UZBEKISTAN STATE WORLD LANGUAGES UNIVERSITY

Measuring Low-Carbon Energy Use

SDG 13 Climate Action | Reporting year 2025

Uzbekistan State World Languages University (UzSWLU) measures the amount of low-carbon energy it generates and uses. Its solar photovoltaic plant, with 2,423 panels and a capacity of 1,340 kW, is metered together with the electricity the University buys from the city grid, and the results are reported in the University's annual greenhouse gas inventory.

How low-carbon energy is measured

- **Metered records with the city grid:** the University's energy accounting with the Tashkent city electricity network records, month by month, the electricity generated by the solar plant, the part used on site, the part exported to the city grid and the electricity purchased from the grid.
- **Storage:** a solar energy storage system provides up to two hours of uninterrupted power, the first such installation among higher education institutions in Uzbekistan.
- **Greenhouse gas accounting:** the metered figures feed the Institutional Greenhouse Gas Emissions Inventory, which applies the UNFCCC standardized baseline grid emission factor for Uzbekistan (0.506 kg CO2e per kWh).

Results for 2025

Measure	1 January – 1 October 2025 (metered)	2025 (full year)
Solar electricity generated	1,363,600 kWh	1,818,133 kWh
Solar electricity used on site	715,200 kWh	953,600 kWh
Solar electricity exported to the city grid	648,400 kWh	864,533 kWh
Electricity purchased from the city grid	1,001,000 kWh	1,854,198 kWh
Low-carbon share of electricity used on site	41.7%	34.0%

The share of low-carbon electricity is calculated as solar electricity used on site divided by total electricity used on site (solar used on site plus purchased grid electricity). Full-year solar figures are annualized from nine months of metered data, and purchased grid electricity is taken from the University's 2025 utility accounts. In the 2025 inventory, emissions from purchased grid electricity were 938.22 tCO2e.

Supporting evidence

- Institutional GHG Emissions Inventory 2025: https://uzswlu.uz/backend/web/uploads/pagepdf/icon/17937021809024.pdf
- UzSWLU SDG 7 Affordable and Clean Energy: https://uzswlu.uz/en/sdg-7-affordable-and-clean-energy