

Is solar energy a good investment in Tajikistan?

In Tajikistan, there are no favourable conditions for the widespread use of solar energy or for attracting investment in this sector. This is happening amid constant energy shortages and a crisis in the country's electric power system. Solar panels in Dushanbe. Photo: CABAR.asia Tajikistan is one of the most vulnerable to climate change countries.

Should Tajikistan use alternative methods of generating electricity?

The experts believe the country has to use alternative methods of generating electric power more actively so that residents have constant access to it. According to meteorological services, Tajikistan has between 260 and 300 sunny days a year and enormous solar energy potential.

Does Tajikistan have electric power?

This is becoming an acute problem for the country's hydropower system, which produces more than 95% of the country's electric power. In 2023, more than 21.8 billion kWh of electric power was produced in Tajikistan. However, during many years in winter, rural residents of the country have access to electric power only 8-10 hours per day.



3 ? Tajikistan has taken a step toward advancing its renewable energy sector by signing a protocol with South Korea to construct the country's first MW-scale solar power plants. These ???

TAJIKISTAN DRAIN BACK SOLAR SYSTEM



A drainback system corresponds to a "solar thermal system in which, as part of the normal working cycle, the heat transfer fluid is drained from the solar collector into a storage device when the pump is turned off, and refills the collector when the pump is turned on again" (ISO, 1999). This unique attribute to empty the collectors and to



Solar heats water for dishwashing, clothes washing, bathing, spa, hot tub, pool, etc., which is referred to as domestic hot water, or DHW for short. Properly designed solar hot water systems can supply 30-60% of the year round hot water needs of a family. For more information on glycol vs. drain back, check out these videos:



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TAJIKISTAN DRAIN BACK SOLAR SYSTEM



The system pumps water underground, where its temperature equalizes with the surroundings, then draws the water back to the surface. Connected buildings are sustainably warmed in the winter and

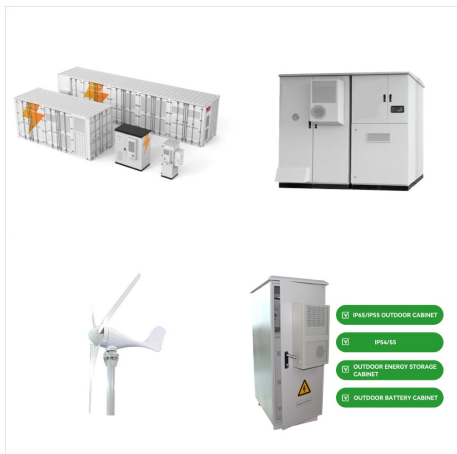


, Uzbekistan has been helping Tajikistan reconnect with the Central Asian Power System (CAPS) and import energy, according to IEA. Furthermore, USAID and Pamir Energy collaborated on creating the Murghab solar energy plant, which was commissioned in 2020, according to CABAR .



The Committee for Architecture and Construction under the Government of Tajikistan believes that using solar photovoltaic systems in buildings and structures, alongside centralized traditional power supply, could cover 6-8% of their total electricity needs.

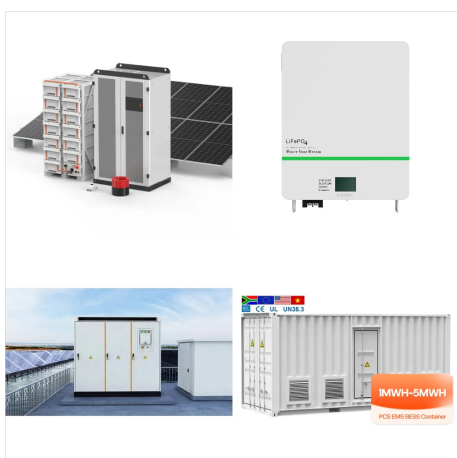
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