SDG
07
AFFORDABLE AND CLEAN ENERGY

EVIDENCE DOCUMENT | INDICATOR 7.2.5

Energy reviews to identify areas where energy wastage is highest

METRIC 7.2 University measures towards affordable and clean energy

REFERENCE YEAR	COVERAGE	DATE PREPARED
Undertaken in 2025	All campuses and constituent units; buildings, blocks and meters	5 November 2026

ISSUING OFFICE	EVIDENCE ID
Directorate of Quality Assurance, Head Office	E-07-7.2.5

THE SIR 2027 REQUIREMENT

Does your university as a body undergo energy reviews to identify areas where energy wastage is highest?

01 Statement of Evidence

Bahria University's direct answer to the requirement

Yes. Bahria University as a body undergoes energy reviews to identify the areas where energy consumption and inefficiency are highest. Its Strategic Management Plan, under Objective 5.9 on maintaining efficient consumption of energy, has required since 2020-21 a review every year at each campus to identify the buildings and blocks with higher energy consumption rates (KPI 5.9.3), and the campuses report the review each year: in 2024-25 it was conducted at the Karachi and Lahore campuses, the Institute of Professional Psychology and the Health Sciences campus, Karachi, the Karachi campus reviewing its buildings and blocks together with a solarization feasibility study, and in 2025-26 at the Institute of Professional Psychology and both Health Sciences campuses. The Health, Safety and Environment (HSE) Policy, whose register records editions in 2021, November 2025 and July 2026, requires annual energy audits with defined efficiency benchmarks (para 6.2(d)) and annual environmental audits with footprint calculation and cost-benefit analysis (para 6.21(d)), within an Environmental Management Plan that each campus prepares, implements and audits in a cycle of measurement, monitoring and audit (paras 6.3 to 6.6). On 24 November 2025 the Rector directed comprehensive energy audits of all campuses and facilities, analysing real-time data on electricity, heating, cooling and equipment use to identify inefficiencies, with follow-up audits. The carbon footprint mapping led by the University's Center of Research Excellence in Climate Finance (CORE-CF) produced a hotspot analysis, and its 2024-25 inventory shows that three campus units account for 75.7 per cent of the emissions from purchased electricity. Consumption is metered and recorded every month, by meter at the Islamabad E-8 campus, where the block housing the Head Office, Business School and BIC is

the largest consumer in every month. The Sustainability and Climate Action Policy, effective 7 December 2025, schedules energy audits for 2025-2026 and quarterly internal audits of sustainability performance.

02 Evidence and Activity Record

Dated facts and records that substantiate the statement

Section 1 presents the annual review of buildings with higher energy consumption required by the University's Strategic Management Plan and the results reported by the campuses. Section 2 presents the HSE Policy, with its amendment register, from its cover through its complete table of contents, followed by the pages cited, and Section 3 the Rector's energy audit directive of November 2025. Section 4 presents, in the same form, the Sustainability and Climate Action Policy. Section 5 presents the hotspot analysis of the University's carbon footprint mapping, Section 6 the metering records that show where and when consumption is highest, and Section 7 summarises the evidence against each element of the requirement.

TABLE 1 Energy reviews to identify areas where energy wastage is highest, undertaken in 2025

No.	Element	Record	Provision	Date	Evidence
1	Annual review required	Review every year at each campus to identify the buildings and blocks with higher energy consumption rates	Target 1 (review conducted) in every year to 2029-30	Since 2020-21	Strategic Management Plan, KPI 5.9.3
2	Reviews reported	Review conducted at BUKC, BULC, IPP and BUHS-KHI (2024-25) and at IPP, BUHS-KHI and BUHS-ISB (2025-26)	University level 0.67 and 0.50	2024-25; 2025-26	Section 1
3	Review record	Karachi campus: energy consumption review of its buildings and blocks to identify higher rates, with a solarization feasibility study	BUKC	2024-25	Strategic Management Plan, KPI 5.9.3, details
4	Audit requirement	Annual energy audits with defined efficiency benchmarks; annual environmental audits with footprint calculation and cost-benefit analysis	All campuses	2025 edition; reviewed 22 Jul 2026	HSE paras 6.2(d) and 6.21(d)
5	Audit cycle and monitoring	Each campus prepares, implements and audits its Environmental Management Plan; checking through measurement, monitoring and audits; monitoring by Earth and Environment Sciences; environmental data consolidated across campuses	Campus Directors	2025 edition; reviewed 22 Jul 2026	HSE paras 6.3 to 6.6 and 6.22 to 6.24
6	Energy audits directed	Comprehensive energy audits of all campuses and facilities; real-time data on electricity, heating, cooling and equipment use; inefficiencies identified; follow-up audits	Director Admin	24 Nov 2025	Rector's Action Points, item 7
7	Audit schedule	Energy audits and solar feasibility studies in 2025-2026; quarterly internal audits of sustainability performance	Quarterly	Effective 7 Dec 2025	SCAP, Pillar 1 timeline and para 8.4

No.	Element	Record	Provision	Date	Evidence
8	Hotspot analysis	Carbon footprint mapping for fiscal years 2022 to 2025 with greenhouse gas inventory and hotspot analysis; purchased electricity emissions by campus unit	3,554.18 tCO2e, Scope 2	2024-25	CORE-CF; Section 5
9	Metering	Monthly consumption recorded by campus and by meter: four meters at the Islamabad E-8 campus; automated meter at Health Sciences, Islamabad	Monthly	2025	Section 6
10	Highest-use areas identified	Three campus units with 75.7 per cent of Scope 2 emissions; Head Office, Business School and BIC meter highest at E-8 in every month; peak in September	Campus, block and month	2024-25; 2025	Sections 5 and 6

1. Strategic Management Plan: annual review of buildings with higher energy consumption

The University's Strategic Management Plan sets objectives and key performance indicators (KPIs) for each theme, with a target for each fiscal year from 2020-21 to 2029-30, and records the progress reported by each campus against them. Under Theme 5, Conducive Infrastructure, Objective 5.9 is to adopt advanced and secure construction and maintenance practices in line with the standards of the relevant local regulatory bodies, while maintaining efficient consumption of energy and protecting the environment.

KPI 5.9.3 requires the conduct of a review at each campus to identify the buildings and blocks with higher energy consumption rates, recorded as 1 when the review is conducted, with a target of 1 in every year from 2020-21 to 2029-30 (Table 2). It operates alongside KPI 5.9.4, which targets a reduction in the electricity requirement of each building or block through renewable energy and energy-efficient systems, of 12.5 per cent in 2025-26 rising to 20 per cent by 2029-30. The University-level value of KPI 5.9.3 is the share of campus units reporting the review, and it has been reported in every year since 2021-22.

Table 2: Strategic Management Plan, KPI 5.9.3, review to identify buildings and blocks with higher energy consumption rates: annual targets and University-level progress

Fiscal year	Target (review conducted = 1)	University-level progress
2020-21	1	0.00
2021-22	1	0.20
2022-23	1	0.60
2023-24	1	0.40
2024-25	1	0.67
2025-26	1	0.50
2026-27	1	Not yet due
2027-28	1	Not yet due
2028-29	1	Not yet due
2029-30	1	Not yet due

1. Strategic Management Plan (continued): reviews reported by the campuses

The campuses report the review each year (Table 3). In 2024-25 it was reported by four of the six campus units, the Karachi and Lahore campuses, the Institute of Professional Psychology and the Health Sciences campus, Karachi, and in 2025-26 by three, the Institute of Professional Psychology and the Health Sciences campuses at Karachi and Islamabad. The Institute of Professional Psychology and the Health Sciences campus, Karachi, have reported the review in each of the last three years.

Table 3: Strategic Management Plan, KPI 5.9.3: review reported by campus (1 = review conducted)

Campus unit	2023-24	2024-25	2025-26
Islamabad Campus (BUIC)	0	0	0
Karachi Campus (BUKC)	0	1	0
Lahore Campus (BULC)	0	1	0
Institute of Professional Psychology (IPP)	1	1	1
Health Sciences, Karachi (BUHS-KHI)	1	1	1
Health Sciences, Islamabad (BUHS-ISB)	Not listed	0	1
University level	0.40	0.67	0.50

The details recorded for 2024-25 state the scope of the review at the Karachi campus: “The energy consumption review has been conducted to identify higher rates (as well as Solarization feasibility study) in buildings/blocks on campus.” The record appears both at University level and in the campus entry (Figures 4 and 5).

In the Strategic Management Plan, BUIC is the Islamabad Campus, BUKC the Karachi Campus, BULC the Lahore Campus, IPP the Institute of Professional Psychology, and BUHS-KHI and BUHS-ISB the Health Sciences campuses at Karachi and Islamabad. The fiscal year runs from July to June. Figures 1 to 8 reproduce the Strategic Management Plan records, captured on 4 November 2026.

1. Strategic Management Plan (continued): fiscal year 2024-25

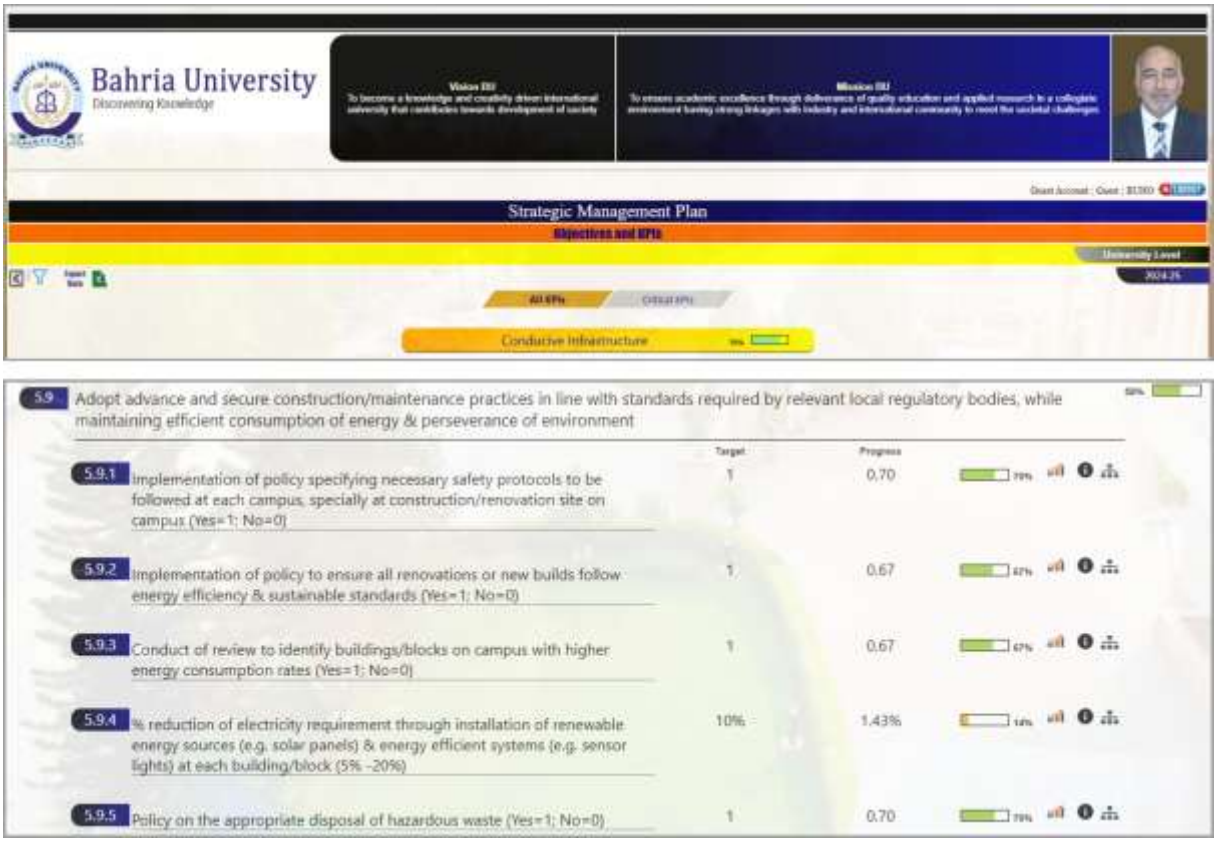


Figure 1: Strategic Management Plan, Objectives and KPIs, University Level, fiscal year 2024-25: Theme 5, Conducive Infrastructure (top); Objective 5.9 with KPIs 5.9.1 to 5.9.5, including KPI 5.9.3, review to identify buildings and blocks with higher energy consumption rates (bottom).

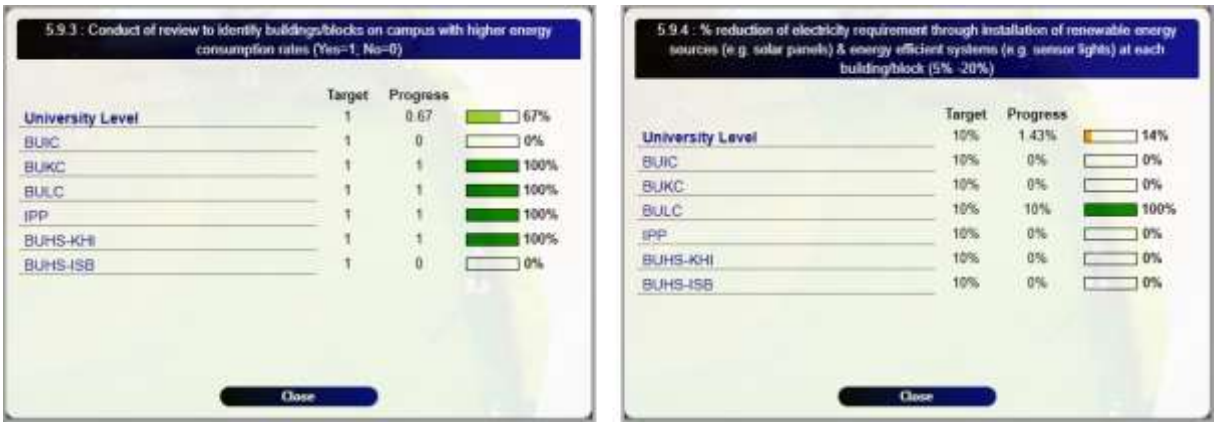


Figure 2: Strategic Management Plan, fiscal year 2024-25, progress by campus: KPI 5.9.3 (left), review conducted at BUKC, BULC, IPP and BUHS-KHI, University level 0.67; KPI 5.9.4 (right).

1. Strategic Management Plan (continued): KPI 5.9.3 details, fiscal year 2024-25



Figure 3: Strategic Management Plan, KPI 5.9.3, fiscal year 2024-25: details panel with the progress of each campus unit and the link to its details.

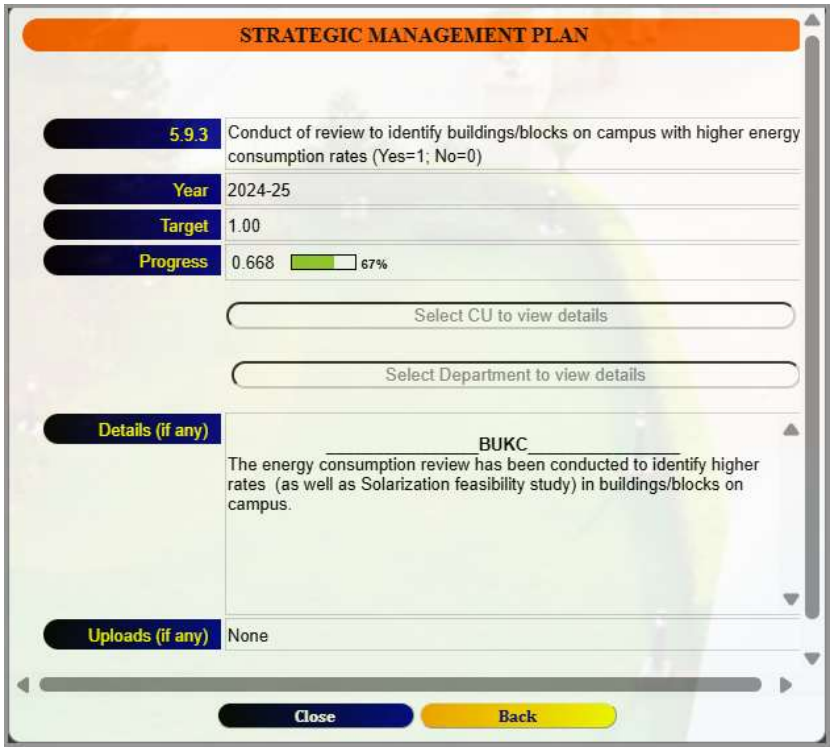


Figure 4: Strategic Management Plan, KPI 5.9.3, fiscal year 2024-25, University Level: target 1.00, progress 0.668, with the details recorded for BUKC.

