SDG
07
AFFORDABLE AND CLEAN ENERGY

EVIDENCE DOCUMENT | INDICATOR 7.2.4

Energy efficiency plan to reduce overall energy consumption

METRIC 7.2 University measures towards affordable and clean energy

REFERENCE YEAR	COVERAGE	DATE PREPARED
In place by 2025	All campuses and constituent units	5 November 2026

ISSUING OFFICE	EVIDENCE ID
Directorate of Quality Assurance, Head Office	E-07-7.2.4

THE SIR 2027 REQUIREMENT

Does your university as a body have an energy efficiency plan in place to reduce overall energy consumption?

01 Statement of Evidence

Bahria University's direct answer to the requirement

Yes. Bahria University has an energy efficiency plan to reduce overall energy consumption. Its Strategic Management Plan, Objective 5.9, has since 2020-21 set annual targets to reduce the electricity requirement of each building or block through renewable energy and energy-efficient systems, rising from 5 per cent to 20 per cent by 2029-30 (KPI 5.9.4), and annual reviews to identify high-consumption buildings (KPI 5.9.3). Campus progress is reported annually: Lahore reported a 10 per cent reduction for 2024-25, and the 2025-26 target was 12.5 per cent. On 24 November 2025 the Rector directed campus-wide energy audits using real-time consumption data, conservation measures implemented by facility teams, follow-up audits and staff training. The Sustainability and Climate Action Policy (BU-SCAP-2025), effective 7 December 2025, requires building management systems, LED lighting with smart controls, HVAC efficiency improvements of at least 25 per cent and deep retrofit of buildings older than ten years (para 5.1.2). It targets a 40 per cent efficiency improvement in existing buildings and a 30 per cent reduction in energy use intensity by 2030 (paras 3.1 and 8.2). The Sustainable Procurement and Purchasing Policy (BU-SPPP-2025), effective 15 November 2025, requires minimum 3-star energy-efficient equipment and Energy Star or equivalent certification for IT equipment (paras 5.2.1 and 6.1.1). The current HSE Policy requires annual energy audits against defined benchmarks and renewable energy KPIs (para 6.2(d–e)), solar transition and environmental audits (para 6.21(c–d)). Its register records editions in 2021, November 2025 and July 2026; the current wording is presented as the reviewed 2026 policy. Campus records show electricity consumption of 6,268,326 kWh and on-campus solar generation of 923,403 kWh in 2025, alongside LED, sensor and inverter replacements.

02 Evidence and Activity Record

Dated facts and records that substantiate the statement

Section 1 presents Strategic Management Plan targets and reported campus progress. Section 2 presents the HSE Policy, amendment register, complete contents and relevant extracts; Section 3 presents the Rector's November 2025 energy audit directive. Sections 4 and 5 present the Sustainability and Climate Action Policy and Sustainable Procurement and Purchasing Policy, including their effective dates and efficiency requirements. Section 6 records electricity consumption in 2025, Section 7 presents implementation and photographs, and Section 8 summarises the evidence.

TABLE 1 Energy efficiency plan to reduce overall energy consumption, in place by 2025

No.	Element	Record	Provision	Date	Evidence
1	Reduction targets	Building electricity requirement reduced through renewable energy and efficient systems	10% (2024-25); 12.5% (2025-26); 20% (2029-30)	Since 2020-21	Strategic Management Plan, KPI 5.9.4
2	Identifying high use	Campus review identifies buildings and blocks with high energy consumption	Every year	Since 2020-21	Strategic Management Plan, KPI 5.9.3
3	Monitoring	Progress reported by each campus and consolidated at University level	Annual	2024-25; 2025-26	Section 1
4	Policy commitment	Annual energy audits; renewable energy KPIs; gradual solar transition and annual environmental audits	All campuses	Reviewed 22 Jul 2026	HSE paras 6.2(d–e), 6.21(c–d)
5	Energy audits	Campus-wide energy audits; conservation measures; follow-up audits and staff training	Director Admin	24 Nov 2025	Rector's Action Points, item 7
6	Efficiency measures and targets	BMS; LED smart controls; HVAC improvement of at least 25%; energy use intensity 30% lower by 2030	40% building efficiency gain by 2030	Effective 7 Dec 2025	SCAP, paras 3.1, 5.1.2 and 8.2
7	Efficient purchasing	Minimum 3-star energy-efficient equipment; Energy Star or equivalent for IT equipment	All purchases	Effective 15 Nov 2025	SPPP, paras 5.2.1 and 6.1.1
8	Consumption recorded	Electricity consumption recorded by campus, and monthly by meter at the Islamabad E-8 campus	6,268,326 kWh	2025	Section 6
9	Measures delivered	LED and sensor lighting, inverter air conditioning and solar systems at the campuses; 923,403 kWh of on-campus solar generation	Under way	2024-25; 2025	Section 7

1. Strategic Management Plan: energy efficiency targets

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. Two KPIs form the University's plan for reducing energy consumption (Table 2):

KPI 5.9.4 sets the percentage reduction in the electricity requirement of each building or block to be achieved through renewable energy sources, such as solar panels, and energy-efficient systems, such as sensor lights, within a range of 5 to 20 per cent. The target rises from 5 per cent in 2020-21 to 10 per cent in 2023-24 and 2024-25, 12.5 per cent in 2025-26 and 2026-27, and 20 per cent in 2029-30.

KPI 5.9.3 requires a review every year at each campus to identify the buildings and blocks with higher energy consumption rates, so that the reduction effort is directed where consumption is highest, with a target of 1 (review conducted) in every year from 2020-21 to 2029-30.

