2040; net zero by 2050	Every year; first all-campus inventory (2025 data) by 2027	Sustainability Office
Renewable energy	Report on-site PV kWh and total renewable share; expand PV	~25% by 2025 (grid renewable share almost 26% in 2025); 40% by 2040	Each semester (on-site PV data); every year (renewable share in the progress report)	Facilities
Energy efficiency	BMS tuning, HVAC O&M, sub-metering; report kWh/m²	Year-on-year decline from 25.9 kWh/m² (2024); 25.3 kWh/m² in 2025	Every quarter (kWh/m² by campus); each semester (BMS and HVAC tuning)	Facilities and Campus Operations
Direct emissions	Refrigerant leak prevention; R22 replacement; fuel logs	Year-on-year Scope 1 decline	Every month (refrigerant and fuel logs); every year (Scope 1 total in the inventory)	Facilities
Resources and waste	Weigh streams; track diversion and contamination	≥70% diversion by 2030	Every month (weighing); each semester (diversion rate); every year (total)	Campus Services and Procurement
Scope 3	Wider carbon footprint assessment of all campuses; green commuting programme	All campuses by 2027	All-campus assessment and green commuting plan by 2027	Research and Innovation Center; Sustainability Office
Education and research	Track programme coverage and student outputs	≥90% of programmes	Every year	Academic Affairs and Research Office
Government and community	Present the plan; workshops, MOUs, joint projects; record feedback	At least one presentation to government and one stakeholder workshop each year	First presentation within the first year after approval; then every year (one government presentation and one stakeholder workshop)	Sustainability Office; Public Relations and Outreach
Reporting	Publish progress report, dashboard and change log	Annual publication	Every year; dashboard updated each semester	Sustainability Office

13. Funding and resources

Objective. Provide stable, diversified financing to deliver AASTMT's climate targets and priority projects.

Funding streams

• **Public and multilateral:** national and municipal grants, regional programmes, international cooperation projects such as EU Erasmus+, and multilateral climate funds where eligible.

• **Industry and philanthropy:** partnerships, sponsorships and gifts aligned with research, student projects and community initiatives.

• **Performance-based savings:** verified savings from LED, BMS, HVAC, irrigation and waste-diversion projects are reinvested in efficiency and renewables (a revolving fund).

• **Research and education grants:** competitive funding for applied research, curriculum innovation and service-learning.

Allocation priorities

• **On-site renewables:** PV expansion, O&M and small storage pilots.

• **Energy efficiency:** BMS tuning, HVAC O&M, sub-metering and high-return retrofits that reduce Scope 2.

• **Resources and waste:** sorting infrastructure, organics pilots, take-back schemes and contamination reduction.

• **Education, research and engagement:** course toolkits, capstone support, laboratories and community partnerships.

Process and controls

• **Annual climate budget call:** one cycle each year, before the start of the financial year; projects ranked by impact (tonnes CO_2e reduced), payback and strategic fit.

• **Gate reviews:** concept, feasibility (technical and permits), funding approval, measurement and verification plan (kWh, kg, m^3, tonnes CO_2e), and close-out.

• **Procurement standards:** lifecycle costing, performance guarantees, O&M plans, warranties and end-of-life provisions.

• **Documentation:** a central repository of grants, contracts, measurement and verification results and reinvested savings.

KPIs and reporting

• Funds secured per year by source, and share of the plan funded (%).

• Capital deployed and projects delivered by pillar; measured outcomes (tonnes CO_2e reduced, kWh saved, diversion %, water saved) and simple payback achieved.

• Reinvestment rate (%): share of verified savings returned to the revolving fund.

14. Monitoring and reporting

Objective. Transparent, audit-ready tracking of AASTMT's climate actions and outcomes.

Core practices

• **Annual GHG inventory** for Scopes 1, 2 and selected Scope 3 with the same boundary and methods each year, with the factor registry and methods note.

• **Data quality:** monthly data checks for completeness and outliers, quarterly internal reviews, and independent review of the inventory every two years from the 2026 inventory onwards, subject to budget approval.

• **Reporting cadence:** a semester dashboard (scope totals, kWh/m², renewable share, diversion, paper and water KPIs) and an annual progress report on outcomes and next actions, published on the AASTMT website.

• **Change management:** document control and the restatement rule in Section 2, with a one-line change log.

Roles

Role	Responsibilities
SDGs Workforce Committee	Approves the plan and any change to its targets.
Dean of Scientific Research for Maritime Affairs	Owns the plan and signs it on behalf of AASTMT.
Sustainability Office	Owns the emissions method, data quality, dashboards and the annual progress report; verifies renewable-energy data; coordinates sharing the plan with government and community groups.
Research and Innovation Center	Leads the wider carbon footprint assessment and its extension to all campuses.
AASTMT Energy Research Unit and Energy Management Committee	Electricity metering, energy analysis and the annual energy insights report.
Facilities and Campus Operations	Deliver renewable-energy, efficiency, refrigerant and fuel measures; provide energy, refrigerant, fuel, waste and water data; take corrective actions.
Campus Services and Procurement	Run waste sorting and hauling contracts; set supplier standards, packaging and take-back requirements.
Procurement and IT	Data capture (sub-metering, invoices, asset logs) and archiving.
Academic Affairs and Research Office	Track programme coverage, curriculum integration and student research outputs.
Deanship of Student Affairs	Manages student participation and service-learning.
Public Relations and Outreach	Supports presentations of the plan, workshops and stakeholder feedback.

15. Review and updates

A Review Program

Item	Detail
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