

Current Status of Power Distribution Automation in Uzbekistan



Overview

Under the Distribution Network Digital Transformation and Resiliency Project, 26 distribution substations across the country's regions will be upgraded to digital substations, including a supervisory control and data acquisition (SCADA) system. However, recent investments in combined cycle gas turbine (CCGT) plants and renewable energy projects indicate a gradual shift toward cleaner and more efficient technologies. This paper presents a technical and policy-oriented analysis of Uzbekistan's power generation infrastructure, highlighting. Shamsiev Bakhtiyor Khamidillaevich is the Head of the Power Systems' Electrical Modes Department in the Coordinating Dispatch Centre 'Energia' since 2019, participates in the development of schemes and electrical modes of the Central Asian Unified Power System in short-term and long-term planning. Shanghai Electric has announced the successful commissioning of Uzbekistan's first digital substation in Jizzakh Province. The Zafarabad 220 kV Digital Substation spans 75,000 square meters and has a capacity of 400 MW. The 40 substations are. WASHINGTON, May 15, 2025— The World Bank's Board of Executive Directors approved today a \$100 million concessional credit to support Uzbekistan's efforts to enhance integration of renewable energy into its electricity distribution networks and improve supply reliability in priority regions.



Article Content

Uzbekistan : Power Distribution System Modernization and Digital ...

The proposed project will build on the ongoing Loan 4347-UZB, by helping rehabilitate additional 40 critical distribution substations in 13 regions across the country, expand power transformation

Distribution Network Digital Transformation and Resiliency Project ...

However, the regional blackout in January 2022, which affected much of southern Kazakhstan, the Kyrgyz Republic, and Uzbekistan, suggests that the enhancement and modernization of Uzbekistan's

Uzbekistan Accelerates Energy Transition with

Uzbekistan is taking decisive steps to modernize its aging electricity distribution infrastructure critical for integrating renewable energy and ensuring

Uzbekistan and World Bank partner on \$150mn power grid overhaul to ...

Uzbekistan is set to overhaul its aging electricity distribution infrastructure through a \$150mn program aimed at improving supply reliability and integrating renewable energy sources,

TA-6787 UZB: Power Sector Reform Support Program Climate Risk

Climate Risk and Adaptation Assessment for the Electricity Distribution Infrastructure in Uzbekistan TA-6787 UZB: Distribution Network Digital Transformation and Resiliency Project

ADB to help digitalize Uzbekistan's power distribution system

Tashkent, Uzbekistan (UzDaily.uz) — The Asian Development Bank (ADB) has approved a US\$200 million loan that will help Uzbekistan modernize and digitalize its power

Uzbekistan to Invest in Modernizing Electricity Distribution Networks ...

Uzbekistan's energy system faces significant inefficiencies, including technical distribution losses estimated at around 13% as of 2024. These losses are primarily due to aging and overburdened

Sustainable Power Sector Development in Uzbekistan and Tajikistan

Until recently, Uzbekistan's power sector was fully controlled by the Joint-Stock Company (JSC) Uzbekenergo, a state-owned power utility, which was tasked with providing electricity with a legally

Development of Renewable Energy sources in Uzbekistan

Power sector overview Reforms – Unbundling and other JSC “Thermal power plants” Distribution JSC “Regional Electric and supply of Grids of Uzbekistan” electrical consumers through to distribution

ADB to Help Digitalize Uzbekistan's Power Distribution System

Under the Distribution Network Digital Transformation and Resiliency Project, 26 distribution substations across the country's regions will be upgraded to digital substations, including

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REPN is a state-owned company, was created in 2019 from the previous vertically integrated power company to develop, own and operate the power distribution network in the territory of Uzbekistan,

Context of renewable energy in Uzbekistan

Formerly, the power sector in Uzbekistan was vertically integrated and Uzbekenergo, a state-owned monopoly, was in charge of power generation,

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In its current condition the power transmission and distribution system cannot sustain the planned high penetration of renewable energy.

World Bank Approves \$100 Million to Modernize

Uzbekistan's Regional Electric Power Networks (REPN) will contribute an additional \$50 million to the initiative, marking the country's first

Uzbekistan to Invest in Modernizing Electricity Distribution Networks ...

Urgent investment is needed to modernize Uzbekistan's distribution networks and support the country's ambitious goal of deploying 25 gigawatts of renewable generation by 2030. Without critical upgrades,

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The objectives of this component are to take advantage of modern digital technologies to support the enhanced monitoring, automation, and control of the power system in Uzbekistan. Digital

Development of energy sector of the Republic of Uzbekistan

Uzbekistan has made significant progress in recent years in the development of its energy sector. The country is rich in natural resources, including oil, gas, and coal, and has a growing renewable energy

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Uzbekistan's Energy Overhaul: Measurable Gains and Public

A comprehensive Uzbekistan energy reform initiative is delivering a deep transformation, with concrete steps reshaping how power is generated, distributed, and consumed. Since 2017, the country has

Distribution Network Digital Transformation and Resiliency Project ...

The project aims to assist Uzbekistan in modernizing and digitalizing 26 critical distribution substations, as well as strengthening the operations of Joint Stock Company Regional Electrical Power Networks

Shanghai Electric, digital substation, Uzbekistan,

Shanghai Electric has completed the commissioning of Uzbekistan's first digital substation in Jizzakh Province, advancing the country's energy

POWER GENERATION TECHNOLOGIES IN UZBEKISTAN:

This paper presents a technical and policy-oriented analysis of Uzbekistan's power generation infrastructure, highlighting challenges such as outdated equipment, limited automation, and

Final Report on Uzbekistan

On June 7, 2024, Tajikistan restored parallel operation with the Central Asian Unified Power System in the southern part of the Tajikistan power system and intends to strengthen it by connecting the

SMART GRIDS AND ENERGY DISTRIBUTION IN THE GREEN

This paper explores the role of smart grids in enabling efficient and sustainable energy distribution, with a specific focus on Uzbekistan's transition under its 2019–2030 Green Economy Strategy.

The Role Of Smart Grids In Uzbekistan's Energy Sector: Challenges

Results and Discussion Challenges in Uzbekistan's Energy Sector High Energy Losses: According to Uzbekistan's Ministry of Energy, approximately 20% of electricity is lost in transmission and

The Role Of Smart Grids In Uzbekistan's Energy Sector: Challenges

This paper explores the potential of smart grids in Uzbekistan, focusing on current challenges, innovative solutions, and future prospects tailored to the country's unique energy landscape.

World Bank to allocate \$100 million to Uzbekistan for

The World Bank approved a \$100 million concessional credit to Uzbekistan to enhance integration of renewable energy and overloaded power

POWER GENERATION TECHNOLOGIES IN UZBEKISTAN: CURRENT STATUS

Abstract Uzbekistan's power sector is undergoing a critical transformation driven by the need to improve energy efficiency, reduce fossil fuel dependency, and comply with international climate goals.

Energy Policy Brief: Turkmenistan

Regional energy interconnectivity also plays a crucial role in achieving Uzbekistan's carbon reduction goals. The country faces challenges in balancing power demand and supply due to its rigid energy

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