Table 2: Strategic Management Plan, Objective 5.9: annual targets of KPIs 5.9.4 and 5.9.3

Fiscal year	KPI 5.9.4: reduction in electricity requirement of each building or block (per cent)	KPI 5.9.3: review to identify buildings and blocks with higher energy consumption (Yes = 1)
2020-21	5.00	1
2021-22	7.50	1
2022-23	7.50	1
2023-24	10.00	1
2024-25	10.00	1
2025-26	12.50	1
2026-27	12.50	1
2027-28	15.00	1
2028-29	18.00	1
2029-30	20.00	1

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

The campuses report their progress against these targets each year (Table 3). For 2024-25 the Lahore campus reported a 10 per cent reduction in its electricity requirement, meeting its target, and the review of buildings with higher energy consumption was conducted at four of the six campuses and constituent units. For 2025-26 the Health Sciences campus, Islamabad, reported a 50 per cent reduction against a target of 12.5 per cent, raising the University-level value from 1.43 to 7.14 per cent. The University-level value of KPI 5.9.3 has been reported in every year since 2021-22 (0.20, 0.60, 0.40, 0.67 and 0.50).

Table 3: Strategic Management Plan: progress reported against KPIs 5.9.4 and 5.9.3

KPI	Fiscal year	Target	University level	Campuses reporting the target met
KPI 5.9.4, reduction in electricity requirement (per cent)	2024-25	10.00	1.43	Lahore (BULC): 10.00
KPI 5.9.4, reduction in electricity requirement (per cent)	2025-26	12.50	7.14	Health Sciences Islamabad (BUHS-ISB): 50.00
KPI 5.9.3, review of buildings with higher energy consumption	2024-25	1	0.67	Karachi (BUKC), Lahore (BULC), Institute of Professional Psychology (IPP), Health Sciences Karachi (BUHS-KHI)
KPI 5.9.3, review of buildings with higher energy consumption	2025-26	1	0.50	Institute of Professional Psychology (IPP), Health Sciences Karachi (BUHS-KHI), Health Sciences Islamabad (BUHS-ISB)

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 6 reproduce the Strategic Management Plan records, captured on 4 November 2026.

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

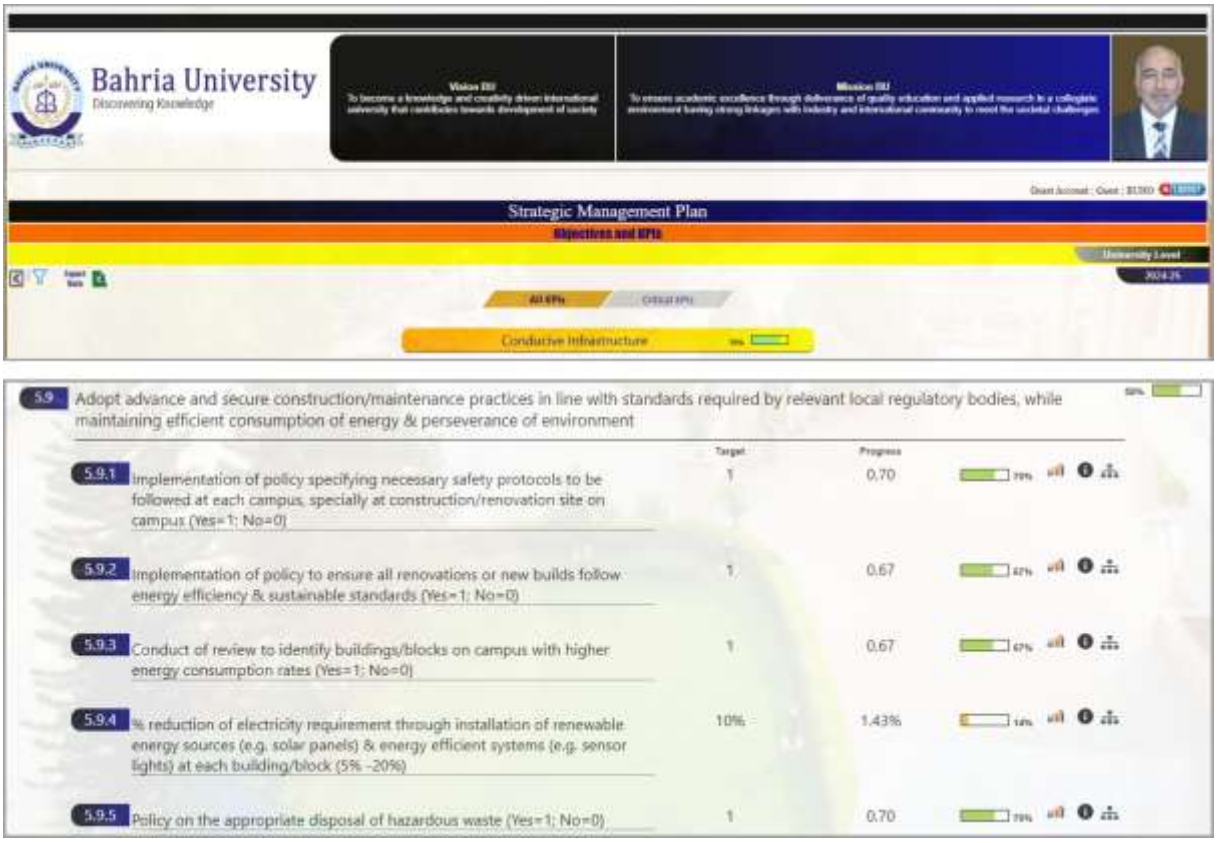


Figure 1: Strategic Management Plan, Objectives and KPIs, University Level, fiscal year 2024-25: Theme 5, Conducive Infrastructure (top); Objective 5.9 with KPIs 5.9.1 to 5.9.5, their targets and progress (bottom).