1. Strategic Management Plan (continued): KPI 5.9.3 details, Karachi campus

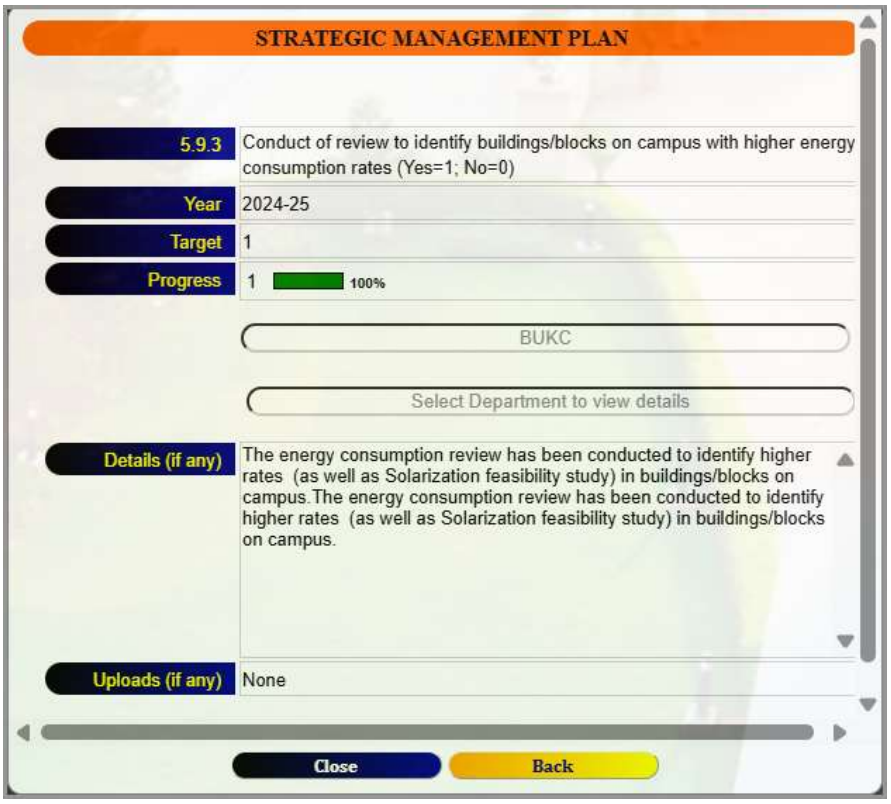


Figure 5: Strategic Management Plan, KPI 5.9.3, fiscal year 2024-25, BUKC: target 1, progress 1 (100 per cent); details: energy consumption review conducted to identify higher rates in buildings and blocks on campus, with a solarization feasibility study.

1. Strategic Management Plan (continued): fiscal year 2025-26

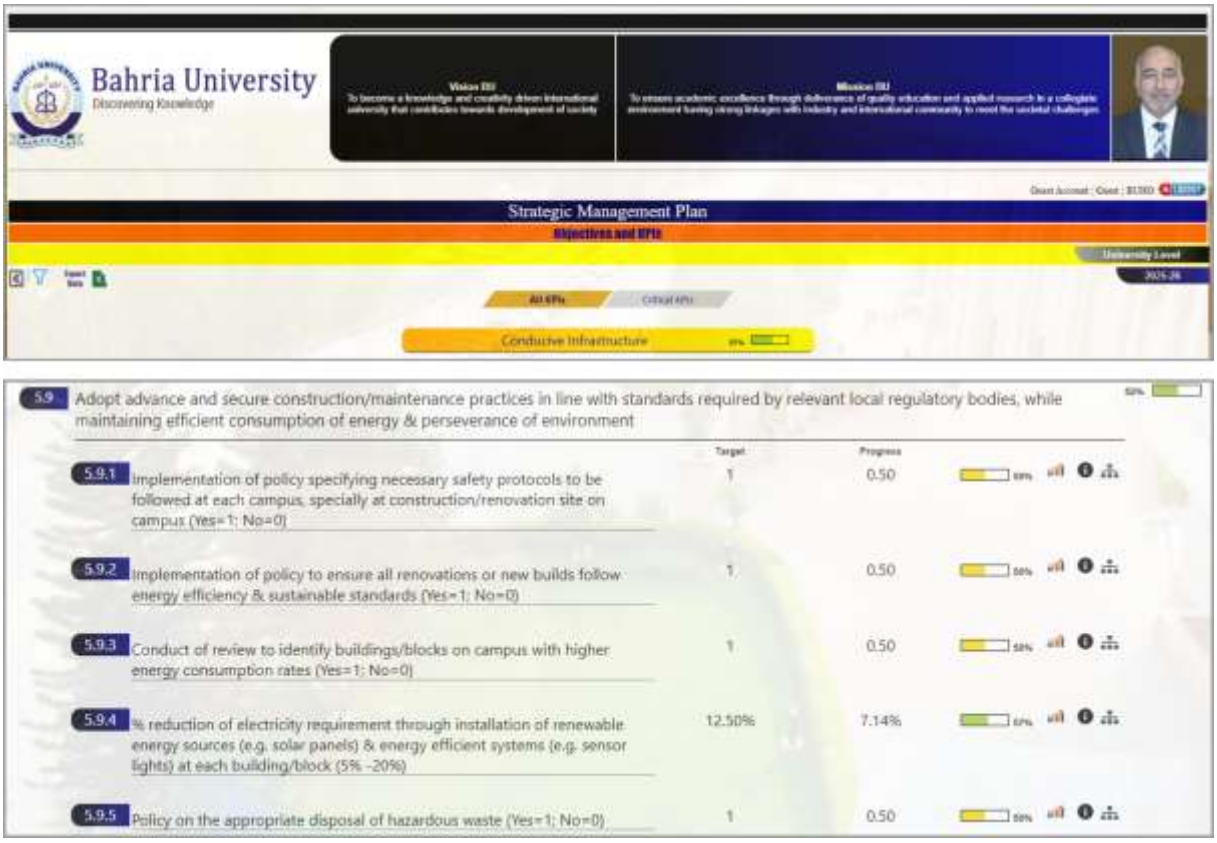


Figure 6: Strategic Management Plan, Objectives and KPIs, University Level, fiscal year 2025-26: Theme 5, Conducive Infrastructure (top); Objective 5.9 with KPIs 5.9.1 to 5.9.5 (bottom).

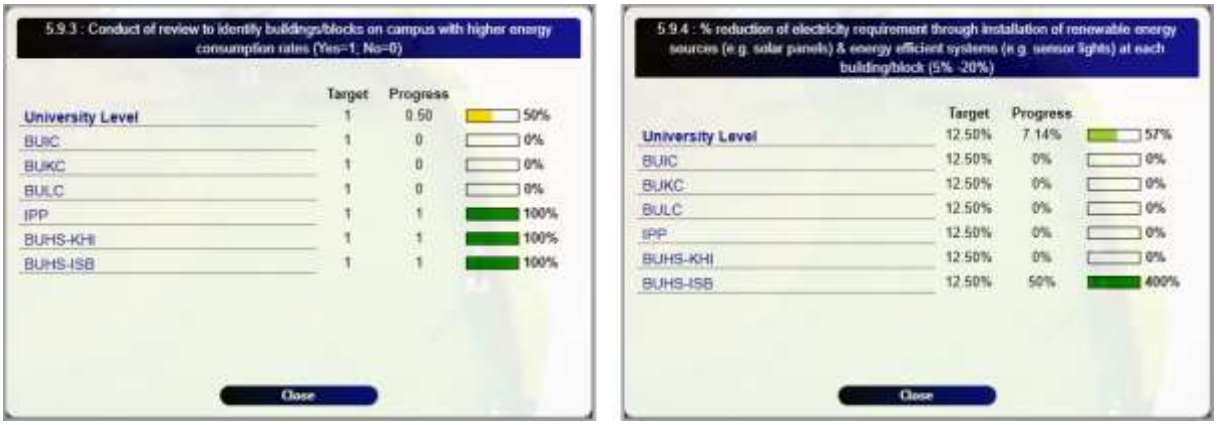


Figure 7: Strategic Management Plan, fiscal year 2025-26, progress by campus: KPI 5.9.3 (left), review conducted at IPP, BUHS-KHI and BUHS-ISB, University level 0.50; KPI 5.9.4 (right).

1. Strategic Management Plan (continued): ten-year view

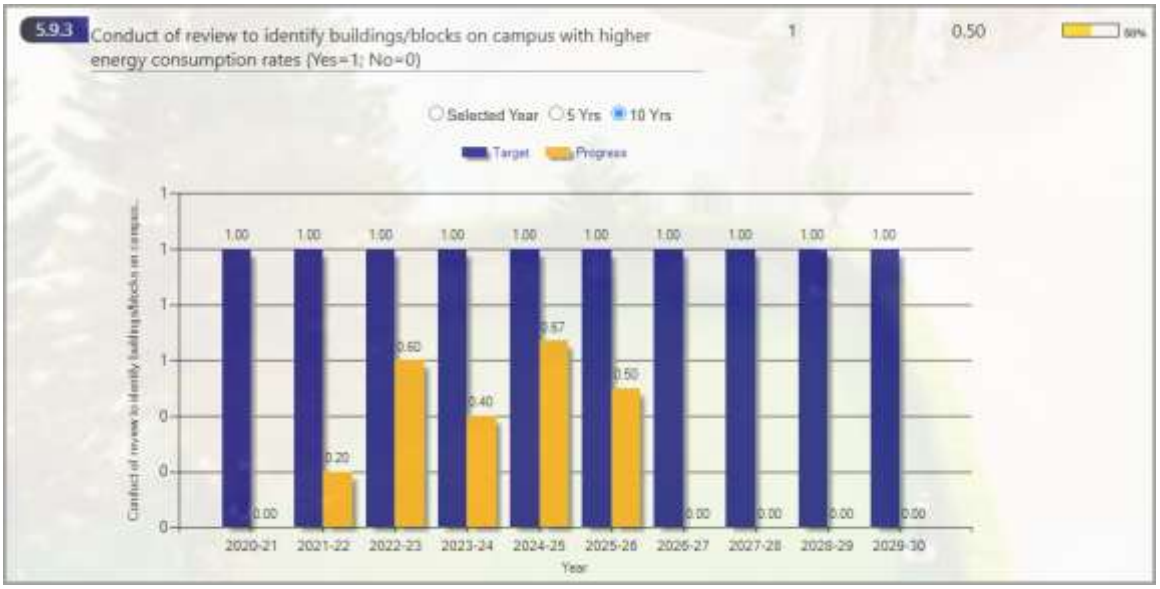


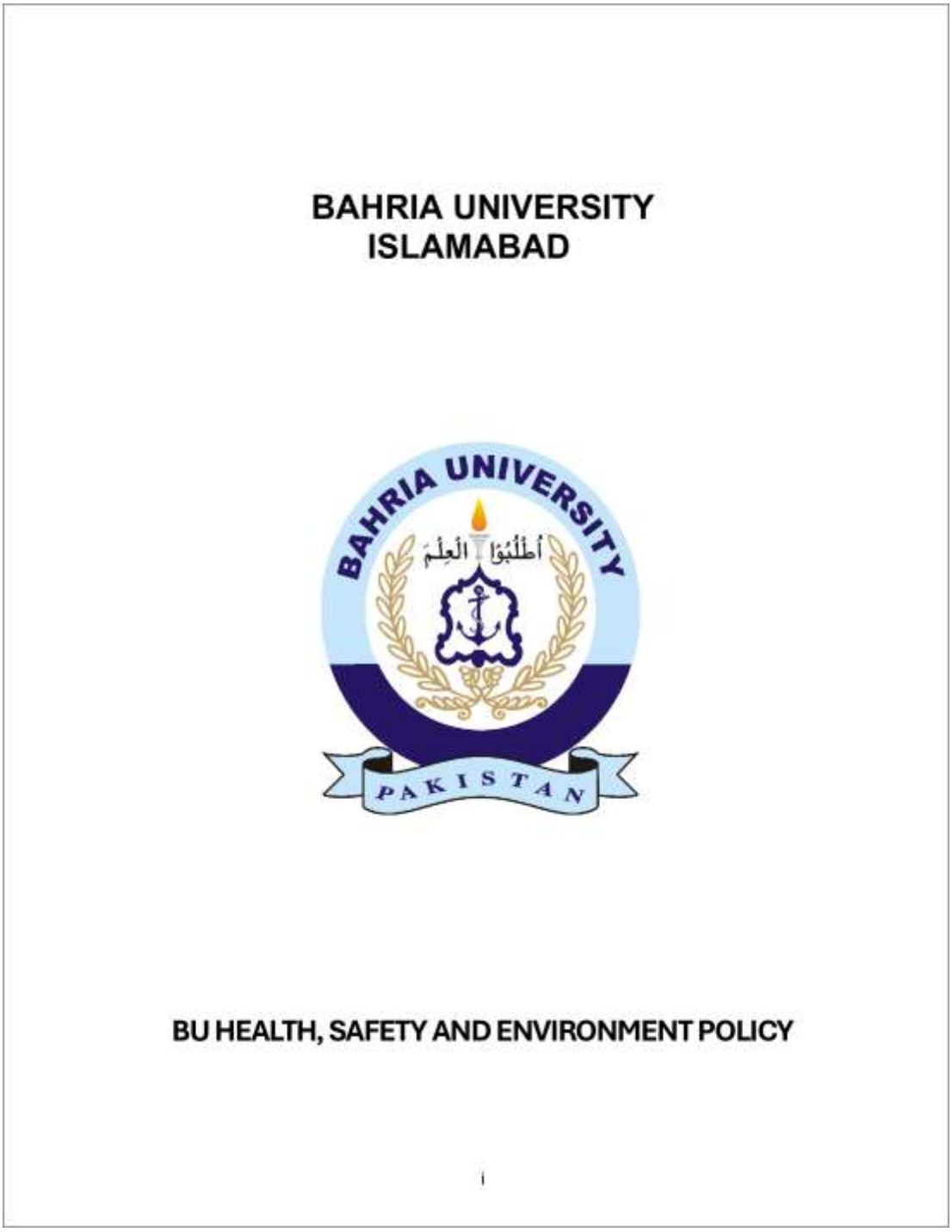
Figure 8: Strategic Management Plan, KPI 5.9.3, ten-year view: a review of buildings and blocks with higher energy consumption targeted in every year from 2020-21 to 2029-30, and the University-level progress reported from 2021-22 (0.20) to 2025-26 (0.50).

2. HSE Policy: energy audits and environmental audits

The HSE Policy amendment register records the first edition of 15 November 2021, a second edition of 22 November 2025 under the Director Admin, and a third edition of 22 July 2026 (BU-HO/Admin/2026/827). The current third edition is reproduced below; its wording is presented as the reviewed 2026 policy, separately from the dated review, audit and metering records. The policy applies to all premises, operations and activities under University control (para 1.3), including the Head Office, campuses and constituent units (para 1.6).

Annual energy audits are to be conducted with defined efficiency benchmarks (para 6.2(d)). Each Campus Director is responsible for the preparation, implementation and audit of the campus Environmental Management Plan, with support from the Earth and Environment Sciences departments (para 6.3). The plan runs as a cycle of planning, implementation, checking and corrective action, and management review, in which the checking stage comprises measurement and monitoring, records and audits (flow chart, para 6.4); it is to highlight the environmental aspects of University operations, manage their impact and maintain a continuous improvement loop (para 6.5(e) and (f)), and its scope includes green energy (para 6.7(d)). Overall monitoring rests with the Earth and Environment Sciences departments (paras 6.6(b) and 6.22). Annual environmental audits of units, with the calculation of environmental footprints and a cost-benefit analysis, revise the plan (para 6.21(d)). All campuses forward environmental data to the Head Office, with the Head of the Center of Excellence supporting data consolidation, reporting coordination and internal follow-up across campuses (para 6.23), and Campus Directors monitor the implementation of the policy parameters (para 6.24(c)).

2. HSE Policy (continued)


BAHRIA UNIVERSITY
ISLAMABAD

BAHRIA UNIVERSITY
أُطْلُبُوا الْعِلْمَ
PAKISTAN

BU HEALTH, SAFETY AND ENVIRONMENT POLICY

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Figure 9: HSE Policy, third edition, PDF page 1: cover.

2. HSE Policy (continued)

RECORD OF AMENDMENTS

Amendment No	Dated	Authority	Clause (s) Amended	Status
1st Edition	15 Nov 2021	Admin/Safety/2021/3224	-	superseded
2nd Edition	22 Nov 2025	Director Admin	Para 6.17 (second sentence added); Para 6.17.3 (new); Para 6.20.1 (new)	New Print
3rd Edition	22 July 2026	BU-HO/Admin/2026/827	Para 6.17 (second	New Print

Note: Amendments are to be recorded, cross-checked and their incorporation in the document authenticated (with name, designation, and signatures).

