

Solar Diplomacy: The Role of Renewable Energy in Great Power Competition

Description

The United States, in its quest to counter Russia and China, neglects Central Asia's key geopolitical advantage by focusing resources on Europe and the Asia-Pacific. Within Central Asia, the United States has the opportunity to actively encourage private sector investment in the region's promising renewable energy industries to achieve critical national security goals.

At face value, it *seems* more advantageous to prioritize the regions housing Moscow and Beijing. However, Central Asia is a critical nexus of economic and cultural influence that the United States generally ignores. This region is the border between Beijing and Moscow, houses both critical trade routes and energy sources, and enjoys historical Russian and contemporary Chinese influence. By fostering economic development and energy independence in the region, Washington can counter Moscow's traditional sway and Beijing's rising presence while promoting global climate goals. Doing so would not only grant a political boost to the implementing administration but also cement a long-term American presence in a key geopolitical region.

Russian Influence in Central Asia

Imperial Russia, later the Soviet Union, historically enjoyed hegemony over Central Asia. In the modern era, Russia holds immense power within the post-Soviet Central Asian countries of Kazakhstan, Kyrgyzstan, Uzbekistan, Tajikistan, and Turkmenistan. In the 18th and 19th centuries, the Russian Empire waged conquests over this region and later incorporated it into the Soviet Union, enabling an imposition of Russian language and culture upon Central Asia.

However, unlike other Soviet republics, Central Asia remained generally favorable toward Moscow, with more than 95% voting to maintain the Soviet Union during a 1991 referendum. Although the republics dissolved, relations did not. Around four million Central Asian expatriates currently work in Russia due to its proximity, opportunities, and relative cultural familiarity. Beyond economics, Central Asia and Russia remain connected through the Collective Security Treaty Organization (CSTO), a post-Soviet military alliance.

However, the scope and durability of Central Asia-Russia ties have shifted with the invasion of Ukraine. Russia's aggressive actions have led to worldwide sanctions. The United Nations' International

Organization for Migration estimated these sanctions could result in the [loss](#) of two million jobs, drive unemployment up from 4.4% to 7.8%, and reduce remittances. These changes would significantly impact the already vulnerable Central Asian economies. As expected, within a year of Russia's invasion, more than [200,000](#) Central Asian migrants left Moscow. By the same timeframe, remittances plummeted from 50% to less than [20%](#).

Beyond the war's economic impact, it has also caused Moscow to neglect its allies, as seen through its failure to honor the CSTO military alliance. In 2023, Russia provided little aid to its historical ally of Armenia in the face of an Azerbaijani offensive, resulting in the seizure and dissolution of Nagorno-Karabakh. Additionally, during the 2022 border clashes between Kyrgyzstan and Tajikistan, Russia once again [failed](#) to properly aid either of its partners. Such instances of inaction [cast doubt](#) on both Russia's reliability as an ally and its commitment to Central Asian relations. Therefore, despite Moscow's historical and cultural ties to the region, its former influential stronghold falters.

Chinese Influence in Central Asia

While Russia's regional presence weakens, China's strengthens. Central Asia-China ties are marked by two advantages: regional trade routes for Beijing and the Belt and Road Initiative (BRI) for Central Asia. The BRI is a key economic plan for Chinese soft power and is tied to the modernization efforts of 147 developing countries, allowing Beijing to innovatively benefit from areas that Washington ignores. After all, through the BRI, it is China rather than the traditional hegemon of the United States that develops and funds vital infrastructure projects.

Since 2013, the BRI has promoted Central Asian trade and connectivity while advancing transport infrastructure. More recently, China's bilateral trade with Central Asia reached a record [\\$70 billion](#) in 2022, and in May 2023, Chinese President Xi Jinping announced a Central Asian economic development [plan](#) for improving freight volumes, warehouses, and tourism-oriented trains. While Russia's historical influence falters, China's contemporary presence rises, yet there remains a relatively untouched domain for Washington: developing the region's green capabilities.

Strategic Opening for the United States

With the invasion of Ukraine, Central Asia seeks to rely less on Moscow especially in the realm of energy fearing that Moscow's militancy toward a former Soviet state may extend to their region. To remedy this dependency, Central Asian leaders [call](#) for advancing their economies. With China focusing on trade and relevant infrastructure, the United States can develop the region's green industries to cement American influence while countering rival presences.

Central Asian leaders [plan](#) to initially diversify oil imports and promote domestic energy production, and later to decrease fossil fuel usage. The US [national security goals](#) are to â??prioritize maintaining an enduring competitive edge over the PRC while constraining a still profoundly dangerous Russiaâ?• and â??accelerate the transition away from fossil fuels.â?• Regarding Central Asia, the administration [intends](#) â??to advance climate adaptationâ?• and â??improve regional energy.â?•

Therefore, all parties reach a consensus: Central Asia intends to develop its domestic energy capabilities instead of relying on Russia, and Washington already desires to promote the regionâ??s green transition while countering Moscow. In fact, the United States Agency for International Development (USAID) has already devised a \$39 million regional energy [development plan](#) focusing on liberal market reforms, clean energy investment and integration strategies, and a regional market model and cross-border trade. This strategy demonstrates Washingtonâ??s awareness of Central Asiaâ??s vitality and economic needs and its commitment to the matter, providing a basis for furthering this involvement into a long-lasting green development plan.