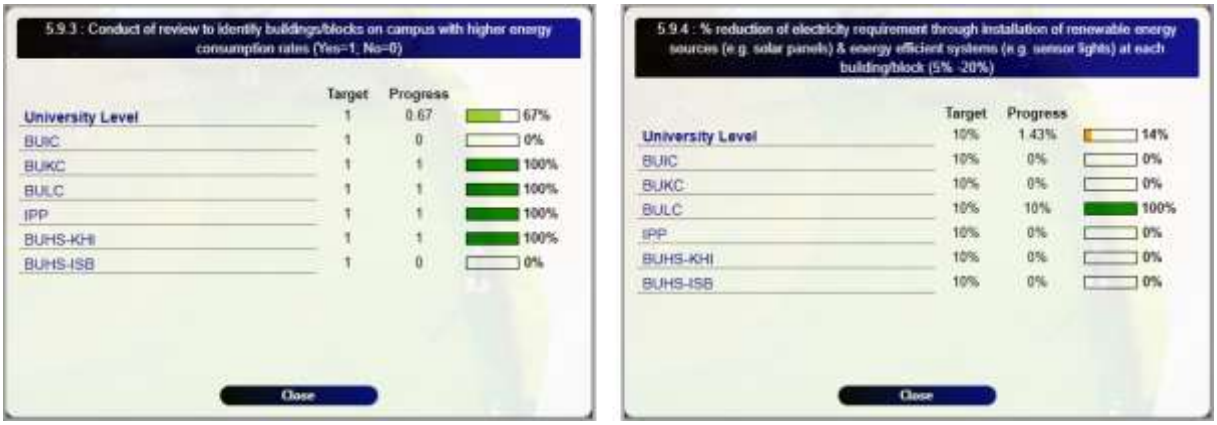


Figure 2: Strategic Management Plan, fiscal year 2024-25, progress by campus: KPI 5.9.3 (left), review conducted at BUKC, BULC, IPP and BUHS-KHI; KPI 5.9.4 (right), 10 per cent reduction at BULC.

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

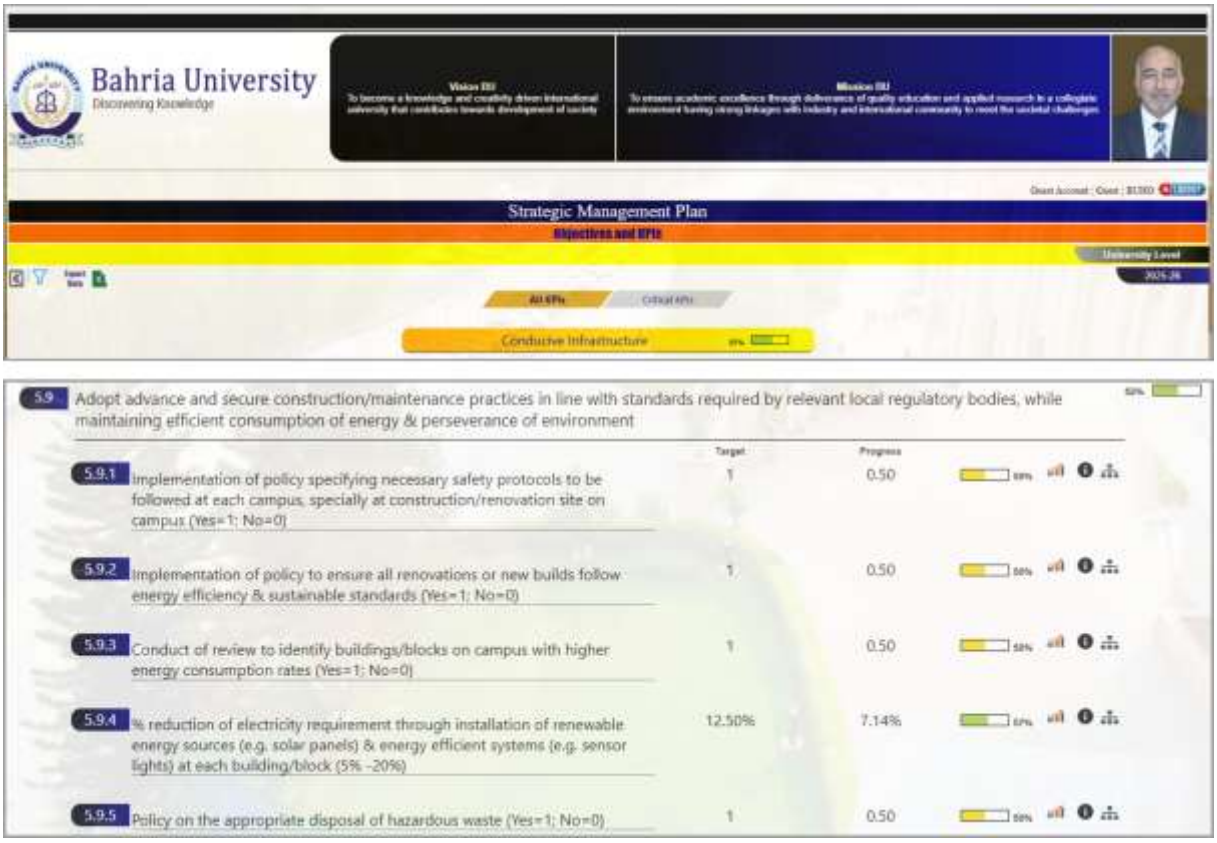


Figure 3: Strategic Management Plan, Objectives and KPIs, University Level, fiscal year 2025-26: Theme 5, Conducive Infrastructure (top); Objective 5.9 with KPIs 5.9.1 to 5.9.5, their targets and progress (bottom).

