

Article Overview

Uzbekistan is developing a digital energy platform to optimize electricity distribution, integrate renewable energy, and enhance grid efficiency through smart grid technologies and advanced metering infrastructure.

Overview of the Platform

Uzbekistan's Energy Internet Sharing Platform is part of a broader effort to digitalize the energy sector, improve efficiency, and support renewable energy integration. The platform leverages advanced data analytics and machine learning algorithms to optimize energy use, enhance reliability, and reduce operational costs across the electricity network . It is designed to facilitate real-time monitoring, predictive maintenance, and efficient energy management, aligning with global smart grid trends.

Smart Grid and Advanced Metering Infrastructure

The platform incorporates smart grid technologies, including Advanced Metering Infrastructure (AMI), which allows utilities to collect detailed consumption data, improve billing accuracy, and reduce the need for manual meter readings . Digital sensors and communication systems enable more precise control of electricity flows, helping to balance supply and demand, especially as renewable energy sources like solar and wind become more prominent .

Renewable Energy Integration

Uzbekistan aims to increase its renewable energy capacity to 25% of total electricity generation by 2030, with plans to add 12 GW of variable renewable energy, including solar, wind, and hydropower . The Energy Internet Sharing Platform supports this goal by enabling efficient integration of intermittent renewable sources into the grid, reducing carbon emissions, and improving energy security .

Modernization of Distribution Networks

The platform complements ongoing investments in modernizing electricity distribution networks, which face technical losses of around 13% due to aging infrastructure . With World Bank support, Uzbekistan is upgrading over 54,800 kilometers of distribution networks and 17,200 transformer substations, improving electricity supply reliability for thousands of settlements . These upgrades are critical to accommodate the planned expansion of renewable generation and ensure long-term sustainability .

Regional Energy Connectivity

Uzbekistan is also focusing on regional energy interconnectivity, which allows cross-border electricity trade and helps balance supply and demand across Central Asia . The digital platform facilitates this by providing real-time data and analytics, supporting both domestic efficiency and regional energy cooperation.

Benefits and Impact

The Energy Internet Sharing Platform is expected to:

- o Enhance grid reliability and reduce power disruptions
- o Optimize energy consumption and reduce operational costs
- o Support renewable energy integration and carbon reduction goals
- o Enable data-driven decision-making for utilities and policymakers
- o Attract private investment by improving the financial and operational performance of the energy sector

Overall, Uzbekistan's Energy Internet Sharing Platform represents a strategic step toward a modern, efficient, and sustainable energy system, combining digitalization, smart grid technologies, and renewable energy integration to meet growing domestic demand and environmental targets.

Uzbekistan has set an ambitious goal of increasing the share of renewable energy sources to 40 percent by 2030. The solar energy

At the "Powering the Future" forum in Tashkent, Uzbekistan unveiled 42 renewable, storage, and grid projects, with

The government has also implemented policies to attract foreign investment in the energy sector, including the creation of special

Uzbekistan's broad economic reforms were expanded to cover energy in 2019 when the government launched a multiphase

Uzbekistan's energy trade has negative implications on its balance sheet as the energy sources imported, such as petroleum, are

From powerful rivers to rising winds, Uzbekistan is reshaping its energy future. Rapid

Table 1. Fossil energy resources of Uzbekistan ... * share of the country's reserves in world

All the data, insights, and trends you need to help you make sense of the "state of digital" in Uzbekistan in 2025,

Solar Energy Policy in Uzbekistan: A Roadmap - Analysis and key findings. A report by the International

Projects with the support of IFC Ministry of Energy Republic of Uzbekistan The Government of the Republic of Uzbekistan and

Uzbekistan has been deploying smart grid technologies to modernize its energy infrastructure, integrate renewable energy sources,

Uzbekistan energy profile - Analysis and key findings. A report by the International Energy Agency.

Despite being energy self-sufficient thanks to its gas sector, Uzbekistan's ageing electricity infrastructure struggle to meet the

In this episode of Business Line Uzbekistan, we look at how the country is rapidly embracing solar power, securing

This policy brief, prepared by the ILO and UNECE, presents an overview of Uzbekistan's current energy landscape and identifies

This article explores the digitalization efforts in Uzbekistan's energy sector, with a focus on smart grid technologies and

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