



International Energy Investment Forum

UNLOCKING THE INVESTMENT POTENTIAL FOR A GREENER FUTURE

Vienna, June 10-11, 2024














01

POWER SECTOR





CENTRAL ASIA – ENERGY SECTOR TARGETS

Country 	Clean energy targets 	Emissions reduction targets 	Trade and connectivity targets 
 Kyrgyzstan	<ul style="list-style-type: none"> 2030: 5% to be sourced from solar and wind. 2050: 100% to be sourced from solar, wind, and hydro 	<ul style="list-style-type: none"> 2050: Carbon neutrality. 2025: GHG emissions reduction of 16.6%. 2030: GHG emissions reduction of 15.9%. 	<ul style="list-style-type: none"> The Central Asian Power System (CAPS), which includes Kazakhstan, Kyrgyzstan, and Uzbekistan opens additional electricity trade opportunities in the region.
 Kazakhstan	<ul style="list-style-type: none"> 2030: 15% to be sourced from solar and wind. 2050: 50% to be sourced from solar, wind and hydro. 	<ul style="list-style-type: none"> 2060: Carbon neutrality. 2030: GHG emissions reduction by 15%. 2030: Energy intensity reduction by 30% from 2008 level. 2050: Energy intensity reduction by 50% from 2008 level. 	<ul style="list-style-type: none"> Development of regional energy-water projects in Kyrgyzstan (Kambarata-1 HPP, Kazarman HPP Cascade, Upper Naryn HPP Cascade, etc.) and Tajikistan (Rogun, Zarafshan, etc.). Launch of Turkmenistan – Afghanistan – Pakistan electricity interconnection expansion project.
 Turkmenistan	<ul style="list-style-type: none"> 2025: 16 MW Hybrid Solar-Wind 2027: First 100 MW Solar PPP project 	<ul style="list-style-type: none"> 2050: Carbon neutrality. 2030: Unconditional 20% reduction in emissions by 2030, compared to 2010 levels, under BAU. 	<ul style="list-style-type: none"> The Central Asian Power System is expected to be revived due to the growing significance of intercountry energy trade.
 Uzbekistan	<ul style="list-style-type: none"> 2030: 20 GW of solar and wind. 2030: 40% to be sourced from solar and wind. 	<ul style="list-style-type: none"> 2050: Power sector carbon neutrality. 2030: GHG emissions reduction by 35% compared to 2010 level. 2026: Energy intensity reduction by 20%. 	<ul style="list-style-type: none"> Tajikistan will re-connect to the Central Asian Power System in 2024, while Turkmenistan is currently assessing such re-connection.
 Tajikistan	<ul style="list-style-type: none"> 2030: 10 GW of solar, wind and hydro. 2030: 10% to be sourced from solar and wind. 	<ul style="list-style-type: none"> 2030: GHG emissions reduction by 30-40% compared to 1990 levels. 	<ul style="list-style-type: none"> Kyrgyzstan and Tajikistan are part of the Central Asia–South Asia (CASA-1000) project, which will focus on hydropower exports from these countries to Afghanistan and Pakistan.



To meet its decarbonization ambitions, the region needs to tap into its large clean energy potential, resolve systemic issues such as full cost recovery, system losses, etc. and integrate energy systems across the region.



KYRGYZSTAN – POWER SECTOR OVERVIEW

Overview



Generating Capacity

Kyrgyzstan's power sector has an installed capacity of ~4 GW, generating ~15 TWh annually.



Hydropower Dominance

Over 90% of the country's electricity is from hydropower, tapping just 13% of its potential.



Fuel Dependency

Kyrgyzstan heavily relies on imported coal, natural gas, and oil products.



Government Energy Goals

Government aims for tariff reforms, debt reduction, hydro, solar and wind power development, grid upgrades, and energy efficiency promotion.