Private sector investments in this development can supplement insufficient public funding. Consider the model of Saudi Aramco. The Saudi Arabian Oil Group is one of the worldâ??s most [profitable](#) companies and a leader in the oil industry. It was founded in 1944 when American companies partnered to develop the newfound Arabian oil industry. However, following the 1973 Yom Kippur War, Saudi Aramcoâ??s assets were slowly [bought](#) by Riyadh. Before then, Americans managed the company while providing jobs for local Saudis. Even today, the American private sector invests heavily in this lucrative company for [great returns](#).

In a similar vein, Central Asian governments recognize thatâ??in addition to international cooperationâ??private sector investments are vital for supporting budding industries. In 2019, Kyrgyzstan issued a [financial roadmap](#) for the stateâ??s green economy transition plans in collaboration with the United Nations Partnership for Action on Green Economy, the Organization for Economic Cooperation and Development, and Kyrgyz banks and ministries. Meanwhile, Kazakhstan currently provides [green bonds](#), and Uzbekistan offers SDG bonds to fund its efforts to meet the UNâ??s sustainable development goals. These governmentsâ?? actions towards foreign investments signal their awareness and proactiveness towards such assets.

Central Asian Renewable Energy Potentials

While the advantages of developing Central Asiaâ??s green industries are established, American corporations and investors must also recognize the regionâ??s renewable potential. Regarding [solar energy](#) capacity, the most promising Central Asian countries are ranked as follows: Kazakhstan,

Turkmenistan, Uzbekistan, Kyrgyzstan, and Tajikistan. In megawatts, potential solar power across these nations ranges from 3.7 million to 30,000 MW. As for wind power, Kazakhstan leads with a capacity of 354,000 MW, followed by Tajikistan, Turkmenistan, Uzbekistan, and Kyrgyzstan, with the latter at 1,500 MW. Such high capacity is promising, as 1 MW can annually power between 94-194 American households, with an average of 147 homes.

Using this median measure, Central Asia's renewable sources could fuel between 33 and 595 million households, depending on the exact country. As this estimate far surpasses the states' populations, the excess megawatts can be used to power renewable plants. Regarding solar farms, for instance, 1 MW requires 4,000 to 8,000 solar panels, which costs between \$1 million and \$2.5 million but generates an average revenue of \$500,000, allowing investments to break even within 2 to 5 years. Accordingly, these sources offer appealing costs. Since 2010, solar and wind development prices have decreased by 80% and 35%, respectively, but presently account for just 6% of the region's installed capacity. This price advantage and abundant room for investment spell promising business returns.

However, regional renewable deployment is challenged by insufficient regulatory and investment guidelines, out-of-date infrastructure, and a lack of expertise. To address regulation, the United States government can act by negotiating reforms and investment incentives with Central Asian governments. As for current technology, it is important to note that regional energy capabilities were developed during the times of the Soviet Union, rendering the technology outdated today. To increase efficiency and profit while reducing power losses and carbon emissions, the Asian Development Bank recommends investing in advanced networks and smart meters. Addressing a lack of specialists can be resolved through Central Asian countries encouraging relevant training and education alongside corporate American investment strategies. As demonstrated through the model of Saudi Aramco, investing companies can provide expert operation and management of renewable energy facilities and production, ensuring proper deployment and economic gains.

A concrete roadmap for developing Central Asian renewable industries should expand on prior efforts, such as furthering the efforts of USAID, while identifying specific investment areas. USAID's 2020-2025 development plan assists Central Asian governments in devising technical, legal, regulatory, and institutional frameworks while identifying optimum locations for green projects. With this information, the private sector can guide its investments with the venture sites and structures provided through USAID and Central Asian governments.

As for the types of investments, a stakeholder looking for a small management role can choose from Central Asian stocks, loans, or bonds. In the realm of bonds, the Asian Development Bank offers green bonds for projects designed to lower carbon emissions and blue bonds for combating overfishing and

ailing ocean health. Specific green bond projects, as of October 2024, include a North-South Railway in Turkmenistan, solar and wind ventures in multiple Uzbek cities, and a sustainable bus project in Kyrgyzstan, among others. However, for those seeking greater control of their investments, multinational corporations remain worthwhile. If an established American company builds an overseas facility in Central Asia, the company enjoys profits, exports, and a diversified market while providing the host country with jobs, tax revenue, developed infrastructure, and transferred technology, thereby contributing to the host country's economy. With pinpointed investment opportunities and intergovernmental framework cooperation, the United States can prepare a strong Central Asian green development plan to cement its regional foothold and deter potential rivals.

Conclusion

Beyond its strategic trade corridors and geopolitical location, Central Asia boasts significant solar and wind potential. While the region's renewable promise is dominated by hydropower, this area is relatively well-developed, with Tajikistan and Kyrgyzstan primarily relying on this source of energy. However, solar and wind deployment falls behind, sparking strong investment potential for developing a long-lasting, self-sufficient energy source.

Of course, the United States is not responsible for this development—there are already current government, inter-government, and private sector investors within Asia and beyond. However, overall funds are limited, and given the strategic advantage that Washington can leverage, it is in the country's best economic and political interests to stake a claim in Central Asia before the rivals of Russia or China block room for potential influence.

This is a contest of great power competition—Moscow's deep-rooted historical and cultural connections with Central Asia, paired with Beijing's expanding financial presence, are leading Washington to lose an essential area for broader geopolitical sway and for countering its competitors' goals. By promoting private sector investments and fostering intergovernmental partnerships in green development, the United States can venture into a relatively unexplored territory to establish a strong foothold in this strategic region.

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Main Image: Solar panels capture sunshine for energy in some rural areas. Photo courtesy of [UNDP in Uzbekistan](#).

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