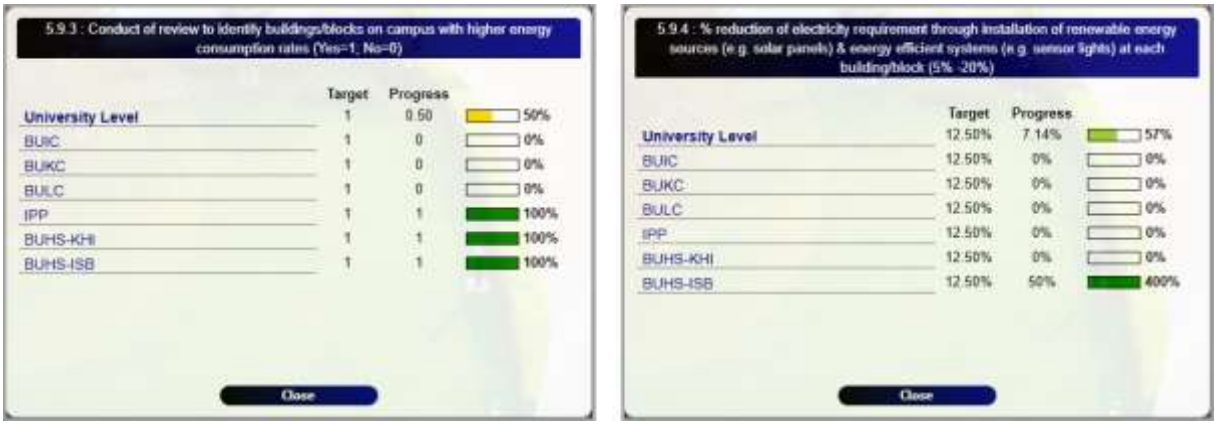


Figure 4: Strategic Management Plan, fiscal year 2025-26, progress by campus: KPI 5.9.3 (left), review conducted at IPP, BUHS-KHI and BUHS-ISB; KPI 5.9.4 (right), 50 per cent reduction at BUHS-ISB.

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

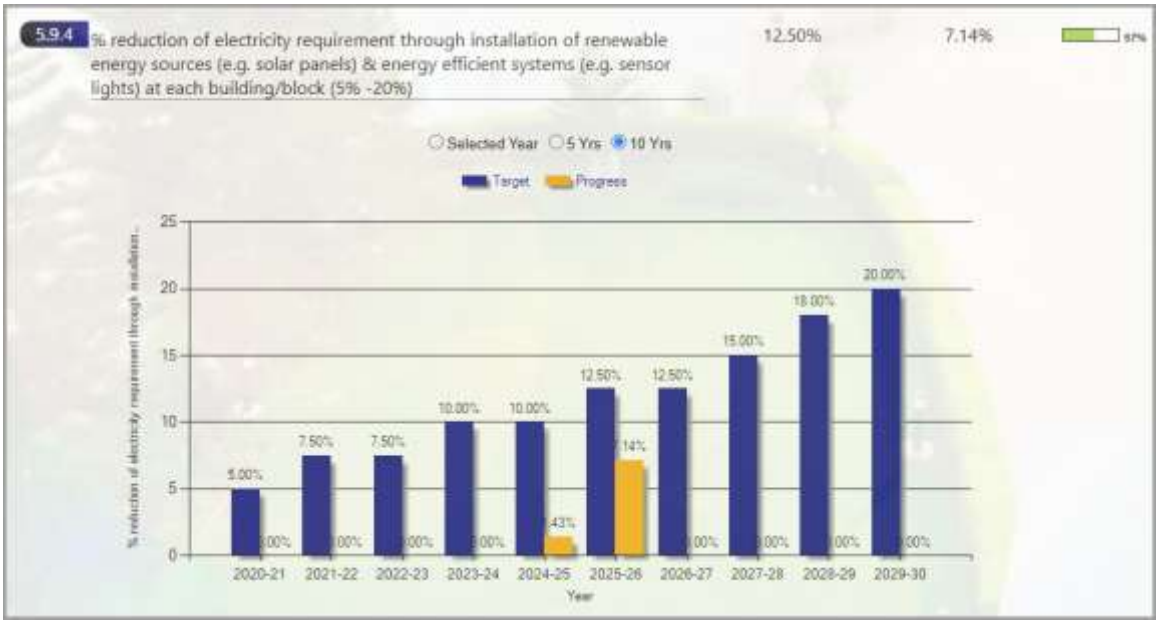


Figure 5: Strategic Management Plan, KPI 5.9.4, ten-year view: targets for the reduction in electricity requirement of each building or block, from 5.00 per cent (2020-21) to 20.00 per cent (2029-30), and the progress reported for 2024-25 (1.43 per cent) and 2025-26 (7.14 per cent).

