## **SOLAR** PRO. **Tajikistan allectrify power solutions**

### How can Tajikistan strengthen and expand electricity trade?

Based on these considerations, for Tajikistan to strengthen and expand electricity trade, the IEA recommends a roadmap focused on three key points: Ensure favourable conditions to enable multilateral electricity trade. Adopt multilateral market models to expand electricity trade.

#### Will Tajikistan & Kyrgyzstan have a new electricity transmission system?

In fact, there are planned electricity trade initiatives as part of the new electricity transmission system, called CASA-1000, to connect Tajikistan and Kyrgyzstan, both with abundant hydropower resources, with nearby Pakistan, which suffer from chronic electricity shortages (Figure 8).

### Who is involved in establishing efficient cross-border electricity trading in Tajikistan?

In Tajikistan's neighbouring countries, the various national ministries for energy, economy and tradeas well as the entities involved with generation, transmission and distribution of electricity as trading partners are relevant stakeholders in establishing efficient cross-border electricity trading.

### Is Tajikistan moving its energy sector towards more reliability?

With an aging electricity supply that relies almost entirely on one source of power generation, hydropower, Tajikistan has a uniquely unstable power supply that has caused energy shortages and rolling blackouts for decades. Now, Tajikistan appears to be moving its energy sector towards greater reliability and sustainability.

### Why should Tajikistan regulate the power sector?

Effective regulation enforces market discipline for utilities and can contribute to their financial viability. In addition to these principles, Tajikistan would profit in appropriately preparing power sector systems and operations for expanded trading opportunities.

### Should Tajikistan import electricity?

While exports are the prime motivation of Tajikistan to pursue cross-border electricity trade in order to gain revenue, the option to import electricity in times of shortage should be open. Imports could also delay or avoid the need to build new thermal generation capacity.

Strengthening Tajikistan's role as a flexibility provider for the region. The report provides recommendations for Tajikistan for electricity trade options with its neighbours for the next ten years. The recommended actions are intended to take place between 2021 and 2030 to help achieve the goals stated in the National Strategy for

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Tajikistan''s energy sector has been a priority area of engagement for the World Bank. Its current investments in this sector stand at \$562 million to support the sector''s financial and ...

Tajikistan''s aim to export 10 TWh of electricity in 2030 requires a power system capable of maximising value from its hydro resources within the existing transmission infrastructure and leveraging its advantages moving forward with expanded cross-border electricity trading.

Potential solutions to this problem lie in (i) improving the efficiency of existing assets; (ii) negotiating commercial trading arrangements with Tajikistan''s neighboring countries; and (iii) attracting private investment to develop coal, gas, and hydroelectric power.

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The power sector is undergoing several institutional reforms to alleviate these challenges including restructuring the vertically integrated utility, implementing energy efficiency laws and measures, and updating its regulatory and tariff regimes.

Tajikistan''s vast water resources drive the country''s cheap electricity, but much of the population experiences energy shortages during winter when freezing temperatures cause soaring ...

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An alternative driver for an interconnection between Tajikistan and China could be as a transit country for electricity trade with higher demand regions such as Uzbekistan or to balance high levels of variable wind power installations energy in the region.

Tajikistan''s energy authorities denied Kazakhstan''s accusations as baseless. They noted at the time that Tajikistan does not have technical feasibility to siphon off electricity ...

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According to the World Bank, Tajikistan''s power production is 92 percent hydropower, six percent hydrocarbon, and two percent from other sources. Tajikistan''s hydropower potential is estimated at 527 billion kWh per year, which exceeds the existing electricity consumption of the countries of Central Asia by 300%.

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gration, giving Tajikistan opportunities to use surplus hydropower and flexibility services. Considering Tajikistan's objectives and power sector conditions, the IEA recommends a roadmap based on three key points

Tajikistan's geographic proximity to some of the world's fastest-growing energy markets means that investing in developing its hydropower potential can contribute to regional energy security and the clean energy transition, in addition to addressing Tajikistan's high vulnerability to climate change and natural disasters upled with the ...

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