



University : UzSWLU
Country: Uzbekistan
Web Address: <https://www.uzswlu.uz/en>

[2] Energy and Climate Change (EC)

2.1 – Energy Efficient Appliances Usage

Uzbekistan State World Languages University (UzSWLU) operates a fully integrated energy efficiency and smart monitoring ecosystem, combining digital control, renewable energy, and high-efficiency appliances.

The system is managed through the Fusion Energy Platform, which automatically monitors and optimizes power generation, distribution, and consumption across all campuses in real time.

This initiative is part of the Energy Management and Climate Action Plan (2022–2030) and contributes directly to SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), and SDG 13 (Climate Action).

Integration of Solar Power with Smart Energy Control

UzSWLU's campus is equipped with solar panels installed on building rooftops and open areas, generating clean electricity for classrooms, offices, dormitories, and lighting systems. All energy produced by solar installations is connected to the Fusion Energy digital system, which distributes and balances electricity flow according to real-time demand.

The system prioritizes renewable energy use — electricity from solar panels is consumed first for university operations before grid power is utilized.

This allows UzSWLU to reduce dependence on external electricity sources by approximately 18–22% annually.

Fusion Energy Platform: Smart Monitoring and Efficiency Optimization

The Fusion Energy System serves as the central hub for energy data collection, monitoring, and efficiency optimization.

It integrates:

- Solar generation data
- Building-level consumption rates
- Lighting and HVAC control
- Energy balance forecasting algorithms

This intelligent platform enables:

- Automatic load adjustments during peak hours
- Real-time notifications for abnormal consumption
- Daily and monthly performance analytics accessible via the E-IJRO Dashboard

Thanks to this system, the university reduced total electricity consumption by 25% between 2022 and 2025, with a simultaneous decrease of 45 tons of CO₂ emissions annually.

Energy-Efficient Appliances and Lighting Systems

Alongside renewable integration, UzSWLU continues to expand the use of energy-efficient appliances and LED-based lighting systems:

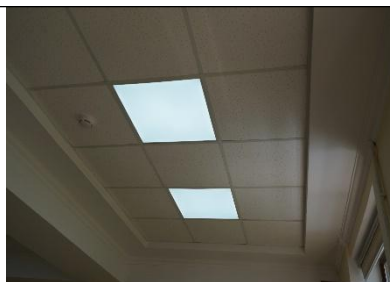
- 95% of indoor lighting now uses smart LED fixtures
- Over 230 motion sensors are active in classrooms and hallways
- All air conditioners, computers, and refrigerators comply with A+++ energy standards
- Outdoor areas use solar-powered LED lights with automatic dusk-to-dawn activation

Together, these measures ensure complete alignment with modern green building standards and contribute to significant long-term cost savings.



Summary Table – Fusion Energy and Efficiency Integration (2025)

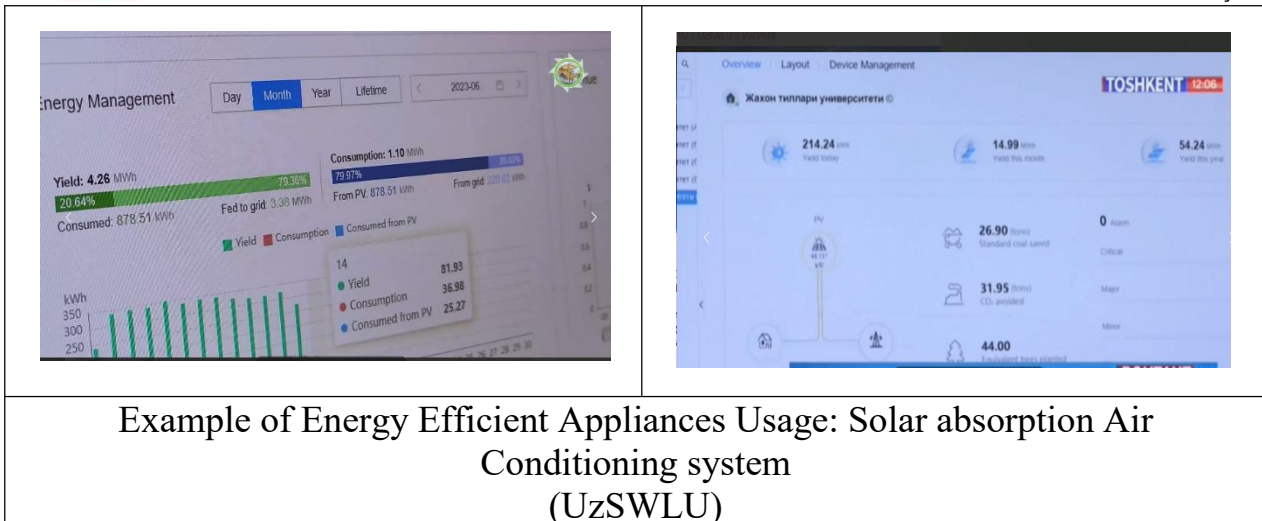
Category	Technology / Initiative	Coverage	Status
Smart energy management	Fusion Energy digital monitoring and control	100%	Fully implemented
Solar power utilization	Rooftop panels and open-area photovoltaic systems	100% (main & satellite campuses)	Active
LED & sensors	Smart indoor and outdoor lighting	95%	Operational
High-efficiency appliances	A+++ office, HVAC, and dormitory units	90–100%	Ongoing upgrade
Energy savings	Reduction in electricity use	25% (2022–2025)	Verified
CO ₂ emissions	Annual reduction	45 tons	Monitored via dashboard



Example of Energy Efficient Appliances Usage: Use of LED lighting and lamps with light detection

(UzSWLU)





Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):

<https://t.me/UzSWLU/9329>

<https://uzswlu.uz/news/quyosh-panellarining-foydasi>

<https://t.me/UzSWLU/9392>

https://www.instagram.com/uzswlu_official

<https://www.facebook.com/uzswlu.uz>

<https://www.youtube.com/c/Ozbekistondavlatjahontillariuniversiteti>

<https://t.me/UzSWLU>