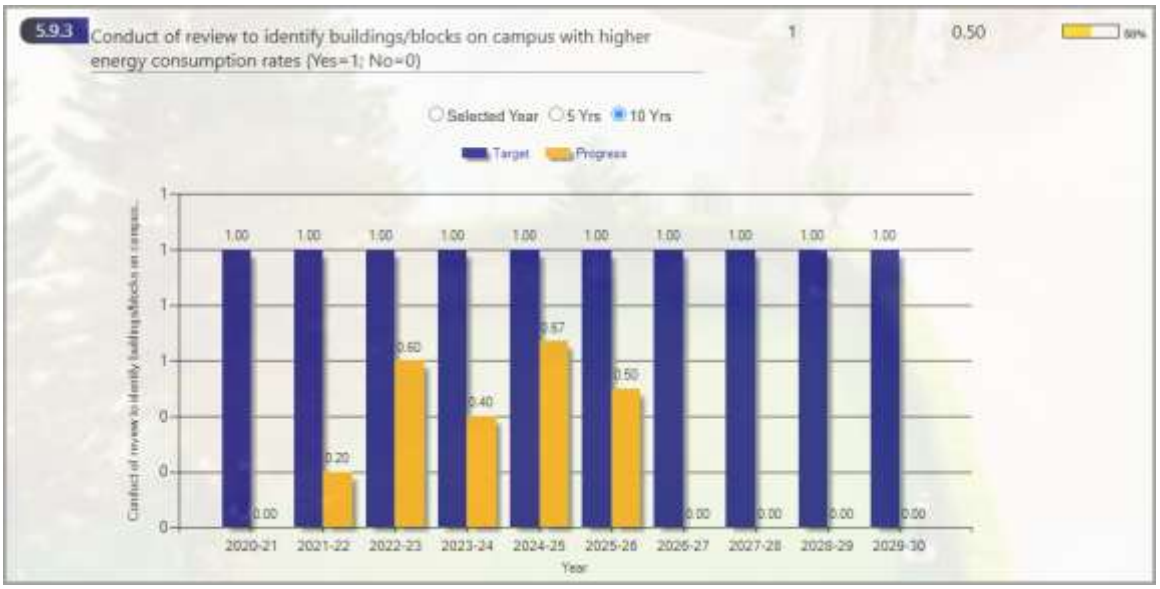


Figure 6: Strategic Management Plan, KPI 5.9.3, ten-year view: a review of buildings and blocks with higher energy consumption targeted in every year from 2020-21 to 2029-30, and the University-level progress reported from 2021-22 (0.20) to 2025-26 (0.50).

2. Health Safety and Environment Policy

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 requirements are presented as the reviewed 2026 policy, separately from the dated energy records and November 2025 audit directive.

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 must use defined efficiency benchmarks (para 6.2(d)), and renewable energy adoption is tracked through measurable KPIs (para 6.2(e)). Each Campus Director prepares, implements and audits an Environmental Management Plan with support from Earth and Environment Sciences (para 6.3).

All campuses are to shift gradually to solar energy to minimise carbon emissions (para 6.21(c)). Annual environmental audits include calculation of environmental footprints and cost-benefit analysis, with the Environmental Management Plan revised accordingly (para 6.21(d)). These provisions support the programme of energy monitoring, efficiency improvements and renewable supply.

2. HSE Policy continued


BAHRIA UNIVERSITY
ISLAMABAD

BAHRIA UNIVERSITY
أطلبوا العلم
PAKISTAN

BU HEALTH, SAFETY AND ENVIRONMENT POLICY

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Figure 7: 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 8: 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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2. HSE Policy continued

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.

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Figure 13: HSE Policy, third edition, PDF page 7: printed page 1: scope and campus applicability.

2. HSE Policy continued

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:

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Figure 14: HSE Policy, third edition, PDF page 32: printed page 26: para 6.2, including annual energy audits with defined benchmarks (d), renewable energy KPIs (e), and campus responsibility under para 6.3.

2. HSE Policy continued

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 15: HSE Policy, third edition, PDF page 38: printed page 32: para 6.21(c–d), solar transition and annual environmental audits.

2. HSE Policy energy audits and renewable energy

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.

Figure 16: Enlarged extract, HSE Policy, PDF page 32, printed page 26: para 6.2, including annual energy audits with defined efficiency benchmarks (d) and renewable energy KPIs (e).

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.

Figure 17: Enlarged extract, HSE Policy, PDF page 38, printed page 32: para 6.21(c–d), solar transition and annual environmental audits.

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 sets the University-wide cycle of audit, implementation, monitoring and follow-up through which consumption is to be reduced.

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 18: 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 19: Rector's Briefing: Action Points, Academic Wing, 24 November 2025, page 3: item 7, AI-based energy audits across all campuses and facilities, energy conservation and cost reduction measures implemented through the facility management teams, follow-up audits and staff training; action by the Director Admin.

4. Sustainability and Climate Action Policy: efficiency measures and targets

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, sets the efficiency programme. Existing buildings are to be retrofitted to achieve a 40 per cent improvement in energy efficiency by 2030 (para 3.1, Objective 2). Under Pillar 1, building management systems are to be implemented across all facilities, all lighting retrofitted to LED with smart controls (occupancy sensors and daylight harvesting), air conditioning upgraded to high-efficiency standards with at least 25 per cent improvement, and a deep energy retrofit programme implemented for buildings older than ten years (para 5.1.2). The implementation timeline begins with energy audits and solar feasibility studies in 2025-2026, and performance is measured against a reduction in energy use intensity (kWh per square metre) of 30 per cent by 2030 and 50 per cent by 2040 (para 8.2).

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

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Figure 23: Sustainability and Climate Action Policy, Table of Contents (page 4), section 10.

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

9	Scope 1 Emissions	Direct greenhouse gas emissions from owned or controlled sources (e.g., campus vehicles, generators)
10	Scope 2 Emissions	Indirect emissions from purchased electricity, heat, or steam
11	Scope 3 Emissions	All other indirect emissions occurring in the value chain (e.g., commuting, business travel, purchased goods)
12	Science-Based Targets	Emission reduction targets aligned with climate science to limit global warming to 1.5°C

3. POLICY OBJECTIVES AND SCOPE

3.1 Strategic Objectives

Objective 1: Carbon Neutrality and Emissions Reduction

- Achieve 50% reduction in Scope 1 and 2 emissions by 2040 (baseline: FY2024)
- Achieve carbon neutrality (Net Zero) across all campuses by 2040
- Transition to 100% renewable electricity by 2035
- Phase out fossil fuel-based transportation fleet by 2032

Objective 2: Climate Resilient Infrastructure

- Climate-proof all new infrastructure developments against 2050 climate projections
- Retrofit existing buildings to achieve 40% energy efficiency improvement by 2030
- Implement nature-based solutions for stormwater management and urban heat island mitigation
- Establish climate-resilient water management systems ensuring zero water waste

Objective 3: Sustainability Integration in Academia

- Embed climate and sustainability content across 100% of academic programs by 2028

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Figure 24: Sustainability and Climate Action Policy, PDF page 7: para 3.1, Strategic Objectives, including Objective 2, Climate Resilient Infrastructure.