High clean energy potential



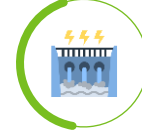
Wind: **1,500 MW**



Biomass: **200 MW**



Solar radiance: **2500-2800 hours**



Hydro: **16,580 MW**



250 sunny days annually (1,700 kWh per m²)

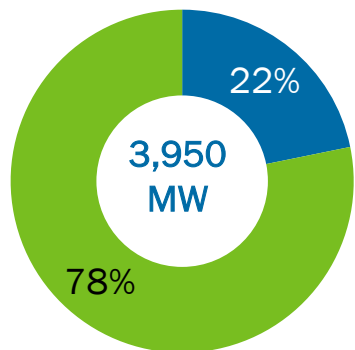


Hydro utilization rate: ~**13%**

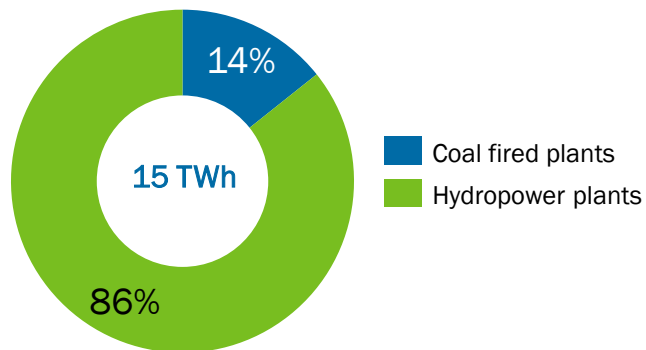
Installed capacity and electricity generation (2023)



Installed capacity



Electricity generation



■ Coal fired plants
■ Hydropower plants

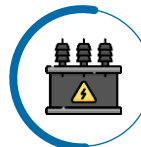
Robust infrastructure



Substations: **200 units**
(110-500 kV
12,498 MVA)



Transmission Lines: **7,500 km**
(110-550 kV)



Transformers: **23,915 units**



Distribution Lines: **59,700 km**
(0.4-35 kV)



KYRGYZSTAN – POTENTIAL OF POWER SECTOR



- Total number of employees
21,506

- Balance value of assets
USD 1.7 BN (KGS 155.5 BN)

- Annual contribution to the country's budget
USD 85.7 MN (KGS 7.5 BN)



KYRGYZSTAN – POWER SECTOR GOVERNANCE

Governance, regulation & policy setting



Cabinet of Ministers
Executive power of the Government



Kyrgyzkomur State Enterprise
Coal mining and supply



Ministry of Energy
Energy policy development and implementation



Department for Regulation of Fuel and Energy Complex under the MOE
Regulation of the fuel and energy complex



Energy Supervision Service under the MOE
supervision of the safe operation of power equipment



Directorate for Construction of Power Plants n OJSC
Development of new generating capacities

Generation, transmission & distribution



Electric Power Plants OJSC
Owns and operates 7 large hydropower plants and 2 thermal power plants



Chakan HPP OJSC
Owns and operates various small HPPs



National Electric Grid of Kyrgyzstan OJSC
Transmission and distribution company



KYRGYZSTAN – POWER SECTOR STRUCTURE

BEFORE



Bishkek TPP and Bishkekteploset **were part of** Electric Power Plants OJSC (generating energy company).



All **boiler houses** in the country were part of the Ministry of Energy.



Separate functioning of energy companies of Vostokelectro OJSC, Severelectro OJSC and Oshelectro OJSC.

NOW



Bishkek TPP and Bishkekteploset were transferred to the municipality.



Now Electric Power Plants OJSC (generating energy company) has completely become a green power plant.



All boiler houses **were transferred to the municipality** with liquidation of Kyrgyzteploenergo.



Merger and strengthening of backup energy companies Vostokelectro OJSC, Severelectro OJSC and Oshelectro OJSC to National Electric Grid of Kyrgyzstan OJSC.



KYRGYZSTAN – REFORMS AND ACHIEVEMENTS



01

National Energy Program until 2030.



02

Tariff for the population (increase by **29.9%** in 2023, by **10.8%** annually from 2024).



