UZBEKISTAN STATE WORLD LANGUAGES UNIVERSITY

Energy Reviews to Identify Areas of Highest Energy Wastage

SDG 7 Affordable and Clean Energy | Reporting year 2025

UzSWLU conducts institutional energy reviews through the monitoring of electricity purchased from the city network, solar generation and on-site solar use, fuel consumption, building operations and greenhouse-gas emissions. The review process covers the University's six campuses and is coordinated through the SDG 7 Policy, the Green Campus Council and the annual GHG inventory. Its purpose is to identify high-consumption areas, distinguish avoidable losses from necessary demand and direct technical or operational improvements to the areas with the greatest saving potential.

The 2025 GHG inventory provides the current baseline. In 2025 the solar system generated 1,818,133 kWh, of which 953,600 kWh was used on site and 864,533 kWh was exported to the city grid, and the University purchased 1,854,198 kWh from the city network. Total energy use, including natural gas and district heat, was 44,330 GJ.

Review framework and responsibility

Review element	What is reviewed	Responsible evidence
Utility and meter review	Purchased electricity, solar generation, on-site solar use and grid export	Uchtepa TETK records, campus meters and solar-generation records
Campus comparison	Differences in consumption among the six campuses and university-controlled facilities	Campus-level energy records and annual consolidation
Building and system review	Lighting, heating, cooling, ventilation, appliances and operating schedules	Facilities and technical maintenance records
GHG review	Scope 1 and Scope 2 emissions and energy-related drivers of emissions	2025 GHG Inventory under the GHG Protocol
Operational review	Unnecessary lighting, heating/cooling outside occupied periods and inefficient equipment operation	Inspection records, maintenance logs and corrective actions
Governance review	Implementation of the SDG 7 Policy and energy-reduction measures	Green Campus Council and International Rankings Department records

Areas where energy wastage is identified

Area	Diagnostic question	Possible corrective action
Lighting	Are lights operating in empty rooms, corridors or outdoor areas?	LED replacement, zoning, timers, sensors and operational instructions
Heating and cooling	Are temperature settings, schedules and equipment efficiency appropriate?	HVAC optimization, maintenance, insulation and control settings
Equipment	Are old or inefficient appliances consuming excessive electricity?	Replacement with efficient equipment and procurement controls
Buildings	Do buildings show heat loss, poor insulation or inefficient ventilation?	Renovation, insulation, ventilation improvement and energy-efficient design
Solar-energy balance	Is generated solar electricity used on site efficiently, or is avoidable surplus exported?	Load balancing, scheduling and improved energy management
Standby and digital loads	Are computers, printers and other devices left operating unnecessarily?	Automatic power management and staff awareness
Fuel and heating systems	Are gasoline and natural-gas use consistent with operational needs?	Fuel monitoring, maintenance and route/usage review

Current baseline indicators

Indicator	2025 value	Use in energy review
Solar electricity generated	1,818,133 kWh	Measures renewable-energy production
Solar electricity used on site	953,600 kWh	Measures direct substitution for grid electricity
Solar electricity exported	864,533 kWh	Shows surplus generation and energy balance
Grid electricity purchased	1,854,198 kWh	Primary purchased-energy review indicator
Total University electricity consumption	2,807,798 kWh	On-site solar use plus grid purchase
Scope 2 emissions	1,109.05 tCO2e	Tracks emissions associated with purchased electricity and heat
Total institutional GHG inventory	10,075.31 tCO2e	Links energy review to wider carbon management

Review and improvement cycle

Stage	Process at UzSWLU	Output
Measure	Collect meter, utility, solar, fuel and operating data	Comparable campus and annual dataset
Diagnose	Compare buildings, systems, periods and energy sources to locate abnormal or avoidable consumption	List of high-wastage areas
Prioritize	Rank interventions by expected energy saving, feasibility and cost	Improvement priorities
Act	Implement LED, HVAC, equipment, operational and renewable-energy measures	Reduced energy demand or purchased electricity
Verify	Compare post-intervention data with the baseline	Documented saving or corrective result
Report	Include results in annual SDG 7 and GHG reporting	Annual review and evidence record

Official UzSWLU evidence and responsible units

- UzSWLU SDG 7 Policy — https://uzswlu.uz/backend/web/uploads/pagepdf/icon/17309783380676.pdf
- The Green Campus Council — https://uzswlu.uz/en/the-green-campus-council
- Institutional GHG Emissions Inventory 2025 — https://uzswlu.uz/backend/web/uploads/pagepdf/icon/17937021809024.pdf
- UzSWLU Commitment to Net-Zero Emissions by 2050 — https://uzswlu.uz/backend/web/uploads/pagepdf/icon/17446368559308.pdf
- Energy management and smart monitoring evidence — https://uzswlu.uz/backend/web/uploads/pagepdf/icon/17625190001123.pdf

Conclusion

UzSWLU undergoes energy reviews to identify areas where energy wastage is highest. The process is based on campus and utility data, solar-generation records, fuel and building-operation information, and annual GHG accounting. Reviews focus on lighting, HVAC, buildings, equipment, operating schedules, solar-energy balance and purchased electricity. The findings are used to prioritize energy-efficiency measures and are incorporated into the University's wider SDG 7 and climate-action framework. The principal next improvement is to maintain a separate review record for each of the six campuses, including baseline consumption, identified wastage, action taken and verified savings.