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 25: Sustainability and Climate Action Policy, PDF page 13, printed page 12: paras 5.1.1 to 5.1.3, including Energy Efficiency and Conservation (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 26: Sustainability and Climate Action Policy, PDF page 14, printed page 13: Pillar 1 implementation timeline.

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

8. MONITORING, REPORTING, AND VERIFICATION

8.1 Greenhouse Gas Inventory

Inventory Standards:

- Conduct annual GHG inventory following GHG Protocol Corporate Standard and ISO 14064-1
- Include all Scope 1, Scope 2, and relevant Scope 3 emissions
- Establish 2024 as baseline year for all emission calculations
- Engage third-party verification for inventory accuracy (ISO 14064-3)

Reporting Categories:

- Stationary combustion (generators, boilers)
- Mobile combustion (fleet vehicles)
- Fugitive emissions (refrigerants, fire suppression)
- Purchased electricity and steam
- Business travel (air, rail, road)
- Employee commuting
- Purchased goods and services
- Capital goods and construction
- Waste generated in operations

8.2 Performance Metrics and Key Performance Indicators (KPIs)

Category	KPI	Target 2030	Target 2040
Energy	Renewable energy share	60%	100%

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Figure 27: Sustainability and Climate Action Policy, PDF page 25, printed page 23: paras 8.1 and 8.2, inventory and performance indicators.

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

	Energy use intensity (kWh/sqm)	-30%	-50%
Emissions	Scope 1+2 emissions reduction	-50%	Net Zero
	Scope 3 emissions reduction	-30%	Net Zero
Water	Water use intensity (L/sqm)	-40%	-60%
	Alternative water sources	30%	50%
Waste	Waste diversion rate	90%	100%
	Single-use plastic elimination	100%	100%
Transport	EV fleet share	50%	100%
	Single-occupancy vehicle trips	-60%	-80%
Biodiversity	Native species in landscaping	80%	95%
	Green cover ratio	35%	50%
Academics	Programs with climate content	100%	100%
	Climate research funding (PKR M)	50	200

8.3 Reporting and Disclosure

Annual Sustainability Report:

- Publish comprehensive sustainability report using GRI Standards
- Include GHG inventory with third-party verification statement
- Report progress against Science-Based Targets
- Disclose climate risks and adaptation measures (TCFD alignment)
- Share best practices and lessons learned

External Reporting:

- Submit data to CDP (Carbon Disclosure Project)

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Figure 28: Sustainability and Climate Action Policy, PDF page 26, printed page 24: para 8.2 continued, energy use intensity targets.

5. Sustainable Procurement and Purchasing Policy: energy-efficient equipment

The Bahria University Sustainable Procurement and Purchasing Policy (Policy Code BU-SPPP-2025, version 1.0), effective 15 November 2025 and approved by the Rector, builds energy efficiency into purchasing. All procurement is to require energy-efficient equipment, with minimum 3-star ratings (para 5.2.1), and supplier documentation is to include energy efficiency ratings (para 5.1.3). All information technology and electronic equipment must carry Energy Star or equivalent certification (para 6.1.1).

5. Sustainable Procurement and Purchasing Policy (continued)

BAHRIA UNIVERSITY
SUSTAINABLE PROCUREMENT AND PURCHASING POLICY

Policy Code: BU-SPPP-2025

Version: 1.0

Effective Date: 15 November 2025

Review Cycle: Annual

Approved By: Rector, Bahria University

Figure 29: Sustainable Procurement and Purchasing Policy, PDF page 1: BU-SPPP-2025, version 1.0, effective 15 November 2025, approved by the Rector.

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Figure 32: Sustainable Procurement and Purchasing Policy, Table of Contents (page 4), sections 8 to 11.

5. Sustainable Procurement and Purchasing Policy (continued): pages cited

5. SUSTAINABLE PROCUREMENT STANDARDS

5.1 General Requirements for All Procurement

5.1.1 Sustainability Planning

- All procurement requests must include sustainability requirements
- Market analysis shall consider sustainability availability and costs
- Specifications shall not unnecessarily restrict sustainable options
- Evaluation criteria shall include sustainability weighting (minimum 15%)

5.1.2 Supplier Requirements

All suppliers must demonstrate:

- Compliance with Pakistani environmental and labor laws
- No use of forced or child labor
- Safe working conditions
- Non-discrimination policies
- Environmental management commitment

5.1.3 Documentation Requirements

- Environmental Product Declarations (EPDs) where available
- Chain of custody certifications (FSC, PEFC for wood; recycled content)
- Energy efficiency ratings
- Chemical content disclosures (REACH, RoHS compliance)
- Fair trade or ethical sourcing certifications where applicable

5.2 Environmental Criteria by Category

5.2.1 Energy and Emissions

- Prioritize products with lower carbon footprint (LCA verified)
- Require energy-efficient equipment (minimum 3-star ratings)
- Specify renewable energy requirements for service providers
- Favor local suppliers to reduce transport emissions

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Figure 33: Sustainable Procurement and Purchasing Policy, PDF page 10: para 5.1.3, supplier energy efficiency documentation, and para 5.2.1, minimum 3-star energy-efficient equipment.