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Figure 10: HSE Policy, third edition, PDF page 2: Record of Amendments: first edition 15 November 2021; second edition 22 November 2025; third edition 22 July 2026.

2. HSE Policy (continued)

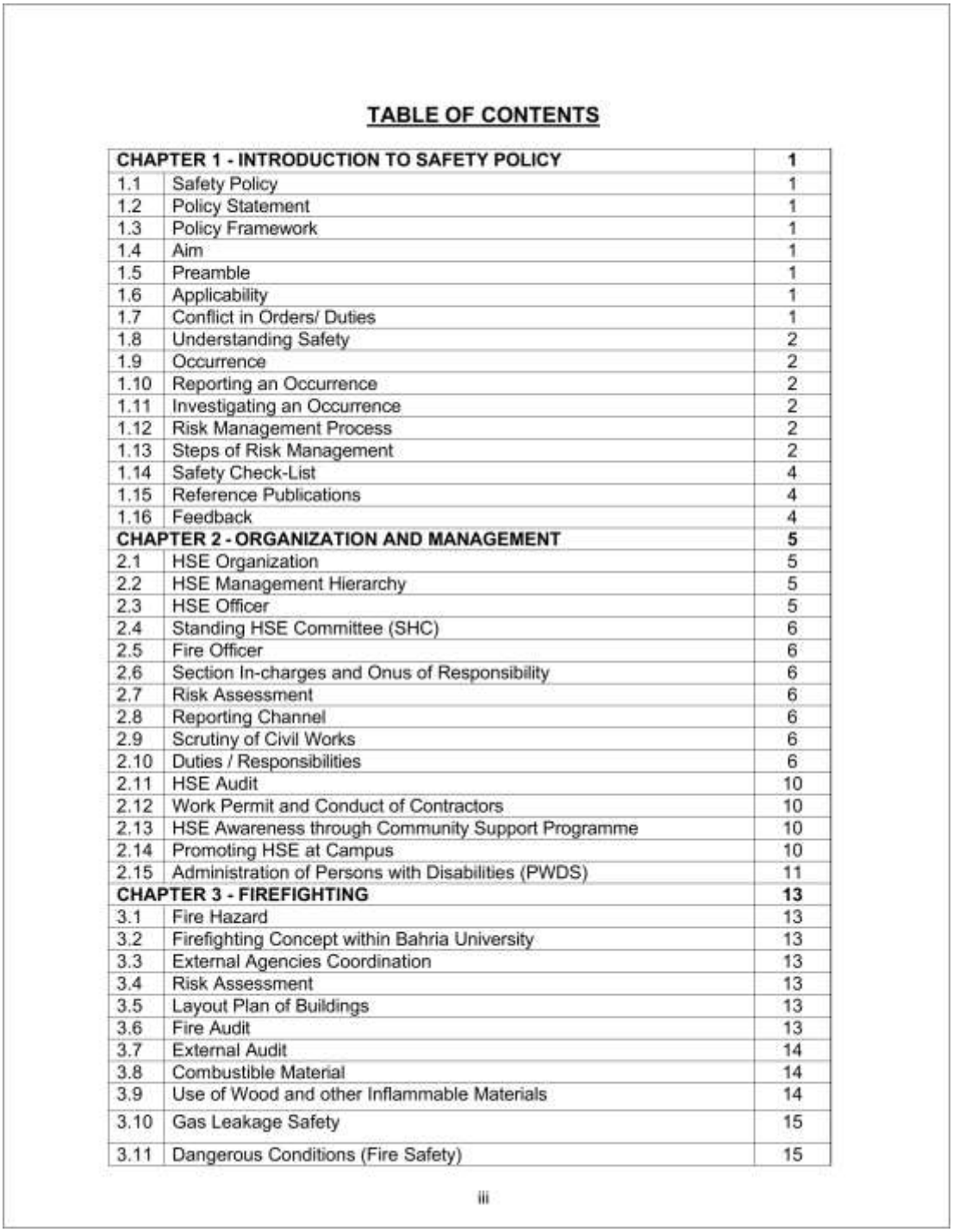


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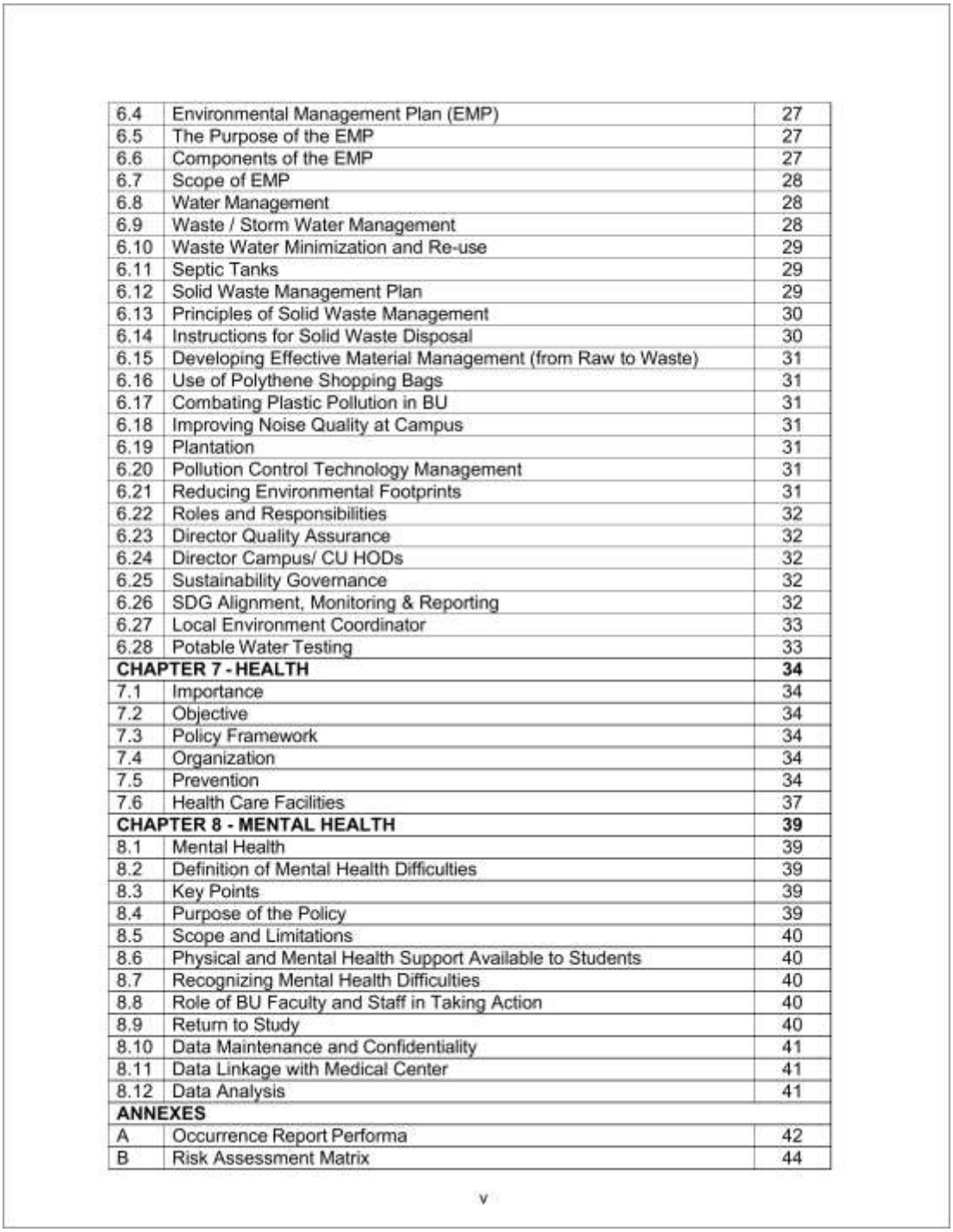
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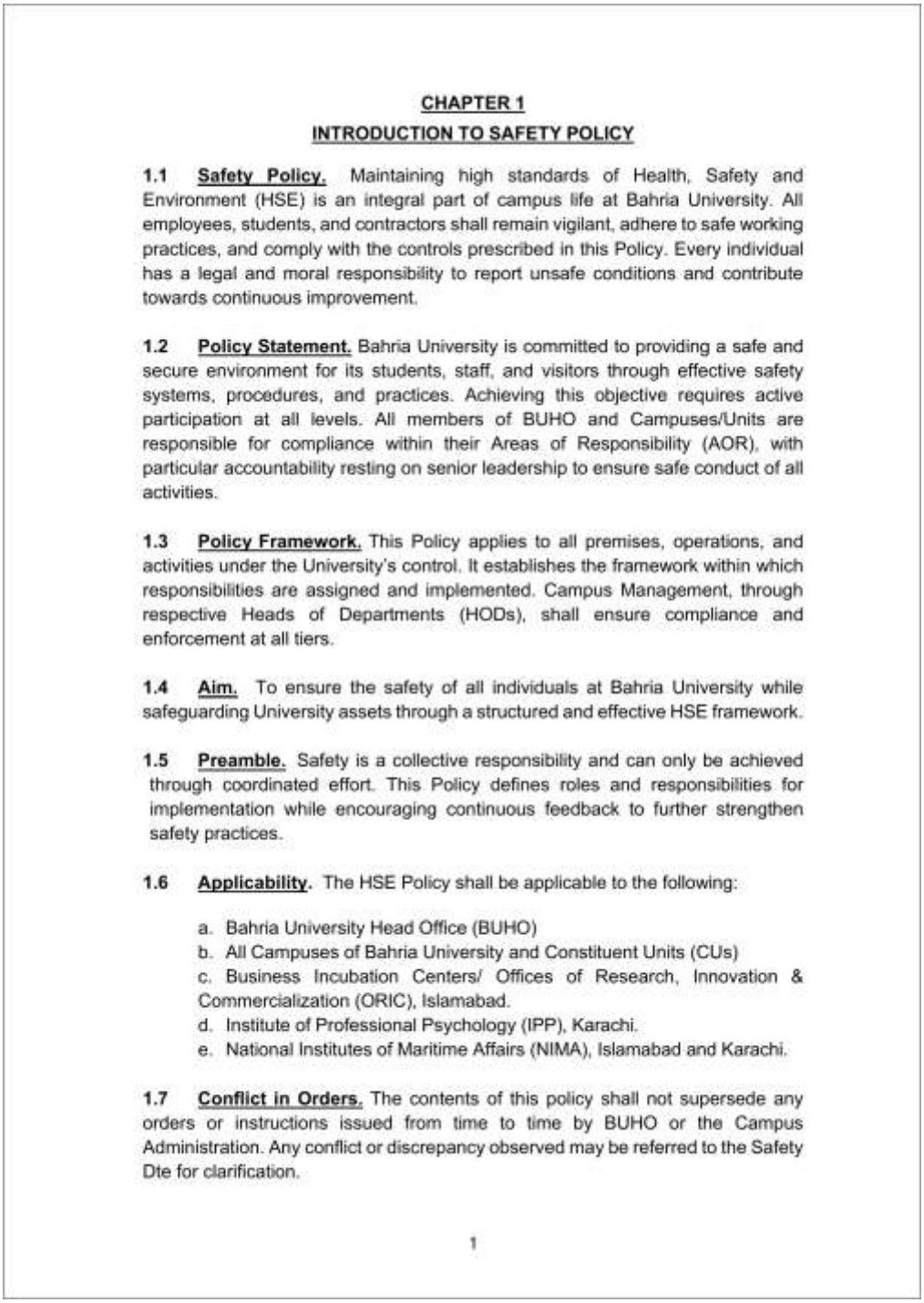
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CHAPTER 1

INTRODUCTION TO SAFETY POLICY

1.1 Safety Policy. Maintaining high standards of Health, Safety and Environment (HSE) is an integral part of campus life at Bahria University. All employees, students, and contractors shall remain vigilant, adhere to safe working practices, and comply with the controls prescribed in this Policy. Every individual has a legal and moral responsibility to report unsafe conditions and contribute towards continuous improvement.

1.2 Policy Statement. Bahria University is committed to providing a safe and secure environment for its students, staff, and visitors through effective safety systems, procedures, and practices. Achieving this objective requires active participation at all levels. All members of BUHO and Campuses/Units are responsible for compliance within their Areas of Responsibility (AOR), with particular accountability resting on senior leadership to ensure safe conduct of all activities.

1.3 Policy Framework. This Policy applies to all premises, operations, and activities under the University's control. It establishes the framework within which responsibilities are assigned and implemented. Campus Management, through respective Heads of Departments (HODs), shall ensure compliance and enforcement at all tiers.

1.4 Aim. To ensure the safety of all individuals at Bahria University while safeguarding University assets through a structured and effective HSE framework.

1.5 Preamble. Safety is a collective responsibility and can only be achieved through coordinated effort. This Policy defines roles and responsibilities for implementation while encouraging continuous feedback to further strengthen safety practices.

1.6 Applicability. The HSE Policy shall be applicable to the following:

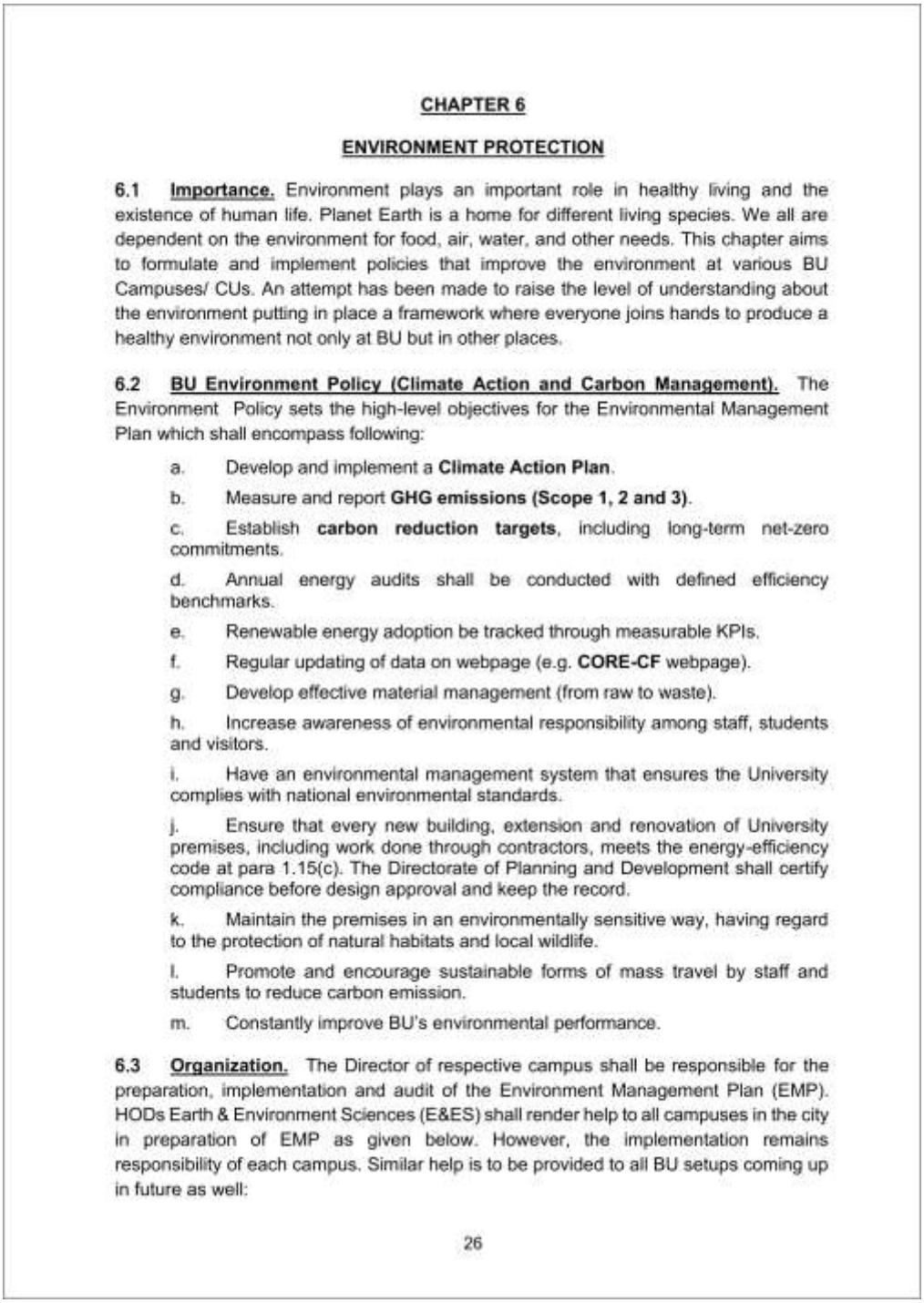
a. Bahria University Head Office (BUHO)
b. All Campuses of Bahria University and Constituent Units (CUs)
c. Business Incubation Centers/ Offices of Research, Innovation & Commercialization (ORIC), Islamabad.
d. Institute of Professional Psychology (IPP), Karachi.
e. National Institutes of Maritime Affairs (NIMA), Islamabad and Karachi.