03

Solvency of energy companies (100% payment of contracts).



04

Remote payment for consumed electricity (by 90%).



05

Introduction of ERP system for electricity saving and ensuring the accounting and maintaining contracts for the supply of electricity.

Reforms and achievements



06

Installation of 100% ASKUE in 2025.



07

Reduction of technical losses of electricity.



08

Update of special equipment over the past 3 years (261 units for 9.3 million USD).



09

Wide opportunities for cooperation in the areas of hydropower, thermal energy, renewable energy, electricity exports, joint development of coal and gas fields, production and supply of fuels and lubricants, etc.).



10

Various financial models of cooperation (PPP, direct negotiations, turnkey, etc.).



KYRGYZSTAN – REFORMS FOR HPP AND RES



Creation of the Green Energy Fund



Modernization of hydropower plants (increase by **400 MW** by 2025)



Launch of the RES by 2026 up to **3 GW**



Export corridor (construction of 500 kV Kemin-Balykchy and 220 kV Tamga-Karakol power lines)



Electrification of Kyrgyzstan-China railroad



Cancellation of licensing for microgeneration (solar panels)



KYRGYZSTAN – POWER REFORM PRIORITIES (ENERGY STRATEGY)



The Government of Kyrgyzstan is committed to continuing energy sector and institutional reforms to support energy security, affordability and decarbonization goals.

Four pillars Of energy reforms



Financial Sustainability & Operational Efficiency



Environmental Sustainability



Affordability and Social Sustainability



Governance and Accountability

Key government reform priorities



Adoption of the Energy Sector Reform Implementation Plan



Multi-year tariff policy for 2025-2030 aimed at full cost recovery



Establishment of an Energy Reform Unit



Improving power sector companies' governance



Strengthening regional connectivity and trade (CAPS, CASA-1000)