5. Sustainable Procurement and Purchasing Policy (continued): pages cited

5.3.2 Local Economic Development

- Preference for local suppliers (within 100km radius)
- Support for SMEs and women/youth-owned businesses
- Skills development and training requirements for large contracts
- Community benefit clauses in major construction projects

5.3.3 Accessibility and Inclusion

- Universal design principles for built environment
- Accessibility features in IT procurement
- Inclusive employment practices by service providers

6. PRODUCT AND SERVICE CATEGORIES

6.1 Priority Categories with Detailed Specifications

6.1.1 Information Technology and Electronics

Mandatory Requirements:

- Energy Star or equivalent certification for all equipment
- EPEAT registration (Gold or Silver) for computers and displays
- TCO Certified for displays and notebooks
- RoHS compliance certification
- Minimum 5-year warranty and availability of spare parts
- Take-back program for end-of-life equipment

Preferred Requirements:

- EPEAT Gold certification
- Recycled plastic content >30%
- Repairability index score >7/10
- Carbon footprint disclosure

6.1.2 Office Furniture and Furnishings

Mandatory Requirements:

- FSC or PEFC certified wood products

Figure 34: Sustainable Procurement and Purchasing Policy, PDF page 12: para 6.1.1, IT and electronics requirements, including Energy Star or equivalent certification.

6. Electricity consumption recorded, 2025

The campuses record their electricity consumption, which provides the baseline against which reductions are measured. In 2025 the six campus units consumed 6,268,326 kWh of electricity (Table 4). The Islamabad E-8 campus records its consumption and bill every month for each of its four meters (Table 5), and the Health Sciences campus, Islamabad, records its monthly supply and installed a new automated (AMI) meter in November 2025.

Table 4: Electricity consumption by campus, January to December 2025

Campus	Electricity consumed (kWh)	Record
Islamabad E-8	1,622,481	Director Admin, E-8 campus
Islamabad H-11	684,480	Director Campus, H-11
Karachi Campus, including the Institute of Professional Psychology	1,827,218	Director Admin, Karachi campus
Health Sciences, Islamabad	438,540	Director Campus, Health Sciences Islamabad (monthly record)
Lahore	288,080	Director, Lahore campus
Health Sciences, Karachi	1,407,527	Director Campus, Health Sciences Karachi
Total	6,268,326	

Health Sciences, Karachi: the monthly record prepared by the campus totals 1,407,527 kWh.

Table 5: Electricity consumption by meter, Islamabad E-8 campus, 2025 (kWh); record: Electricity Consumption, Bahria University Islamabad, Year 2025, Director Admin, E-8 campus; the four meters total 1,622,481 kWh

Month	Sir Syed Block	Head Office, Business School and BIC	Iqbal Block	Student Service Centre
January	30,880	64,000	46,080	1,920
February	21,280	45,600	25,600	1,140
March	13,280	35,600	20,640	800
April	14,240	44,400	25,920	780
May	37,440	92,000	53,760	1,400
June	47,360	87,200	59,680	1,780
July	47,360	89,600	47,200	2,320
August	45,314	74,000	20,840	2,025
September	47,053	99,240	52,698	2,461
October	36,987	79,480	49,661	1,600
November	10,588	41,560	16,463	877
December	19,780	48,040	13,014	1,540
Total	371,562	800,720	431,556	18,643

The printed total for the Iqbal Block meter in the campus record (402,079 kWh) covers January to October; the twelve monthly readings total 431,556 kWh, and the four meters 1,622,481 kWh.

7. Efficiency measures delivered in 2024-25 and 2025

The campus administrations report the replacement of conventional lighting and air conditioning with efficient units (Table 6). The Islamabad E-8 campus administration states that the University aims to reduce overall energy consumption while maintaining comfort, safety and academic functionality, and reports that more than half of its conventional lighting has been replaced with LED and SMD lights with motion sensors and more than half of its conventional split air conditioners with inverter units. On the supply side, the Directorate of Planning and Development completed three solarization projects at existing campuses in 2024-25, a combined 870 kW, which reduce the electricity drawn from the grid (Figures 35 and 36).

Table 6: Energy efficiency measures reported by the campus administrations

Campus	Lighting	Air conditioning and other services	Record
Islamabad E-8	Conventional lighting replaced with LED and SMD lights with motion sensors (more than 50 to 75 per cent)	Conventional split air conditioners replaced with inverter units (more than 50 to 75 per cent); solar systems expanded across academic and hostel blocks	Campus Admin, 2026
Islamabad H-11	LED lighting in corridors and offices; LED emergency and outdoor lights	Central air conditioning plant	Campus Admin, 2026
Health Sciences, Islamabad	LED lights with light detection	Inverter split air conditioning; solar carport	Campus Admin, 2026
Health Sciences, Karachi	4,020 LED lamps	Electricity and gas consumption recorded for 2025	Campus Admin, 2026
Lahore	LED lights, 100 per cent	Solar panels supplying 25 per cent of the total load	Campus Admin, 2026

7. Efficiency measures delivered (continued): Annual Progress Report 2024-25

Annual Progress Report (2024-2025) of P&D Directorate:

1. Planning department completed following solarization projects during the Year 2024-2025 (Picture is attached in Annex A):

S.No	Description	Quantity	Project Cost	Department
1.	Provision & Installation of Solar System	500 KW	42.4 M	BUIC
2.	Provision & Installation of Solar System	300 KW	25.5 M	BU H-11 Campus
3.	Provision & Installation of Solar System	70 KW	9.33 M	BULC

2. Development department completed the following projects during the Year 2024-2025 (Pictures are attached in Annex A):

S.No	Description	Quantity	Project Cost	Department
1.	Dental College & Hospital at Karahi	1 Job	915 M	BUKC
2.	Sky Room	1 Job	61.14 M	BUHO

3. Procurement department completed the purchasing of following items / equipment during the Year 2024-2025:

S.No	Description (Items Purchased)	Quantity	Project Cost	Department
1.	Laptop	1	85,000/-	Marketing-BUHO
2.	Desktop PC	1	68,500/-	Academic-BUHO
3.	Laptop	1	85,000/-	Academic-BUHO
4.	Dell Computer System	1	79,569/-	AD (I&C)-BUHO
5.	HP LaserJet Printer	1	85,550/-	PMSTP
6.	100 x Desktop PCs for BUIC	100	11,223,100/-	BUIC
7.	Renewal of Sophos Antivirus intercept x Advance for server & Clients	1	1,274,000/-	IT Dte- BUHO
8.	Photocopier Machine	1	270,600/-	Exams-BUHO
9.	New Generation Firewalls	1	13,922,680/-	IT-BUHO
10.	Sound system in VCL Room (1st Floor)	1	2,650,000/-	IT-BUHO
11.	Multimedia Projector, Re-furbished computer system Robotics and Workshop Lab	30	1,378,020/-	BU H-11 Campus

Figure 35: Annual Progress Report (2024-2025) of the Directorate of Planning and Development, page 1: solarization projects of 500 kW (Islamabad E-8), 300 kW (Islamabad H-11) and 70 kW (Lahore) completed during 2024-25.