1.7 Conflict in Orders. The contents of this policy shall not supersede any orders or instructions issued from time to time by BUHO or the Campus Administration. Any conflict or discrepancy observed may be referred to the Safety Dte for clarification.

1

Figure 15: HSE Policy, third edition, PDF page 7, printed page 1: paras 1.1 to 1.7, including all premises, operations and activities (1.3) and applicability to the Head Office, campuses and constituent units (1.6).

2. HSE Policy (continued): pages cited



CHAPTER 6

ENVIRONMENT PROTECTION

6.1 **Importance.** Environment plays an important role in healthy living and the existence of human life. Planet Earth is a home for different living species. We all are dependent on the environment for food, air, water, and other needs. This chapter aims to formulate and implement policies that improve the environment at various BU Campuses/ CUs. An attempt has been made to raise the level of understanding about the environment putting in place a framework where everyone joins hands to produce a healthy environment not only at BU but in other places.

6.2 **BU Environment Policy (Climate Action and Carbon Management).** The Environment Policy sets the high-level objectives for the Environmental Management Plan which shall encompass following:

a. Develop and implement a **Climate Action Plan**.

b. Measure and report **GHG emissions (Scope 1, 2 and 3)**.

c. Establish **carbon reduction targets**, including long-term net-zero commitments.

d. Annual energy audits shall be conducted with defined efficiency benchmarks.

e. Renewable energy adoption be tracked through measurable KPIs.

f. Regular updating of data on webpage (e.g. **CORE-CF** webpage).

g. Develop effective material management (from raw to waste).

h. Increase awareness of environmental responsibility among staff, students and visitors.

i. Have an environmental management system that ensures the University complies with national environmental standards.

j. Ensure that every new building, extension and renovation of University premises, including work done through contractors, meets the energy-efficiency code at para 1.15(c). The Directorate of Planning and Development shall certify compliance before design approval and keep the record.

k. Maintain the premises in an environmentally sensitive way, having regard to the protection of natural habitats and local wildlife.

l. Promote and encourage sustainable forms of mass travel by staff and students to reduce carbon emission.

m. Constantly improve BU's environmental performance.

6.3 **Organization.** The Director of respective campus shall be responsible for the preparation, implementation and audit of the Environment Management Plan (EMP). HODs Earth & Environment Sciences (E&ES) shall render help to all campuses in the city in preparation of EMP as given below. However, the implementation remains responsibility of each campus. Similar help is to be provided to all BU setups coming up in future as well:

26

Figure 16: HSE Policy, third edition, PDF page 32, printed page 26: para 6.2, BU Environment Policy (Climate Action and Carbon Management), including annual energy audits with defined efficiency benchmarks (d); para 6.3, Organization, the Director of each campus responsible for the preparation, implementation and audit of the Environmental Management Plan.

2. HSE Policy (continued): pages cited

a. BUKC, BUHSCK E&ES department Karachi
b. BUIC E-8 & H-11, BUHSCI, BULC E&ES department Islamabad

6.4 ENVIRONMENTAL MANAGEMENT PLAN (EMP). This Environment Management Plan (EMP) establishes a mechanism for delivering on the aims and objectives of BU's Environmental Policy. EMP assigns and defines the roles and responsibilities of management to meet the requirements for maintaining environmental quality. Each Campus/ CU is to formulate EMP of its own and implement it. The expertise of faculty members (E&ES deptt) may be utilized to promote effective planning and implementation. Incentive may be considered for the subject work. The flow chart of Environment Management Policy is given below:

Flow Chart of Environmental Policy



6.5 Purpose of the EMP

a. Promote healthy environment through implementation of environment standards and procedures.
b. Prevent workplace illnesses caused by poor environment.
c. Avoid property losses or damage.
d. Protect the environment by reducing adverse impacts.
e. To highlight the environmental aspects of university operations and manage the impact of those aspects.
f. To ensure continuous improvement loop is established and maintained.

6.6 Components of the EMP. Main components of EMP include following:

a. **Organizational Structure.** The EMP has to function under the supervision of Director Campus. The HOD E&ES Islamabad/ Karachi is to advise Director Campuses/ CUs on environment issues.

27

Figure 17: HSE Policy, third edition, PDF page 33, printed page 27: para 6.4 with the flow chart of the plan, do, check and act cycle, including measurement and monitoring and audits; para 6.5, purposes of the plan; para 6.6(a).

2. HSE Policy (continued): pages cited

b. **Monitoring Requirements.** The EMP has many components spread over wide range of activities falling under the management ambit of different departments. Each department is responsible of its part of environment protection efforts. However, the overall monitoring responsibility shall rest with E&ES department. Standing HSE committee meetings are appropriate forum to discuss and resolve various environmental issues.

c. **Training Requirements**. All the areas of this plan assign roles and responsibilities to personnel employed in different sections of administration and faculty. E&ES department is to identify the training needs and arrange courses at campus level. BUHO is to be kept informed on conduct of the training. Any training requirement requiring assistance/ approval of BUHO be forwarded accordingly. Proposed training programmes are as follows:

Training Required	Target Trainees	Suggested Frequency
Chemical Hygiene Training	Students & staff working in laboratories	Initial and Annual
Waste Management Training	All administrative personnel, faculty & students, lower staff	Initial and Annual
Lab Ventilation Training		Initial and Annual
Safety Orientation and Right-To-Know Training	For individuals who don't work with chemicals (potential affectees)	Initial and Annual

d. **Communication and Documentation**. All activities in and outside the campus falling under the ambit of promoting environment safety are to be recorded on paper and electronic documents as evidence. All procedural/ documentation revisions are to be communicated to respective E&ES department under intimation to Safety directorate at BUHO.

6.7 **Scope**. The scope of the EMP will focus on the following categories:

a. Waste Water/ Storm Water Management.

b. Solid Waste Management.

c. Noise & Air Monitoring and Management Options.

d. Green Energy.

6.8 **Water Management**

a. Water consumption shall be measured and the annual consumption (m^3/year) shall be recorded and posted on the relevant page.

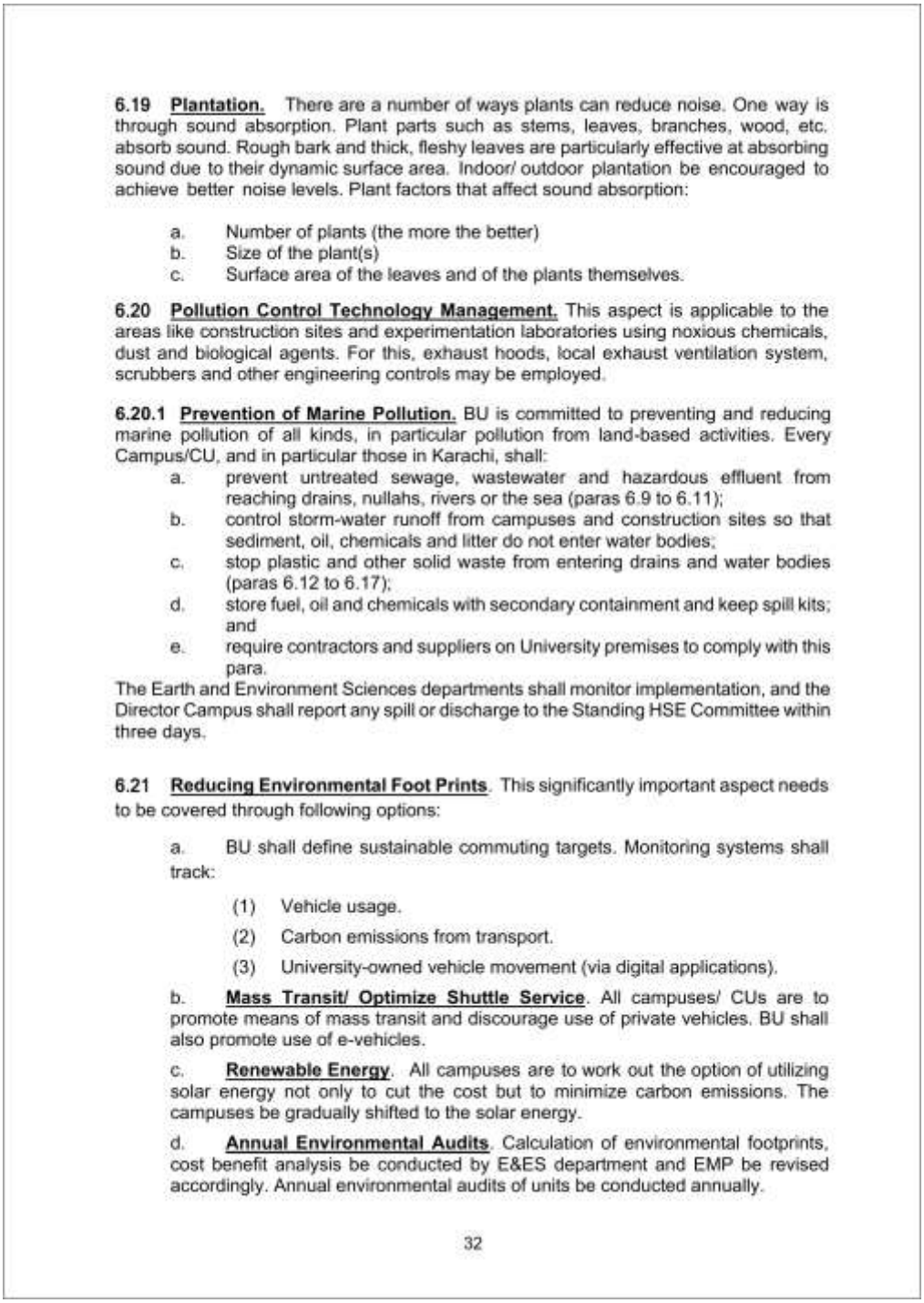
b. The University shall also develop water sustainability dashboards for internal reporting.

6.9 **Waste/ Storm Water Management**. The purpose of the adopted procedure is

28

Figure 18: HSE Policy, third edition, PDF page 34, printed page 28: para 6.6(b) to (d), monitoring requirements, training, and communication and documentation; para 6.7, scope, including green energy (d).

2. HSE Policy (continued): pages cited



6.19 Plantation. There are a number of ways plants can reduce noise. One way is through sound absorption. Plant parts such as stems, leaves, branches, wood, etc. absorb sound. Rough bark and thick, fleshy leaves are particularly effective at absorbing sound due to their dynamic surface area. Indoor/ outdoor plantation be encouraged to achieve better noise levels. Plant factors that affect sound absorption:

a. Number of plants (the more the better)
b. Size of the plant(s)
c. Surface area of the leaves and of the plants themselves.

6.20 Pollution Control Technology Management. This aspect is applicable to the areas like construction sites and experimentation laboratories using noxious chemicals, dust and biological agents. For this, exhaust hoods, local exhaust ventilation system, scrubbers and other engineering controls may be employed.

6.20.1 Prevention of Marine Pollution. BU is committed to preventing and reducing marine pollution of all kinds, in particular pollution from land-based activities. Every Campus/CU, and in particular those in Karachi, shall:

a. prevent untreated sewage, wastewater and hazardous effluent from reaching drains, nullahs, rivers or the sea (paras 6.9 to 6.11);
b. control storm-water runoff from campuses and construction sites so that sediment, oil, chemicals and litter do not enter water bodies;
c. stop plastic and other solid waste from entering drains and water bodies (paras 6.12 to 6.17);
d. store fuel, oil and chemicals with secondary containment and keep spill kits; and
e. require contractors and suppliers on University premises to comply with this para.

The Earth and Environment Sciences departments shall monitor implementation, and the Director Campus shall report any spill or discharge to the Standing HSE Committee within three days.

6.21 Reducing Environmental Foot Prints. This significantly important aspect needs to be covered through following options:

a. BU shall define sustainable commuting targets. Monitoring systems shall track:

(1) Vehicle usage.
(2) Carbon emissions from transport.
(3) University-owned vehicle movement (via digital applications).

b. **Mass Transit/ Optimize Shuttle Service**. All campuses/ CUs are to promote means of mass transit and discourage use of private vehicles. BU shall also promote use of e-vehicles.

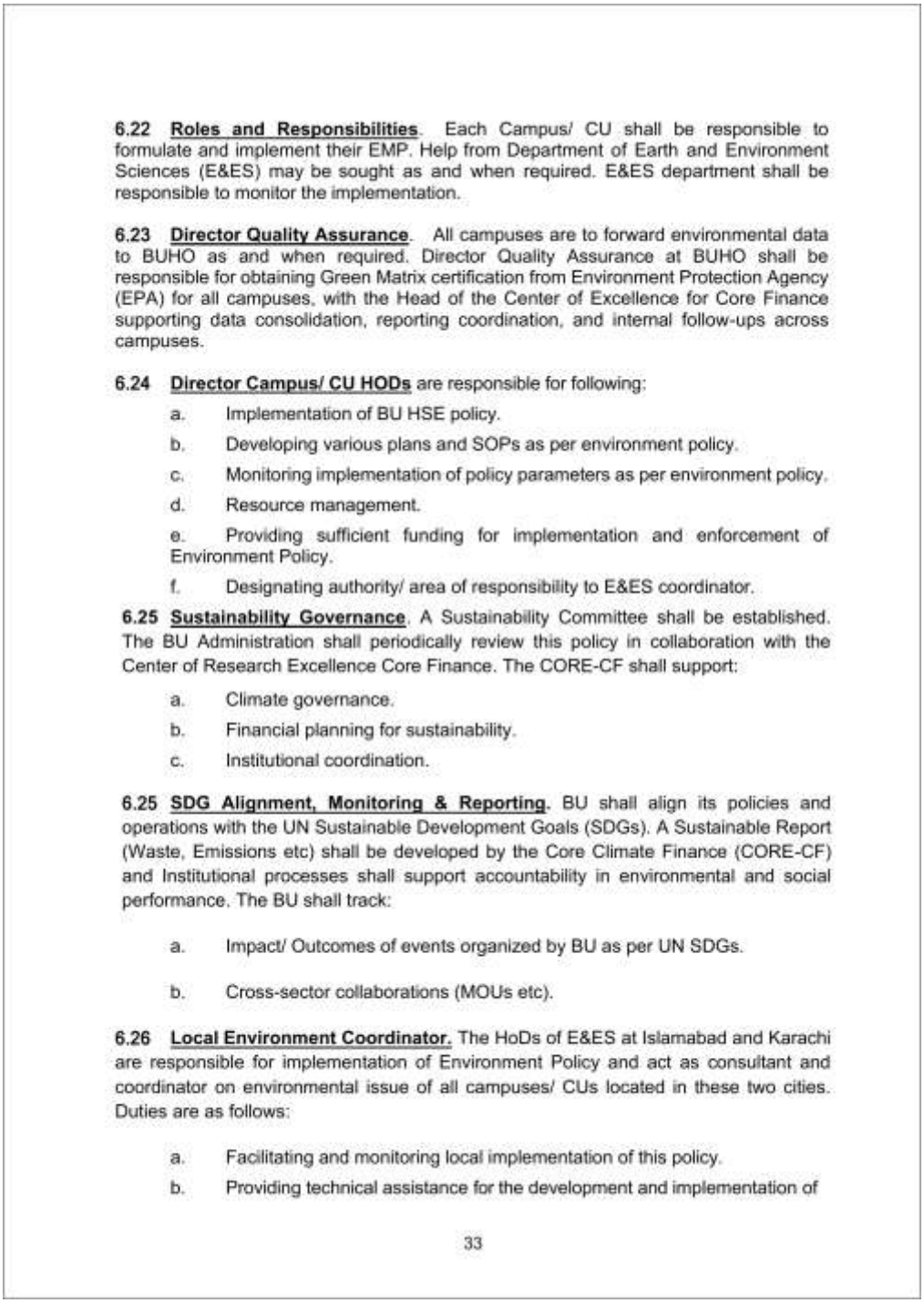
c. **Renewable Energy**. All campuses are to work out the option of utilizing solar energy not only to cut the cost but to minimize carbon emissions. The campuses be gradually shifted to the solar energy.

d. **Annual Environmental Audits**. Calculation of environmental footprints, cost benefit analysis be conducted by E&ES department and EMP be revised accordingly. Annual environmental audits of units be conducted annually.

