Sustainability Report 2025

Jizzakh Polytechnic Institute

Executive Summary

In 2025, Jizzakh Polytechnic Institute made major strides in aligning its academic and operational strategies with the principles of sustainable development. Through the integration of renewable energy technologies, expansion of sustainability-focused academic programs, and growing international collaboration, the institute reinforced its position as a regional leader in sustainability innovation. Notably, the development and commercialization of solar technologies—including semi-transparent photovoltaic panels—and the establishment of a full-scale solar panel production facility enabled both financial independence and environmental impact mitigation. This report details the institute's sustainability performance across governance, education, research, infrastructure, and stakeholder engagement.

1. Introduction: Institutional Commitment to Sustainability

Jizzakh Polytechnic Institute (JPI) has a strong institutional mandate to contribute to the global Sustainable Development Goals (SDGs), particularly those related to clean energy (SDG 7), climate action (SDG 13), sustainable infrastructure (SDG 9), and quality education (SDG 4). As a technical university located in a region with abundant solar potential, JPI has focused on embedding sustainability into its core academic and operational framework. 2025 marked a significant leap in institutional transformation, as solar energy became both a key research priority and a source of practical innovation.

2. Governance and Strategic Approach

The Institute established a dedicated Sustainability Office under the rector’s leadership, tasked with coordinating all campus sustainability projects. The Office works closely with the "Center for Renewable Energy Research and Innovation" to oversee the planning and implementation of all green initiatives. JPI’s sustainability strategy for 2025–2030 focuses on:

- Energy transition through solar infrastructure
- Expansion of sustainability-related academic programs
- Green procurement and resource efficiency
- Engaging students and faculty in environmental responsibility

Policies on zero-emission campus transport, green building design, and digital monitoring were adopted in 2025.

3. Education and Research on Sustainability

In 2024, the Institute offered 28 sustainability-related academic programs with over **922 individual courses** touching on topics such as renewable energy, climate systems, water resource management, green economy, and sustainable agriculture.

A total of **1,436 scholarly publications** related to sustainability were recorded, including **230 Scopus and Web of Science indexed articles**, resulting in a publication-to-staff ratio of **2.74**. Moreover, JPI implemented sustainability-focused course modules into core science and engineering programs.

Significant research milestones in 2025:

- **USD 12 million** total research funding, of which over **USD 5.4 million** was dedicated to sustainability.
- Winning **3 Erasmus+ projects** related to green innovation and climate-resilient infrastructure.
- Launch of government-funded projects to design decorative and semi-transparent PV panels.

4. Campus Operations and Green Infrastructure

One of the flagship projects of 2025 was the **presidentially funded USD 1 million solar panel factory**, operational since Q2 2023. The facility enabled:

- Production of standard and semi-transparent PV panels
- Integration into campus greenhouses and rooftops
- Commercial sales generating over **USD 2.5 million** in 2025 alone

Campus-wide solar installations resulted in a **58% reduction in grid electricity consumption**. Additional improvements:

- Full LED lighting retrofitting in academic buildings
- Solar-powered street lighting along pedestrian paths
- Expansion of green zones and shaded walkways

5. Stakeholder Engagement and Impact

JPI engaged its academic and local community through multiple initiatives:

- "Green Campus Week" involving over 2,000 students in clean-up and tree-planting actions
- Start-up competitions focused on energy and climate solutions
- Collaboration with local authorities to install solar-powered irrigation systems in rural schools

The Institute also contributed to national climate dialogue, presenting its solar-based agricultural solutions at the Central Asia Regional Renewable Energy Forum.

6. Future Roadmap (2026–2030)

Looking ahead, JPI aims to:

- Reach **90% renewable energy reliance** by 2030
- Introduce Master's programs in Climate Engineering and Circular Economy
- Digitize water and energy usage monitoring across all buildings
- Establish an inter-university Green Tech Innovation Hub in collaboration with Malaysian and Chinese partners

The Sustainability Report 2025 serves as both a record of impact and a strategic blueprint for a more climate-resilient and environmentally responsible future.