7. Efficiency measures delivered (continued): Annual Progress Report 2024-25

ANNEX – A

Solarization:





BU Dental College & Hospital Karachi:

Figure 36: Annual Progress Report (2024-2025) of the Directorate of Planning and Development, Annex A: photographs of the solarization projects.

7. Efficiency measures delivered (continued): solar supply

The University's campuses generated 923,403 kWh from on-campus solar systems in 2025 (Table 7), including 360,000 kWh from the 300 kW system at the Islamabad H-11 campus. At the Islamabad E-8 campus two 100 kW systems on the Sir Syed Block and the Business School block were joined by the 500 kW system, for which the campus administration records generation from October 2025. This generation is consumed on campus and reduces the electricity drawn from the grid.

Table 7: Solar energy generated on campus, January to December 2025

Campus	System	Energy generated (kWh)	Source
Islamabad E-8	100 kW, Sir Syed Block	100,134	Campus Admin record
Islamabad E-8	100 kW, Business School block	98,209	Campus Admin record
Islamabad E-8	500 kW, generation from October 2025 (October to December)	66,140	Campus Admin record
Islamabad E-8, total		264,483	University website
Islamabad H-11	300 kW	360,000	H-11 campus record
Lahore	Solar system	55,320	University website
Health Sciences, Karachi	Solar system	243,600	University website
Total		923,403	Sum of the above

University website, Renewable Energy (2025 data for the Islamabad E-8, Lahore and Health Sciences Karachi campuses): https://www.bahria.edu.pk/content/Downloads/c3021b88-9264-4e69-a673-109498816311.pdf

7. Efficiency measures delivered (continued): solar supply



Figure 37: Islamabad E-8 campus: rooftop solar arrays on the existing academic blocks. Campus record, undated.

7. Efficiency measures delivered (continued): lighting and air conditioning



Figure 38: Islamabad H-11 campus: LED tube and panel lighting in offices and classrooms, LED desk lighting, LED emergency light and LED outdoor light (top row and bottom left); central air conditioning plant and variable refrigerant flow outdoor units (bottom centre and right). Supplied by the campus administration, undated.

7. Efficiency measures delivered (continued): lighting and air conditioning



Figure 39: Health Sciences campus, Islamabad: LED lights with light detection (top); solar carport and inverter split air conditioner (bottom). Supplied by the campus administration, undated.



Figure 40: Health Sciences campus, Karachi: LED ceiling lamps. Supplied by the campus administration, undated.

7. Efficiency measures delivered (continued): lighting and solar supply



Figure 41: Lahore campus: rooftop solar arrays (top); grid-tied solar inverters and LED ceiling lights (bottom). Campus administration photographs; the inverter and lighting photographs are dated 13 May 2026.

8. Summary of evidence

Element	Evidence	Figures
Plan with reduction targets, in place by 2025	Strategic Management Plan, Objective 5.9, since 2020-21: reduction in the electricity requirement of each building or block through renewable energy and energy-efficient systems, 10 per cent for 2024-25 rising to 20 per cent by 2029-30 (KPI 5.9.4); annual review to identify buildings with higher energy consumption (KPI 5.9.3)	1 to 6; Tables 2 and 3
Policy requirements	Current HSE Policy: annual energy audits with defined benchmarks and renewable KPIs (6.2(d–e)); solar transition and environmental audits (6.21(c–d)). Amendment register records editions in 2021, November 2025 and July 2026; current wording is reproduced as reviewed in 2026.	7 to 17
Energy audits and conservation	Rector's directive of 24 November 2025: campus-wide energy audits, conservation measures, follow-up audits and staff training; current HSE audit benchmarks (6.2(d)).	19; 14; 16
Efficiency measures and long-term targets	SCAP effective 7 December 2025: existing building efficiency improvement of 40% and energy use intensity reduced 30% by 2030; BMS, LED smart controls and efficient HVAC (3.1, 5.1.2, 8.2). SPPP effective 15 November 2025: 3-star equipment and Energy Star or equivalent IT certification (5.2.1, 6.1.1).	20 to 34
Monitoring	Progress reported each year by campus against KPIs 5.9.3 and 5.9.4; electricity consumption of 6,268,326 kWh recorded across six campus units in 2025, monthly by meter at the Islamabad E-8 campus	1 to 6; Tables 3 to 5
Reductions delivered	10 per cent reduction at Lahore (2024-25) and 50 per cent at Health Sciences Islamabad (2025-26) reported against KPI 5.9.4; LED, sensor and inverter replacements at the campuses; 870 kW of solar capacity completed in 2024-25 and 923,403 kWh of on-campus solar generation in 2025	35 to 41; Tables 6 and 7

The records show an energy efficiency plan in place in 2025 through annual building-level targets, campus progress monitoring and the Rector's November energy audit programme. The procurement and sustainability policies became effective in November and December 2025 and set equipment standards, efficiency measures and longer-term targets. The current HSE Policy provides the reviewed audit benchmarks and renewable energy KPIs. Consumption records, solar generation and campus replacements demonstrate monitoring and implementation.