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Figure 19: HSE Policy, third edition, PDF page 38, printed page 32: para 6.21, Reducing Environmental Foot Prints, including annual environmental audits with footprint calculation and cost-benefit analysis (d).

2. HSE Policy (continued): pages cited



6.22 **Roles and Responsibilities**. Each Campus/ CU shall be responsible to formulate and implement their EMP. Help from Department of Earth and Environment Sciences (E&ES) may be sought as and when required. E&ES department shall be responsible to monitor the implementation.

6.23 **Director Quality Assurance**. All campuses are to forward environmental data to BUHO as and when required. Director Quality Assurance at BUHO shall be responsible for obtaining Green Matrix certification from Environment Protection Agency (EPA) for all campuses, with the Head of the Center of Excellence for Core Finance supporting data consolidation, reporting coordination, and internal follow-ups across campuses.

6.24 **Director Campus/ CU HODs** are responsible for following:

a. Implementation of BU HSE policy.

b. Developing various plans and SOPs as per environment policy.

c. Monitoring implementation of policy parameters as per environment policy.

d. Resource management.

e. Providing sufficient funding for implementation and enforcement of Environment Policy.

f. Designating authority/ area of responsibility to E&ES coordinator.

6.25 **Sustainability Governance**. A Sustainability Committee shall be established. The BU Administration shall periodically review this policy in collaboration with the Center of Research Excellence Core Finance. The CORE-CF shall support:

a. Climate governance.

b. Financial planning for sustainability.

c. Institutional coordination.

6.25 **SDG Alignment, Monitoring & Reporting.** BU shall align its policies and operations with the UN Sustainable Development Goals (SDGs). A Sustainable Report (Waste, Emissions etc) shall be developed by the Core Climate Finance (CORE-CF) and Institutional processes shall support accountability in environmental and social performance. The BU shall track:

a. Impact/ Outcomes of events organized by BU as per UN SDGs.

b. Cross-sector collaborations (MOUs etc).

6.26 **Local Environment Coordinator.** The HoDs of E&ES at Islamabad and Karachi are responsible for implementation of Environment Policy and act as consultant and coordinator on environmental issue of all campuses/ CUs located in these two cities. Duties are as follows:

a. Facilitating and monitoring local implementation of this policy.

b. Providing technical assistance for the development and implementation of

33

Figure 20: HSE Policy, third edition, PDF page 39, printed page 33: paras 6.22 to 6.25, including monitoring by Earth and Environment Sciences (6.22), environmental data forwarded to the Head Office and consolidated across campuses (6.23) and monitoring by Campus Directors (6.24(c)).

3. Energy audit directive of the Rector, November 2025

On 24 November 2025 the Rector directed the Director Admin to deploy AI-based tools to conduct comprehensive energy audits across all campuses and facilities; to collect and analyse real-time data on electricity, heating, cooling and equipment use; to identify inefficiencies and generate recommendations for energy conservation and cost reduction; to implement the recommended measures through the facility management teams and monitor performance; to conduct periodic follow-up audits to assess improvements and refine the energy-saving strategies; and to train the staff concerned in the use and interpretation of the audit tools (Rector's Briefing: Action Points, item 7). The directive extends the review of buildings with higher consumption to a University-wide audit of where energy is used inefficiently, followed by measures and repeat audits.

3. Energy audit directive of the Rector, November 2025 (continued)

Bahria University, Islamabad

Rector's Briefing: Action Points

24th November, 2025

Academic Wing

Sr.No.	Action Points by the Honorable Rector	Action by
1	a. Conduct regular workshops on modern teaching tools, including AI-for university educators. b. Offer capacity-building sessions on contemporary pedagogies suited for Gen-Z and Gen-A learners. c. Provide hands-on training for using AI tools in course planning, assessments, and feedback. d. Implement faculty development programs focused on digital literacy and technology-enhanced teaching. e. Encourage faculty to adopt interactive, student-centered teaching techniques in classrooms and labs. f. Ensure continuous professional development through seminars, webinars, and relevant certifications. g. Monitor and evaluate faculty adoption of new teaching tools and pedagogies for effectiveness.	Director CoE AI Director LPDC Director Academics
2	a. Ensure faculty strictly adhere to scheduled class timings, regardless of administrative meetings. b. Disallow cancellation or postponement of classes due to internal meetings. c. Schedule meetings outside teaching hours. d. Schedule essential meetings in alignment with the academic timetable. e. Enforce guidelines for timely faculty arrival. f. Allow alternative modes (e.g., online classes) only in cases of extreme weather/emergency. g. Monitor faculty class attendance and punctuality through academic departments. h. Apply corrective measures for repeated unjustified absences or delays.	Director Academics
3	a. Begin all presentations to the Honorable Rector with a slide containing relevant Qur'anic verses. b. Include a slide for Darood Sharif immediately after the	Director IT

Figure 21: Rector's Briefing: Action Points, Academic Wing, 24 November 2025, page 1.

3. Energy audit directive of the Rector, November 2025 (continued): page cited

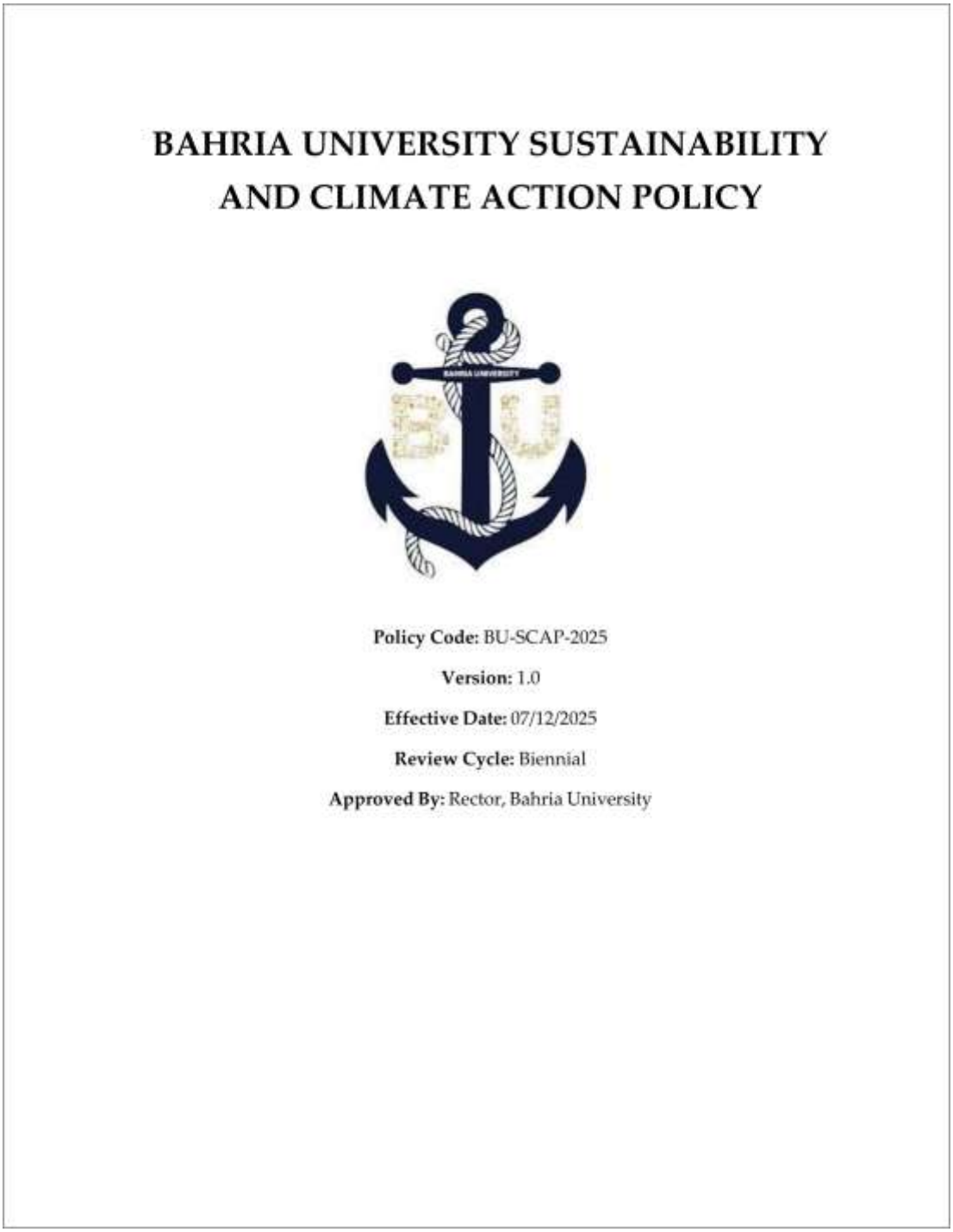
Sr.No.	Action Points by the Honorable Rector	Action by
	and laboratories scheduling software) to ensure optimal allocation of academic spaces. h. Encourage commercial use of labs especially in off academic hours and using platforms of LPDC and ORIC.	
6	a. Identify emerging and high-demand fields relevant to industry and corporate sector needs across all campuses. b. Design and launch evening and weekend certification programs tailored to working professionals. c. Develop Postgraduate (PG) diplomas in specialized and emerging areas to attract new market segments. d. Engage industry experts to co-create curriculum and ensure relevance to current market requirements. e. Promote these programs through targeted marketing and outreach campaigns. f. Monitor enrollment trends and continuously update program offerings to maximize revenue generation. g. Utilize existing classrooms, and labs during evening and weekend hours to optimize resources and reduce additional costs.	Director LPDC
7	a. Deploy AI-based tools and software to conduct comprehensive energy audits across all campuses and facilities. b. Collect and analyze real-time data on electricity, heating, cooling, and equipment usage using AI-driven systems. c. Identify inefficiencies and generate AI-powered recommendations for energy conservation and cost reduction. d. Implement the recommended measures through facility management teams and monitor performance. e. Conduct periodic follow-up audits to assess improvements and refine energy-saving strategies. f. Train relevant staff on the use and interpretation of AI-based energy audit tools.	Director Admin
8	a. Identify emerging and high-demand domains suitable for launching undergraduate, certification, and postgraduate diploma programs. b. Develop new academic programs with quality curriculum aligned with market and industry needs.	Director Academics Director LPDC Treasurer Director ORIC

Figure 22: Rector's Briefing: Action Points, Academic Wing, 24 November 2025, page 3: item 7, AI-based energy audits across all campuses and facilities, real-time data on electricity, heating, cooling and equipment use, identification of inefficiencies, measures implemented through the facility management teams, follow-up audits and staff training; action by the Director Admin.

4. Sustainability and Climate Action Policy: energy audits and internal audit

The Bahria University Sustainability and Climate Action Policy (Policy Code BU-SCAP-2025, version 1.0), effective 7 December 2025 and approved by the Rector, provides for microgrids with smart energy management systems (para 5.1.1) and building management systems across all facilities (para 5.1.2), and its implementation timeline for energy opens with energy audits and solar feasibility studies in 2025-2026, ahead of the solar installation phases from 2026. Under para 8.4 the University conducts internal audits of its sustainability performance every quarter, alongside annual third-party verification of its greenhouse gas inventory and records maintained for audit trails.

4. Sustainability and Climate Action Policy (continued)



BAHRIA UNIVERSITY SUSTAINABILITY AND CLIMATE ACTION POLICY

Policy Code: BU-SCAP-2025

Version: 1.0

Effective Date: 07/12/2025

Review Cycle: Biennial

Approved By: Rector, Bahria University

Figure 23: Sustainability and Climate Action Policy, PDF page 1: BU-SCAP-2025, version 1.0, effective 7 December 2025, approved by the Rector.