Large-scale foreign investments into the hydropower and renewables



KYRGYZSTAN – POTENTIAL EXPORT OF ELECTRICITY

01

To China through 500 kV Kemin-Torugart power line



02

To Tajikistan and Pakistan through CASA 1000 project during the summer



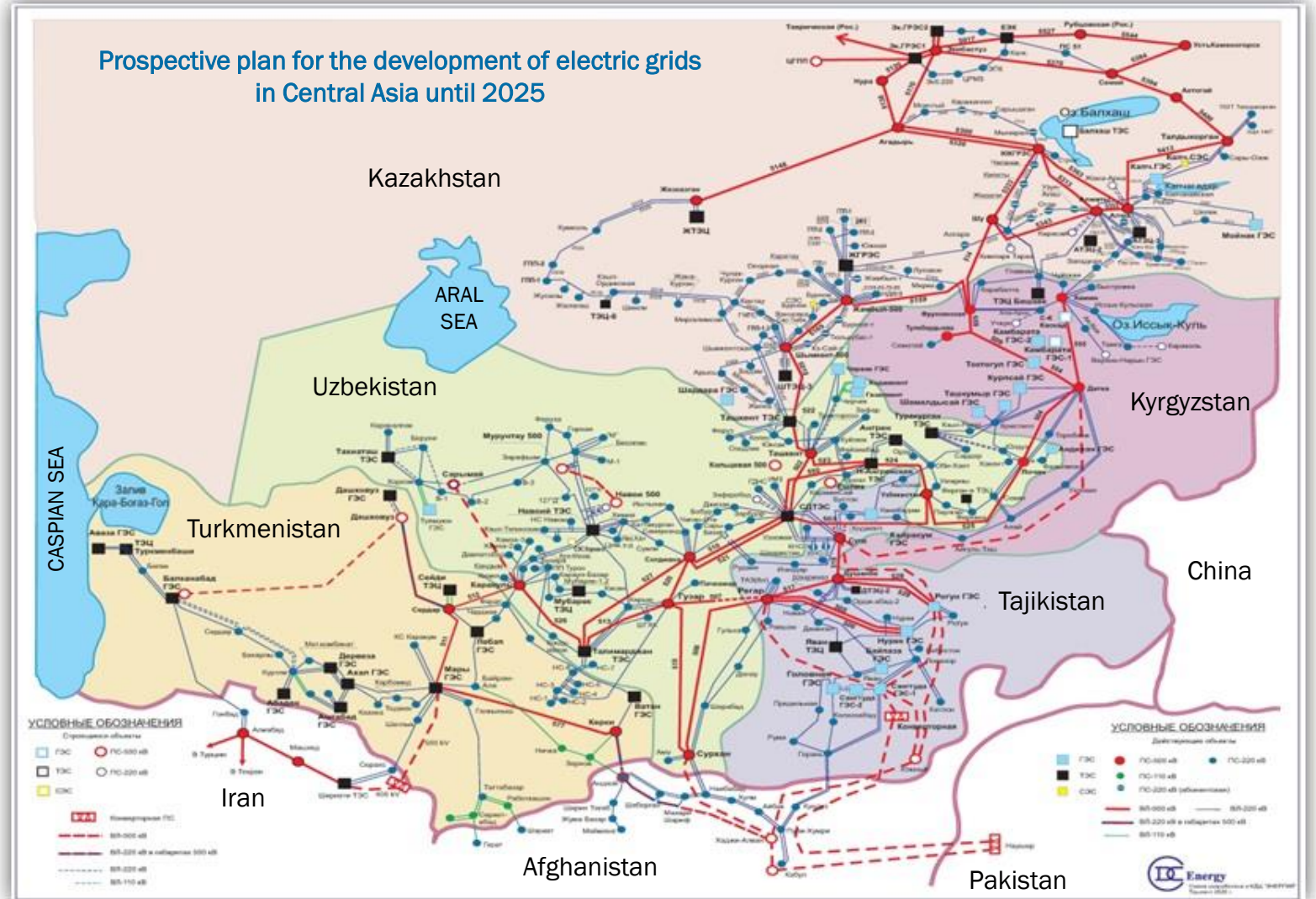
03

To Turkmenistan and Iran during the summer



04

To Uzbekistan and Kazakhstan





WHY INVEST IN KYRGYZSTAN?





KYRGYZSTAN – GUARANTEES FOR INVESTORS



Reforms and achievements



Purchasing of **100%** of generated electric power

01



Purchase tariff – 5 US cents

02



Land plot for the implementation of the Project for **25 years**

03



Issuance of technical specifications for connection to national power grids

04



Assistance in obtaining the licenses, permits and approval of the EIA, design and estimate documentation, etc.

05



Stabilization regime

06



Exemption from income tax for **5 years** with the right to extend for another 5 years

07



Exemption from VAT on imported equipment and special goods

08



Unhindered transit of electric power from the producer to the consumer

09



Priority order in the formation of dispatch schedules for electric power supplies to the grid

10



Insurance of investments

11









KYRGYZSTAN – INVESTMENT CLIMATE



Key achievements







Regulatory environment



-  Business Ombudsman under the Cabinet of Ministers
-  Reduced time for business registration (3-5 days)
-  Kyrgyzstan joined Kyoto Customs Convention
-  Introduction of PPPs and PPP legislation
-  Amendments to Law on Investments to protect & guarantee investor rights
-  30+ BITs¹ signed and enforced

Investment incentives/ exemptions



-  Investment Visas for 5-10 years
-  5 Free Economic Zones
-  Reduction in number of taxes from 16 to 8
-  Beneficiary to GSP+² Scheme
-  Property, Land and Income tax exemptions for power projects
-  Investment Agreement for additional incentives/ exemptions



KYRGYZSTAN – INCENTIVES TO IMPROVE INVESTMENT CLIMATE

Courts – England, France, Singapore

Financial **guarantee** from the Green Energy Fund

Tariff and concession preferences for 25 years

Tariff in foreign currency

Establishment of **monthly or annual indexation** for the foreign currency in PPA contracts