4. Sustainability and Climate Action Policy (continued)

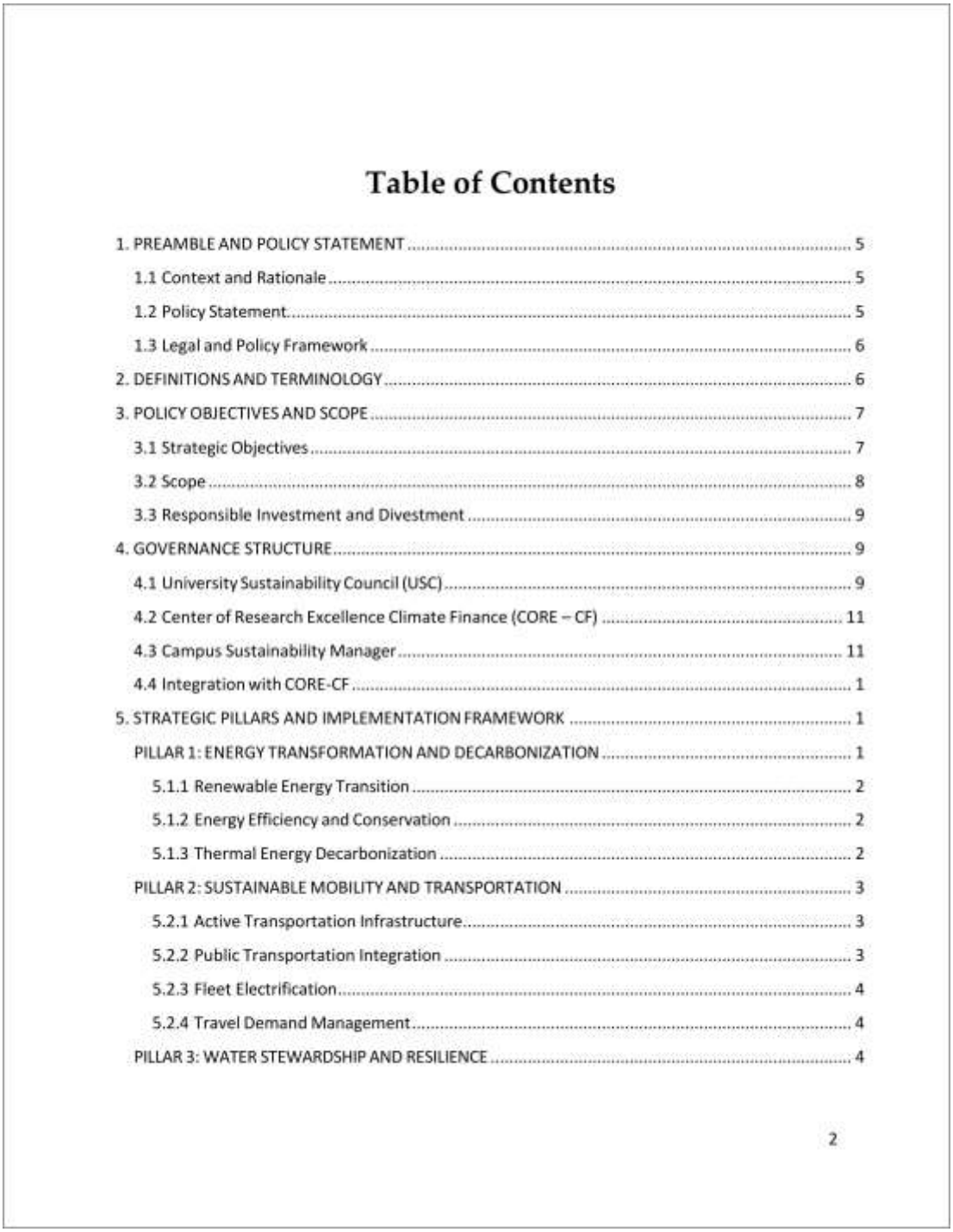


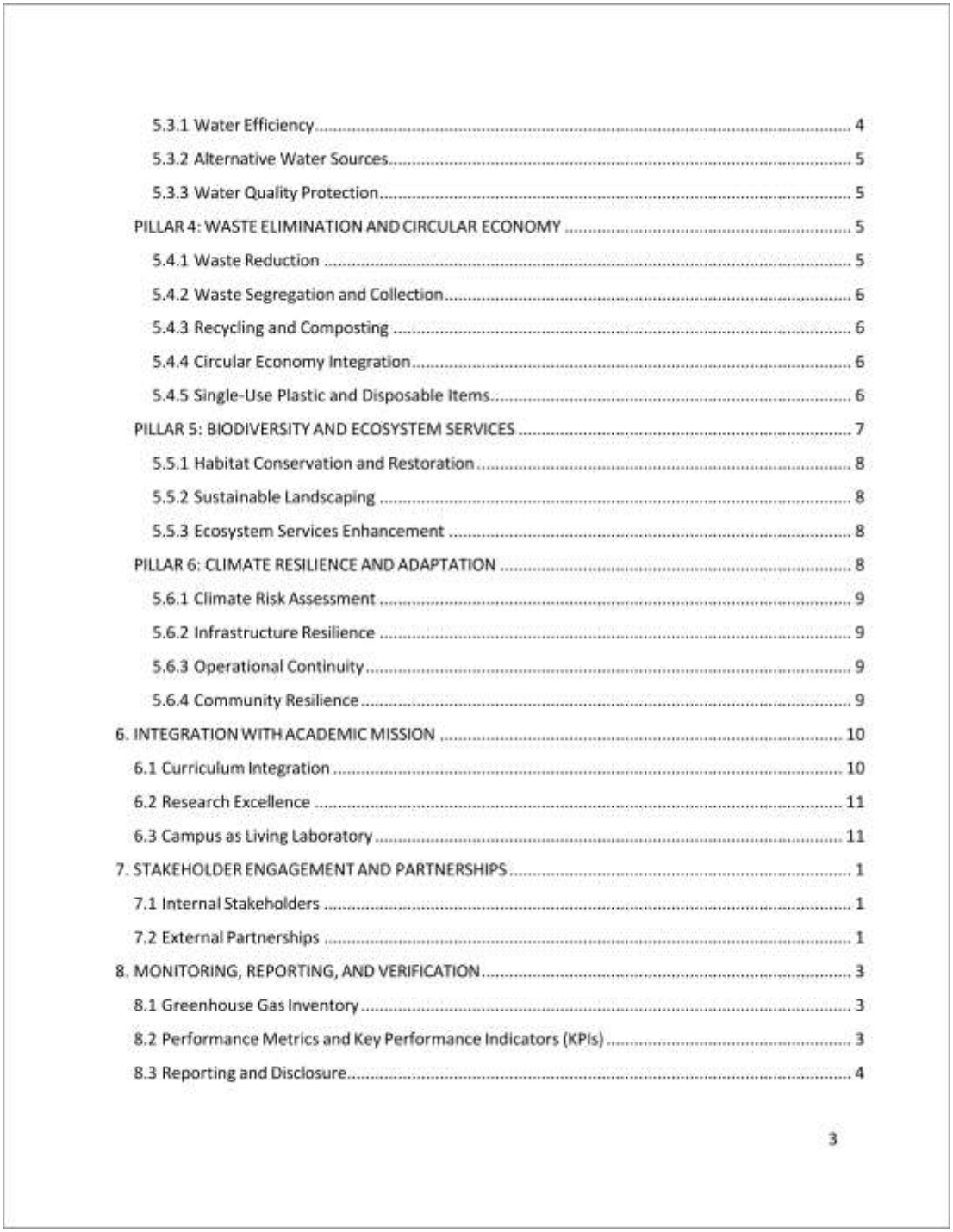
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Figure 24: Sustainability and Climate Action Policy, Table of Contents (page 2), sections 1 to 5, including para 5.1.2, Energy Efficiency and Conservation.

4. Sustainability and Climate Action Policy (continued)

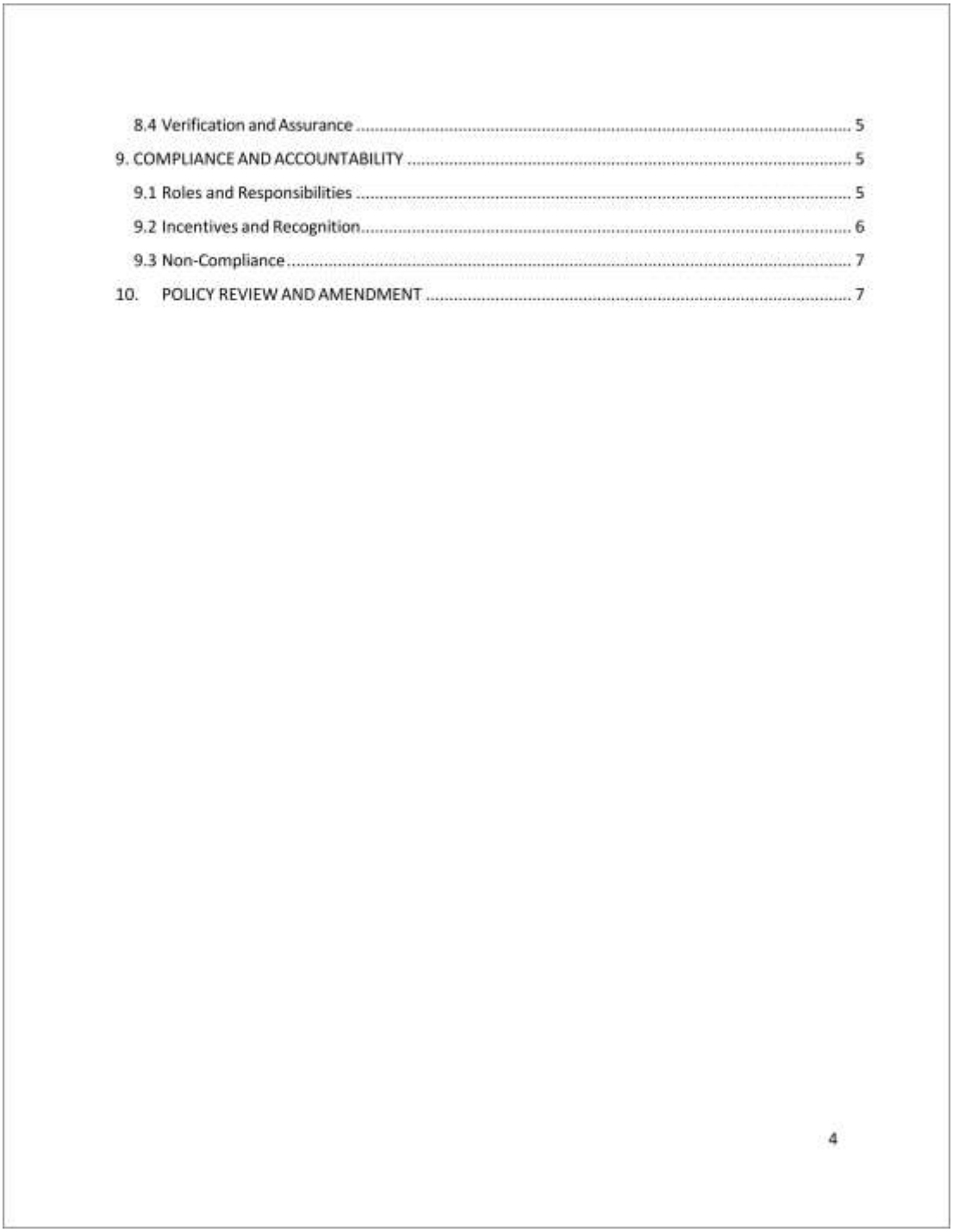


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Figure 25: Sustainability and Climate Action Policy, Table of Contents (page 3), sections 5 to 8.

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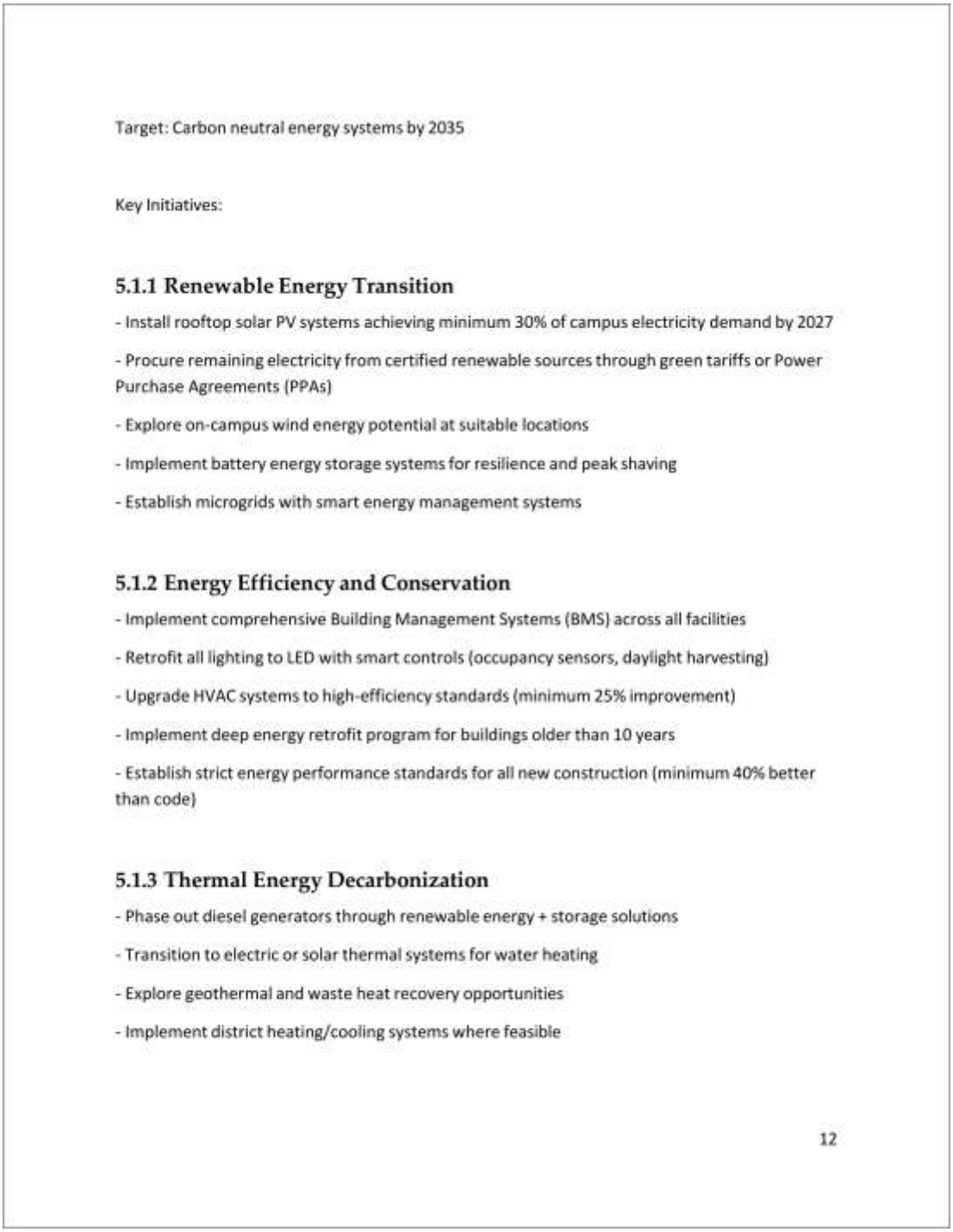


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Figure 26: Sustainability and Climate Action Policy, Table of Contents (page 4), sections 8 to 10, including para 8.4, Verification and Assurance.

4. Sustainability and Climate Action Policy (continued): pages cited



Target: Carbon neutral energy systems by 2035

Key Initiatives:

5.1.1 Renewable Energy Transition

- Install rooftop solar PV systems achieving minimum 30% of campus electricity demand by 2027
- Procure remaining electricity from certified renewable sources through green tariffs or Power Purchase Agreements (PPAs)
- Explore on-campus wind energy potential at suitable locations
- Implement battery energy storage systems for resilience and peak shaving
- Establish microgrids with smart energy management systems

5.1.2 Energy Efficiency and Conservation

- Implement comprehensive Building Management Systems (BMS) across all facilities
- Retrofit all lighting to LED with smart controls (occupancy sensors, daylight harvesting)
- Upgrade HVAC systems to high-efficiency standards (minimum 25% improvement)
- Implement deep energy retrofit program for buildings older than 10 years
- Establish strict energy performance standards for all new construction (minimum 40% better than code)

5.1.3 Thermal Energy Decarbonization

- Phase out diesel generators through renewable energy + storage solutions
- Transition to electric or solar thermal systems for water heating
- Explore geothermal and waste heat recovery opportunities
- Implement district heating/cooling systems where feasible

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Figure 27: Sustainability and Climate Action Policy, PDF page 13: paras 5.1.1 to 5.1.3, including smart energy management systems (5.1.1) and building management systems (5.1.2).

4. Sustainability and Climate Action Policy (continued): pages cited

Implementation Timeline:

- 2025-2026: Energy audits and solar feasibility studies
- 2026-2028: Phase 1 solar installation (15% demand)
- 2028-2030: Phase 2 solar + storage (30% demand)
- 2030-2035: Complete renewable transition and efficiency retrofits

PILLAR 2: SUSTAINABLE MOBILITY AND TRANSPORTATION

Target: 60% reduction in transport emissions by 2030; 100% electric fleet by 2032

Key Initiatives:

5.2.1 Active Transportation Infrastructure

- Construct protected cycling lanes connecting all campus zones
- Establish secure, weather-protected bicycle parking with repair stations
- Implement shower and locker facilities for cyclists
- Create pedestrian-priority zones with enhanced landscaping and shading
- Partner with bike-sharing services for inter-campus connectivity

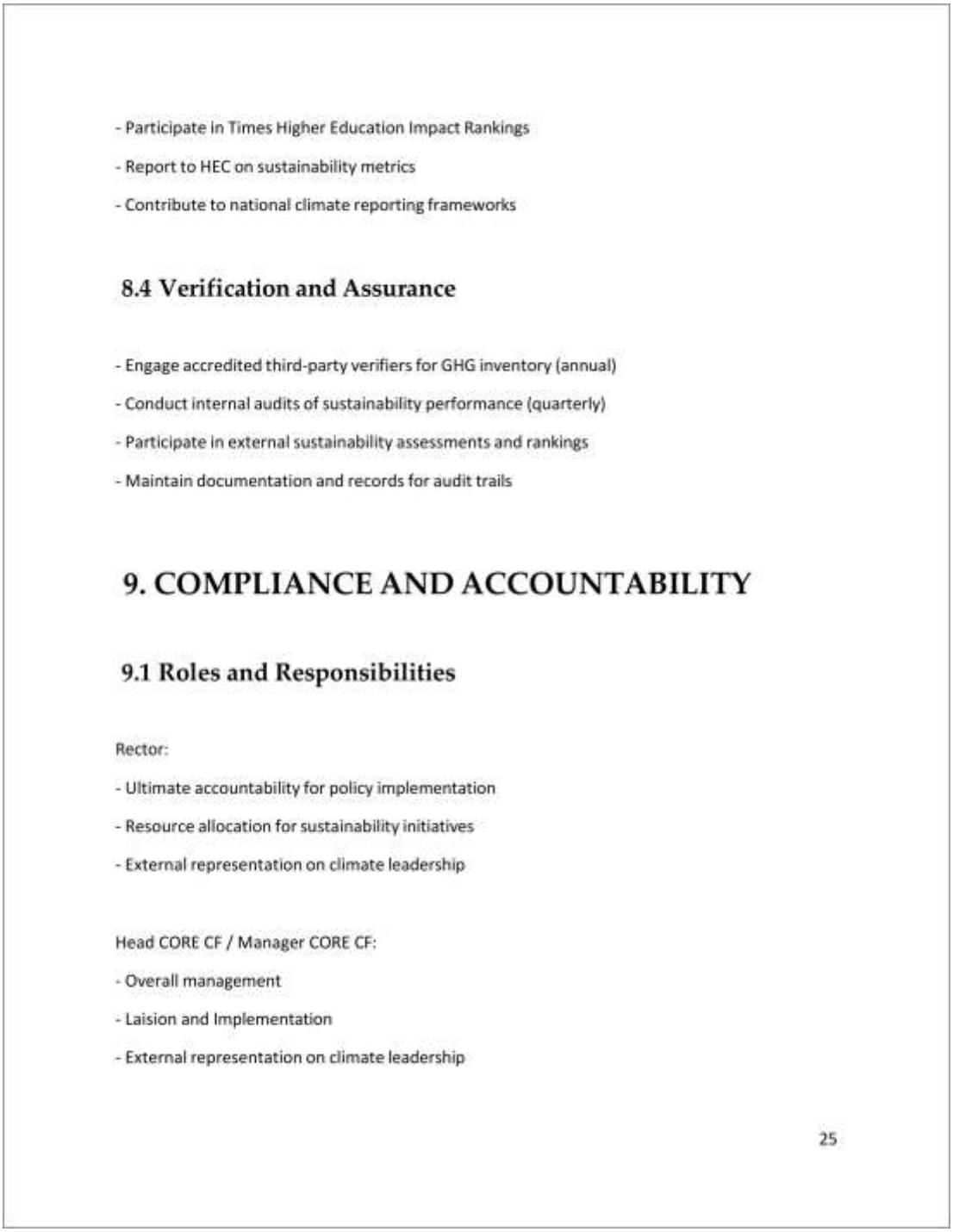
5.2.2 Public Transportation Integration

- Establish dedicated shuttle services from major residential areas
- Partner with public transit authorities for enhanced service to campuses
- Implement real-time transit information systems
- Subsidize public transit passes for students and staff

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Figure 28: Sustainability and Climate Action Policy, PDF page 14: Pillar 1 implementation timeline, beginning with energy audits and solar feasibility studies in 2025-2026.

4. Sustainability and Climate Action Policy (continued): pages cited



- Participate in Times Higher Education Impact Rankings
- Report to HEC on sustainability metrics
- Contribute to national climate reporting frameworks

8.4 Verification and Assurance

- Engage accredited third-party verifiers for GHG inventory (annual)
- Conduct internal audits of sustainability performance (quarterly)
- Participate in external sustainability assessments and rankings
- Maintain documentation and records for audit trails

9. COMPLIANCE AND ACCOUNTABILITY

9.1 Roles and Responsibilities

Rector:

- Ultimate accountability for policy implementation
- Resource allocation for sustainability initiatives
- External representation on climate leadership

Head CORE CF / Manager CORE CF:

- Overall management
- Laision and Implementation
- External representation on climate leadership

25

Figure 29: Sustainability and Climate Action Policy, PDF page 27: para 8.4, Verification and Assurance, including quarterly internal audits of sustainability performance.

5. Hotspot analysis: carbon footprint mapping by CORE-CF

The webpage of the Center of Research Excellence in Climate Finance (CORE-CF) on the University website records that the Center led the University's multi-campus carbon footprint mapping, covering fiscal years 2022 to 2025 and Scopes 1, 2 and 3, and that this work produced the University's greenhouse gas inventory, a hotspot analysis and actionable recommendations for future emissions reduction. Among its services the Center measures emissions, builds carbon inventories, identifies hotspots and creates practical reduction pathways, including institutional benchmarking (Figures 31 to 34).

The 2024-25 inventory attributes 3,554.18 tonnes of carbon dioxide equivalent (tCO2e) to purchased electricity (Scope 2), 89.5 per cent of the University's Scope 1 and 2 emissions, and shows where it arises (Table 4 and Figure 30): the Karachi Campus with the Institute of Professional Psychology (32.0 per cent), the Islamabad E-8 campus (22.0 per cent) and the Health Sciences campus, Karachi (21.8 per cent) together account for 75.7 per cent, identifying them as the campus units where electricity use is greatest.

Table 4: Scope 2 (purchased electricity) emissions by campus unit, 2024-25; source: CORE-CF greenhouse gas inventory, 2024-25

Campus unit	Scope 2 emissions (tCO2e)	Share of Scope 2 total (per cent)	Rank
Karachi Campus and Institute of Professional Psychology	1,137.2	32.0	1
Islamabad E-8	780.3	22.0	2
Health Sciences, Karachi	773.8	21.8	3
Islamabad H-11	428	12.0	4
Health Sciences, Islamabad	236.08	6.6	5
Lahore	198.8	5.6	6
Total	3,554.18	100.0	

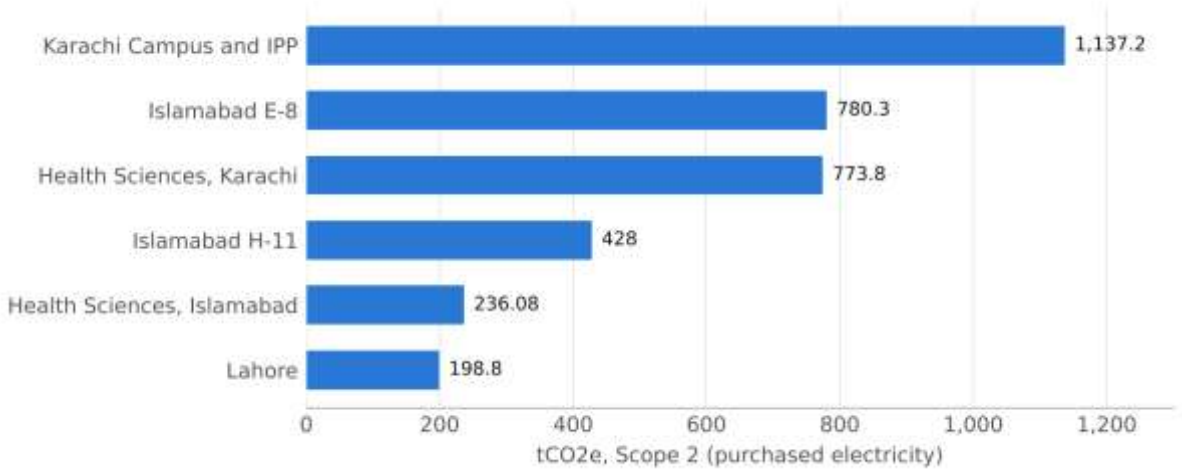


Figure 30: Scope 2 (purchased electricity) emissions by campus unit, 2024-25, in tCO2e, prepared from the CORE-CF greenhouse gas inventory (Table 4).
University website, Center of Research Excellence in Climate Finance:
https://bahria.edu.pk/page/PageTemplate4?pageContentId=8302&websiteId=1

5. Hotspot analysis (continued): CORE-CF webpage



Bahria University
Discovering Knowledge

BU

ABOUT ACADEMICS ADMISSIONS RESEARCH & INNOVATIONS INTERNATIONAL CAMPUS

Center of Research Excellence - Climate Finance

"Accountability – Not Aid, Assets – Not Appeals"

CORE-CF's success story is rooted in a simple but powerful transformation: a classroom idea became a university-wide climate action platform. The center's earliest and most important achievement was leading Bahria University's multi-campus carbon footprint mapping exercise, covering FYs 2022–2025 and Scopes 1, 2, and 3. This work produced the University's greenhouse gas inventory, hotspot analysis, and actionable recommendations for future emissions reduction.

Who We Are and How We Were Born: The Story of Carbon Sensitization

CORE-CF was established at Bahria University as a dedicated platform to respond to the growing urgency of climate change and the increasing need for innovative, evidence-based climate finance solutions. The center brings together research, policy thinking, institutional action, and stakeholder engagement to support sustainable development and climate resilience in Pakistan and beyond.

Our journey began in the classroom. A BBA final-semester class project first developed the idea of mapping Bahria University's carbon footprint to turn sustainability into measurable institutional action. It was later expanded into a university-wide Carbon Footprint Mapping Initiative covering the Islamabad, Karachi, and Lahore campuses across Scopes 1, 2, and 3 under the GHG Protocol for FYs 2022–2025. This initiative produced Bahria University's first consolidated greenhouse gas emissions baseline and actionable recommendation for the future.

The findings made one thing clear: climate action needed to move beyond isolated efforts. The mapping exercise showed the scale of the University's climate challenge and highlighted the need for a permanent structure to sustain measurement, reporting, coordination, and implementation. CORE-CF emerged from this realization as a hub for carbon sensitization, climate-finance leadership, and institutional transformation.

Today, CORE-CF represents Bahria University's commitment to linking academic excellence with national relevance. It is a center designed not only to study climate finance, but to apply it through carbon mapping, policy dialogue, training, partnerships, and practical solutions for a low-carbon future.

OUR GOAL: NET ZERO

Bahria University commits to achieving net-zero greenhouse gas emissions across all scopes by 2050, with an interim target of **50% reduction in absolute emissions by 2040.**

(Baseline: FY2024)

Driving sustainable transformation through accountability, innovation, and climate leadership.

Figure 31: University website, Center of Research Excellence in Climate Finance webpage, captured on 4 November 2026, part 1 of 4: the multi-campus carbon footprint mapping for fiscal years 2022 to 2025, which produced the greenhouse gas inventory, hotspot analysis and recommendations; the University's net-zero goal.

5. Hotspot analysis (continued): CORE-CF webpage

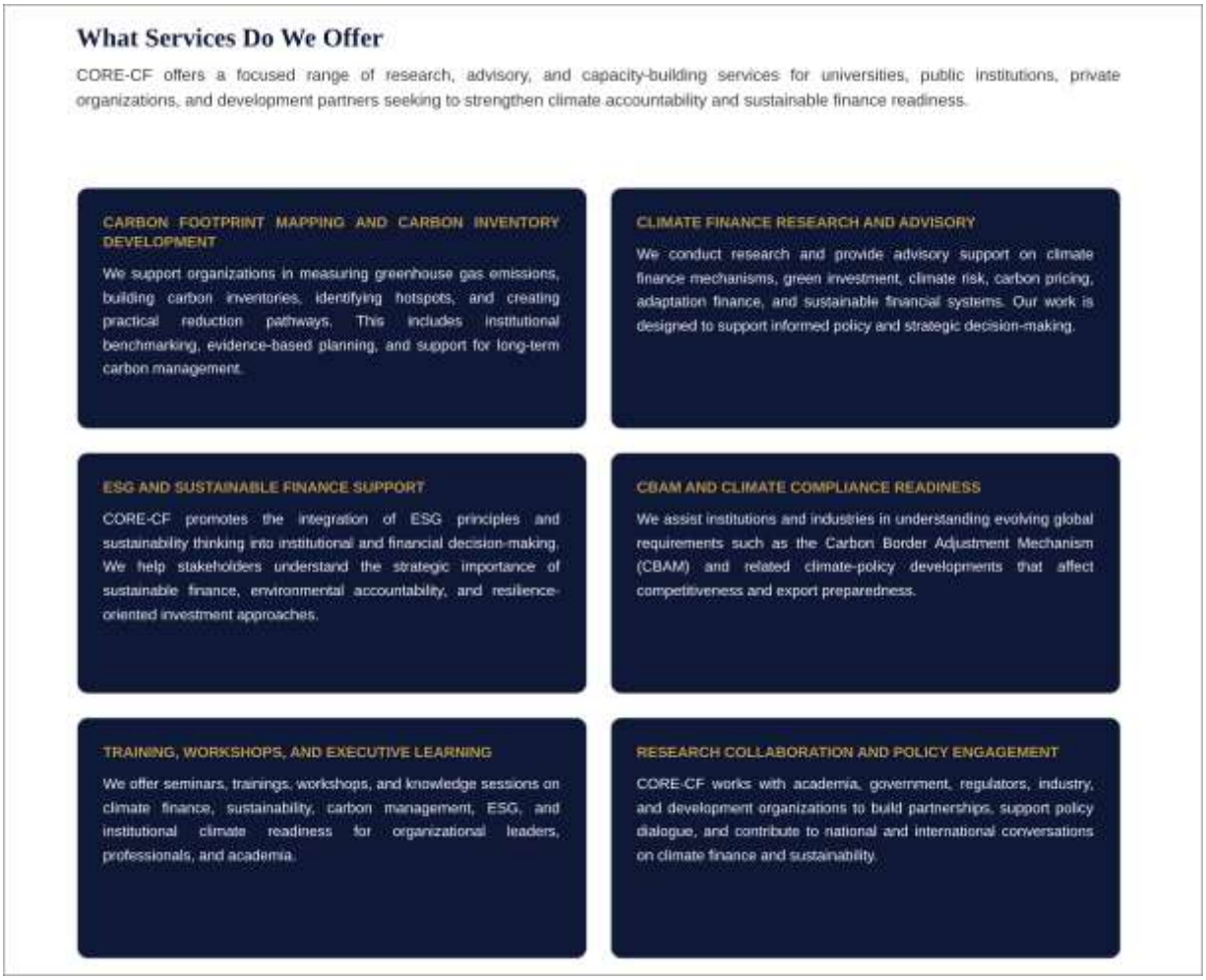
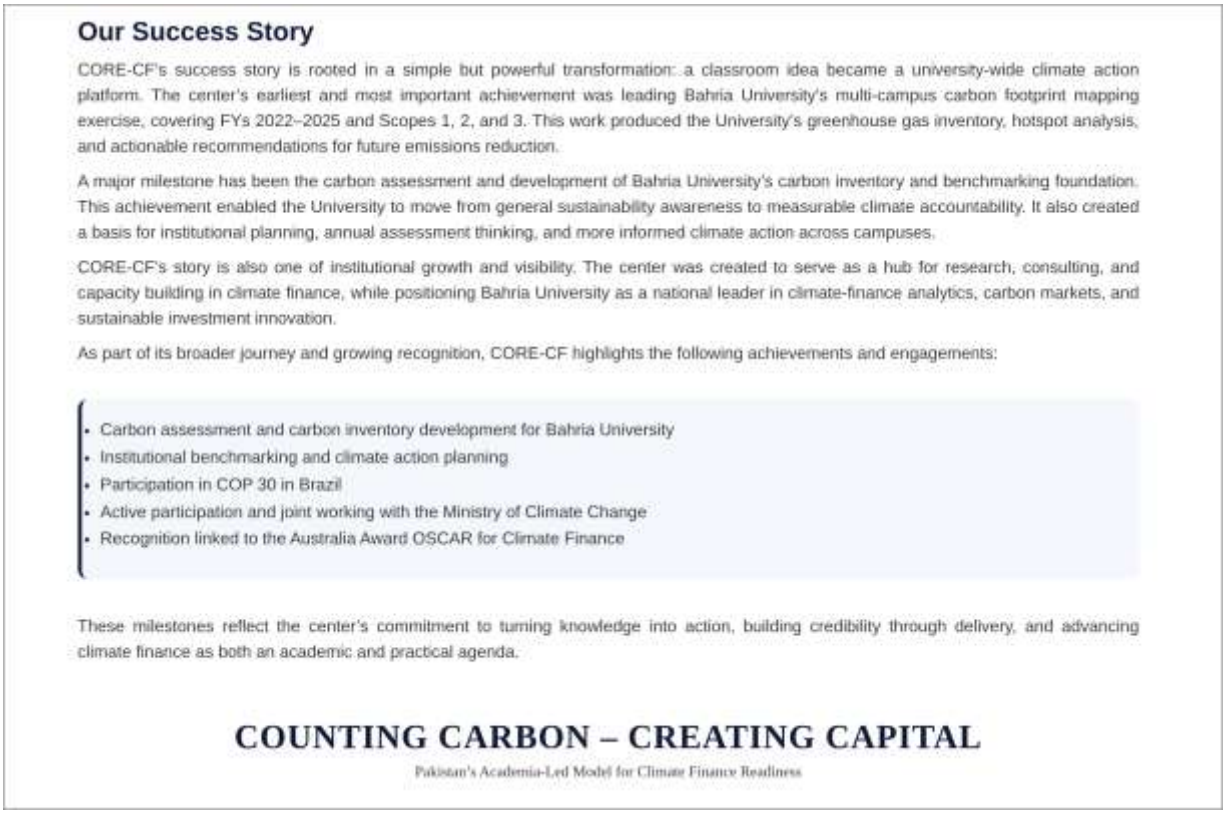


Figure 32: CORE-CF webpage, part 2 of 4: services, including carbon footprint mapping and carbon inventory development, measuring emissions, identifying hotspots and creating reduction pathways.

5. Hotspot analysis (continued): CORE-CF webpage



Our Success Story

CORE-CF's success story is rooted in a simple but powerful transformation: a classroom idea became a university-wide climate action platform. The center's earliest and most important achievement was leading Bahria University's multi-campus carbon footprint mapping exercise, covering FYs 2022–2025 and Scopes 1, 2, and 3. This work produced the University's greenhouse gas inventory, hotspot analysis, and actionable recommendations for future emissions reduction.

A major milestone has been the carbon assessment and development of Bahria University's carbon inventory and benchmarking foundation. This achievement enabled the University to move from general sustainability awareness to measurable climate accountability. It also created a basis for institutional planning, annual assessment thinking, and more informed climate action across campuses.

CORE-CF's story is also one of institutional growth and visibility. The center was created to serve as a hub for research, consulting, and capacity building in climate finance, while positioning Bahria University as a national leader in climate-finance analytics, carbon markets, and sustainable investment innovation.

As part of its broader journey and growing recognition, CORE-CF highlights the following achievements and engagements:

- Carbon assessment and carbon inventory development for Bahria University
- Institutional benchmarking and climate action planning
- Participation in COP 30 in Brazil
- Active participation and joint working with the Ministry of Climate Change
- Recognition linked to the Australia Award OSCAR for Climate Finance

These milestones reflect the center's commitment to turning knowledge into action, building credibility through delivery, and advancing climate finance as both an academic and practical agenda.

COUNTING CARBON – CREATING CAPITAL

Pakistan's Academia-Led Model for Climate Finance Readiness

Figure 33: CORE-CF webpage, part 3 of 4: the Center's success story and achievements, including the carbon assessment and carbon inventory development for Bahria University, institutional benchmarking and climate action planning.

5. Hotspot analysis (continued): CORE-CF webpage

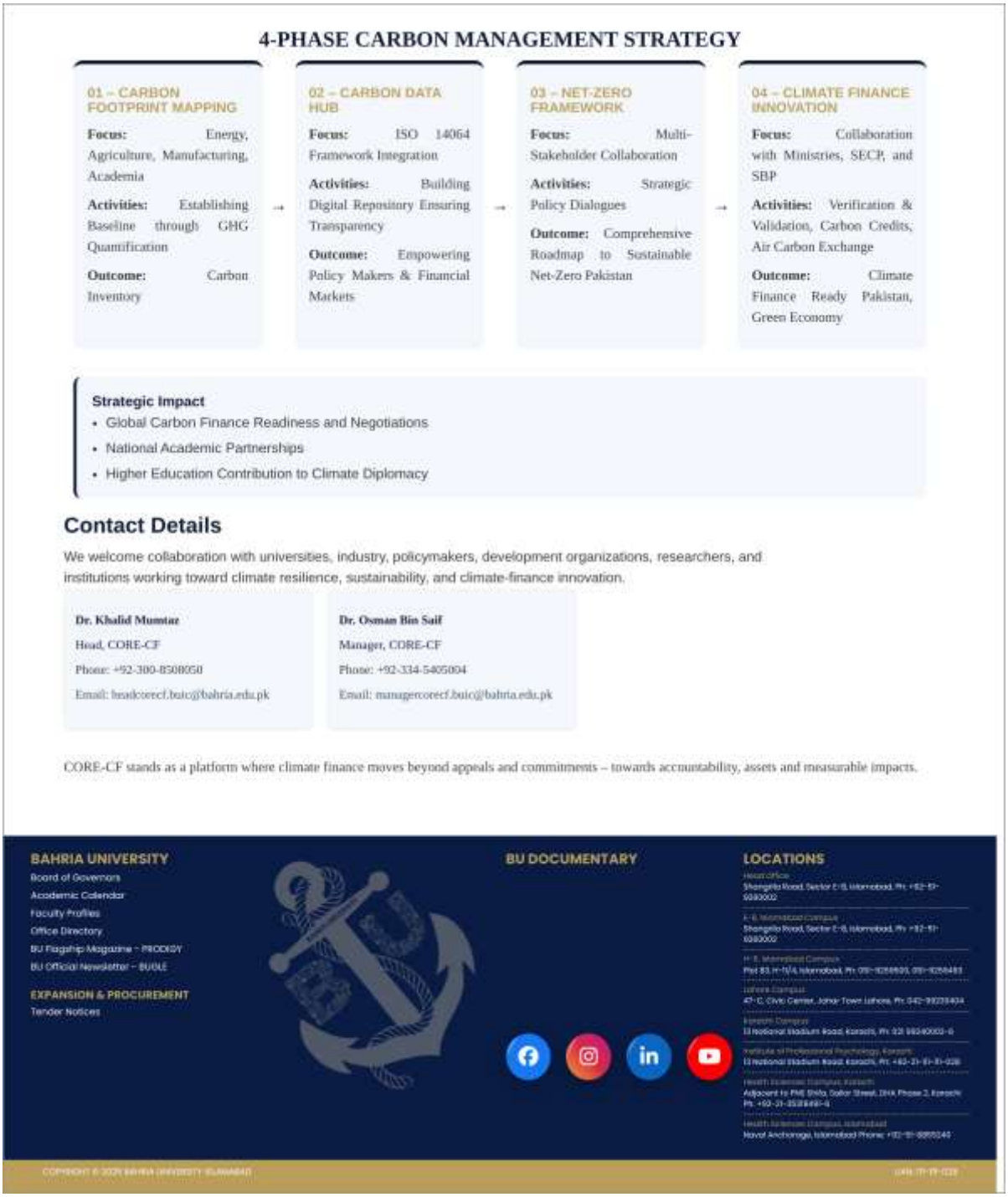


Figure 34: CORE-CF webpage, part 4 of 4: the four-phase carbon management strategy, beginning with carbon footprint mapping to establish the baseline, and contact details.

6. Metering records: where and when consumption is highest, 2025

The campuses record their electricity consumption every month from the utility meters. At the Islamabad E-8 campus the Director Admin records the consumption and bill of each of four meters, which separate the Sir Syed Block, the block housing the Head Office, Business School and BIC, the Iqbal Block and the Student Service Centre (Table 5 and Figure 35). The readings show where and when consumption is highest. The Head Office, Business School and BIC meter recorded the highest consumption of the four in every month of 2025, about half of the campus total. The campus's monthly consumption peaked at 201,452 kWh in September and was lowest at 69,488 kWh in November, and the six months from May to October accounted for about two thirds of the year's consumption (Figure 36).

Table 5: Electricity consumption by meter, Islamabad E-8 campus, 2025 (kWh): monthly readings as recorded by the Director Admin, E-8 campus; the last column is the sum of the four meters

Month	Sir Syed Block	Head Office, Business School and BIC	Iqbal Block	Student Service Centre	All four meters
January	30,880	64,000	46,080	1,920	142,880
February	21,280	45,600	25,600	1,140	93,620
March	13,280	35,600	20,640	800	70,320
April	14,240	44,400	25,920	780	85,340
May	37,440	92,000	53,760	1,400	184,600
June	47,360	87,200	59,680	1,780	196,020
July	47,360	89,600	47,200	2,320	186,480
August	45,314	74,000	20,840	2,025	142,179
September	47,053	99,240	52,698	2,461	201,452
October	36,987	79,480	49,661	1,600	167,728
November	10,588	41,560	16,463	877	69,488
December	19,780	48,040	13,014	1,540	82,374

6. Metering records (continued): Islamabad E-8 campus

ELECTRICITY CONSUMPTION BAHRIA UNIVERSITY ISLAMABAD YEAR 2025

	SIR SYED BLOCK METER		BUHO/BBS/BIC METER		IQBAL BLOCK METER		SSC BULIDING METER	
Month	KWH	Bill	KWH	Bill	KWH	Bill	KWH	Bill
Jan	30880	1693065	64000	3499924	46080	2561740	1920	106966
Feb	21280	1150276	45600	2457069	25600	1402437	1140	62983
Mar	13280	658256	35600	1809691	20640	1041427	800	40613
Apr	14240	726744	44400	2274836	25920	1347498	780	40937
May	37440	1826888	92000	4486419	53760	2658416	1400	69345
Jun	47360	2297240	87200	4248589	59680	2943405	1780	87745
Jul	47360	2392187	89600	4512337	47200	2407400	2320	118560
Aug	45314	2306423	74000	3759979	20840	1041733	2025	104595
Sep	47053	2334495	99240	4944077	52698	2663105	2461	123549
Oct	36987	1918028	79480	4118029	49661	2606810	1600	84106
Nov	10588	535663	41560	2147655	16463	855553	877	46267
Dec	19780	1034211	48040	2520887	13014	663559	1540	82940
Total	371562	18875476	800720	40779592	402079	22193083	18643	968606

TOTAL KWH 1593004

Figure 35: Electricity Consumption, Bahria University Islamabad, Year 2025: monthly consumption (kWh) and bill for the Sir Syed Block, BUHO/BBS/BIC, Iqbal Block and SSC building meters; record of the Director Admin, E-8 campus.

6. Metering records (continued): monthly consumption by meter

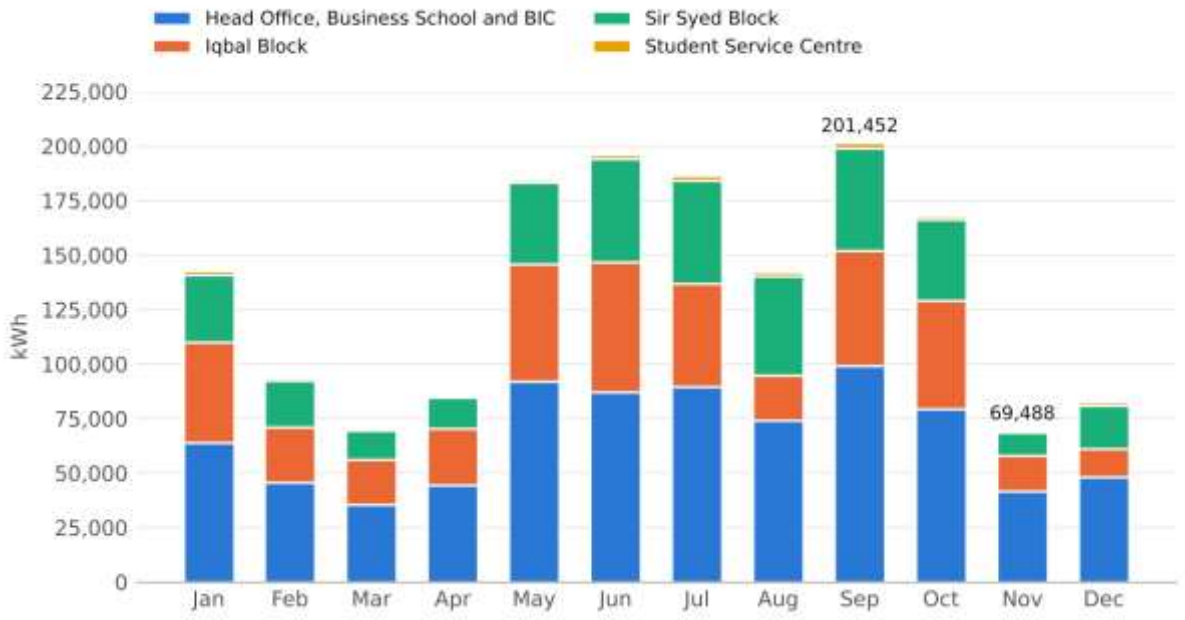


Figure 36: Monthly electricity consumption by meter, Islamabad E-8 campus, 2025, in kWh, prepared from the monthly readings in Table 5; the highest and lowest monthly totals are labelled.

6. Metering records (continued): Health Sciences campus, Islamabad

The Health Sciences campus, Islamabad, records its monthly supply from the utility bill, which carries the twelve-month consumption history of the meter (Figures 37 and 38). The 2025 record totals 438,540 kWh, with the highest monthly supply in January, February and July (50,000 kWh or more), and shows the replacement of the meter with an automated (AMI) meter in November 2025.

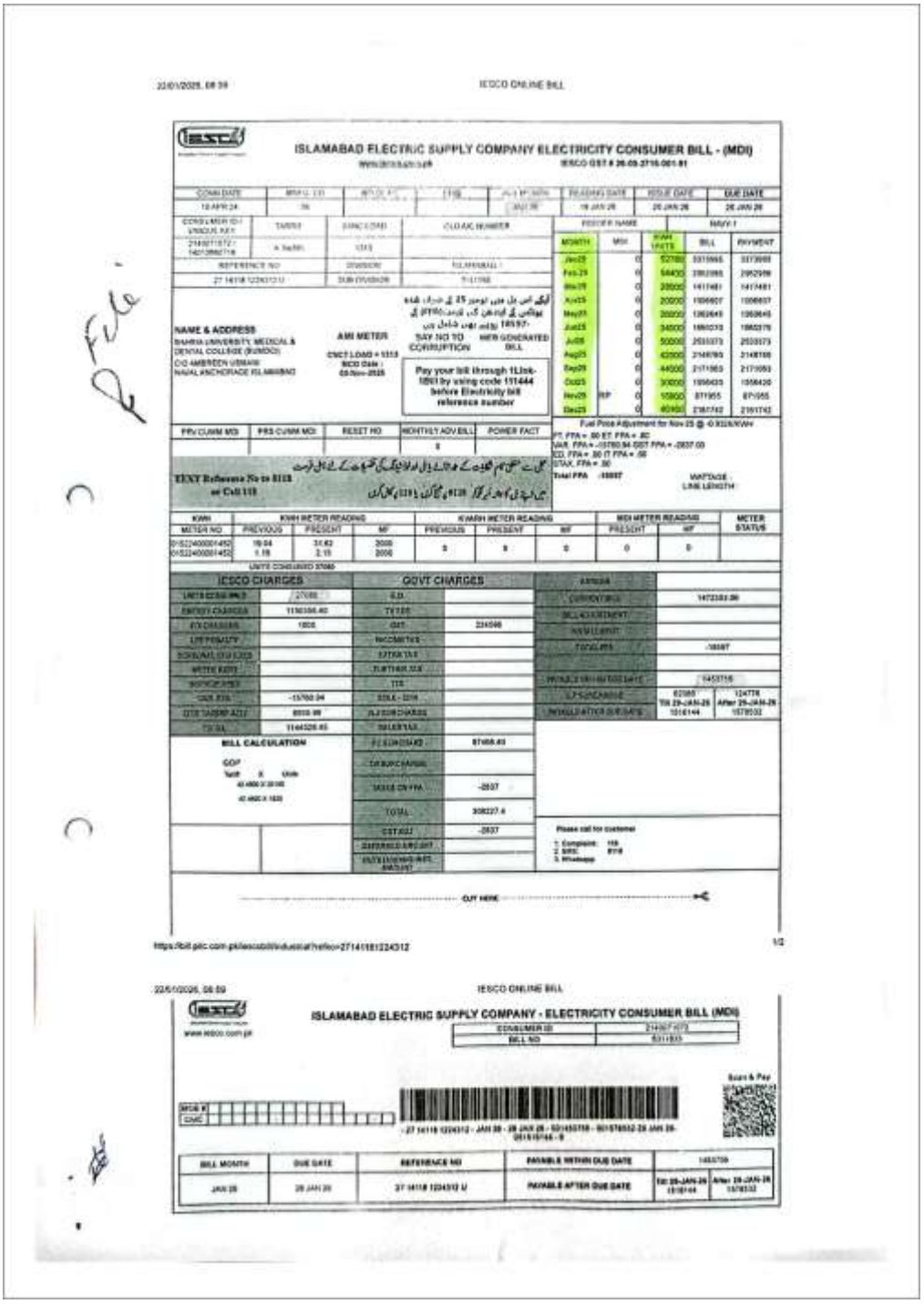


Figure 37: Electricity bill (Islamabad Electric Supply Company) of the Health Sciences campus, Islamabad, AMI meter, with the monthly consumption history for 2025; campus record, page 1.

6. Metering records (continued): Health Sciences campus, Islamabad

MONTH	MDI	KWH UNITS	BILL	PAYMENT
Jan25	0	52780	3373995	3373995
Feb-25	0	54400	2962986	2962986
Mar25	0	28000	1417481	1417481
Apr25	0	20000	1006807	1006807
May25	0	26000	1262645	1262645
Jun25	0	34000	1660270	1660270
Jul25	0	50000	2533373	2533373
Aug25	0	42000	2148760	2148760
Sep25	0	44000	2171063	2171063
Oct25	0	30000	1556420	1556420
Nov25	RP 0	16900	871955	871955
Dec25	0	40460	2161742	2161742

Figure 38: Health Sciences campus, Islamabad: monthly units (kWh), bill and payment, January to December 2025, with the meter replacement (RP) in November 2025; campus record, page 2.

7. Summary of evidence

Element	Evidence	Figures
Annual energy review required	Strategic Management Plan, Objective 5.9, KPI 5.9.3, since 2020-21: review every year at each campus to identify the buildings and blocks with higher energy consumption rates, target 1 in every year to 2029-30	1 to 8; Table 2
Reviews conducted and reported	Review reported at four campus units in 2024-25 (0.67) and three in 2025-26 (0.50); the Karachi campus review of its buildings and blocks, with a solarization feasibility study (2024-25)	1 to 8; Table 3
Energy and environmental audits in policy	HSE Policy (register: editions 2021, November 2025 and July 2026; third edition reproduced): annual energy audits with defined efficiency benchmarks (para 6.2(d)); Environmental Management Plan cycle with measurement, monitoring and audits (paras 6.3 to 6.6); annual environmental audits with footprint calculation and cost-benefit analysis (para 6.21(d)); monitoring and data consolidation (paras 6.22 to 6.24)	9 to 20
University-wide energy audits	Rector's directive of 24 November 2025: energy audits of all campuses and facilities using real-time data to identify inefficiencies, with follow-up audits; SCAP, effective 7 December 2025: energy audits in 2025-2026 and quarterly internal audits (para 8.4)	22; 23 to 29
Hotspot analysis	CORE-CF carbon footprint mapping for fiscal years 2022 to 2025 with greenhouse gas inventory and hotspot analysis; three campus units with 75.7 per cent of the 3,554.18 tCO2e of Scope 2 emissions in 2024-25	30 to 34; Table 4
Metering and highest-use areas	Monthly consumption recorded by meter: at the Islamabad E-8 campus the Head Office, Business School and BIC meter is the largest consumer in every month, with a peak in September and about two thirds of consumption from May to October; monthly record and automated meter at the Health Sciences campus, Islamabad	35 to 38; Table 5

Taken together, the records show that Bahria University as a body undergoes energy reviews to identify where energy consumption and inefficiency are highest: an annual review of the buildings and blocks with higher consumption required by its Strategic Management Plan since 2020-21 and reported by the campuses, annual environmental audits under its HSE Policy, a University-wide energy audit directive of November 2025, a hotspot analysis of its carbon footprint by campus, and monthly metering that identifies the blocks and months of highest use.