Written Testimony of
Geoffrey R. Pyatt
Assistant Secretary for Energy Resources
United States Department of State

Before the Senate Foreign Relations Committee
Subcommittee on Near East, South Asia, Central Asia, and Counterterrorism

March 8, 2023

Chairman Murphy, Ranking Member Young, and members of the subcommittee, thank you for the opportunity to discuss the Administration's efforts to strengthen energy security in Central Asia.

During the past year, the consequences of Putin's war against Ukraine have echoed around the world, including in Central Asia. Putin's weaponization of energy has disrupted global markets in ways that will ripple for years to come, and I have seen the effects everywhere I travel. These effects include rising energy and commodity prices, surging demand for non-Russian gas, and an increased determination to accelerate the transition to clean energy sources. For most of the world, it is clear Russia never again will be viewed as a reliable supplier of energy. In the face of widespread condemnation on the global stage, Russia has sought to reassert its influence on the countries it traditionally considered within its sphere.

Although Central Asia has some of the world's largest fossil fuel deposits and notable potential to increase renewable energy and clean technology, the region also is landlocked and vulnerable – with access to global markets through Russia to the north, Iran to the south, and the PRC to the east – presenting both logistical and geopolitical challenges. To support a secure, clean, and resilient energy future, my team in the State Department's Bureau of Energy Resources (ENR) seeks to strengthen Central Asia's energy security, provide a strategic counterweight to malign actors in the region,

and support Central Asian countries in achieving their climate goals and protecting their sovereignty and territorial integrity.

Given today's energy security challenges and the Administration's focus on energy security, transition, and access – including increasingly in Central Asia – ENR steadily has increased its foreign assistance budget requests within the Department's overall request to $30.5 million in FY 2023. We appreciate Congress's past and continued support for our work to ensure the United States is the preferred partner for Central Asian countries in both energy security and energy transition.

At a time when global energy markets are tight thanks to Putin's weaponization of oil and gas, every barrel counts. Kazakhstan exports over one percent of total global crude oil production, most of which is handled by American energy companies. Eighty percent of its exports leave through the Caspian Pipeline Consortium (CPC), which terminates in the Russian Black Sea port of Novorossiysk. Through the newly revitalized U.S.-Kazakhstan Strategic Energy Dialogue, ENR, in conjunction with the Department of Energy and other stakeholders at the State Department, is engaging with the Government of Kazakhstan to strengthen its energy security by diversifying export routes and reducing dependence on Russia. As part of this work, we aim to address infrastructure needs in the "Middle Corridor" trade route across the Caspian and through Azerbaijan into Europe to better allow countries to export goods – including energy products and critical mineral commodities such as uranium – to global markets.

In conjunction with the Bureau of South and Central Asian Affairs and the Partnership for Global Infrastructure and Investment in the Department of State, ENR has also worked with the Government of Kazakhstan to pursue diversification of exit routes for crude oil. In February, KazMunayGaz and SOCAR, the respective state-owned energy companies from Kazakhstan and Azerbaijan, implemented a commercial agreement to ship 1.5 million tons of oil per year via the Caspian and Azerbaijan to global markets on the Mediterranean. By focusing on stronger regional connectivity among the states of Central Asia, and by seeking to expand export routes across the

Caspian, Central Asian countries will have options that enable them to stand firm in the face of malign influence.

The Central Asian countries that produce fossil fuels rely on the PRC as a critical export market. Turkmenistan and Kazakhstan are two of the top 10 natural gas exporters to the PRC, shipping gas via pipelines. Nearly all of Turkmenistan's natural gas exports are destined for the PRC, providing the Turkmen treasury with the great majority of its revenue. In 2022, the PRC imported 67 percent of its pipeline gas from Central Asia – approximately 34 billion cubic meters (bcm) from Turkmenistan with an additional four bcm from Kazakhstan and four bcm from Uzbekistan. As domestic demand increases in Uzbekistan, and Kazakhstan seeks to transition its coal-based electricity generation to run on natural gas and renewables, the countries' exports to Beijing likely will decrease, increasing PRC demand for Turkmenistan-origin gas and deepening ties between Beijing and Ashgabat. The United States continues to discuss with Turkmenistan options for bringing Turkmenistan gas to Europe, perhaps via the Southern Gas Corridor. But that will hinge on decisions by the Turkmenistan government to make their market more attractive to western international oil companies.

Greater energy integration is one way to bolster energy security in Central Asia. Natural gas transmission within the region is limited by infrastructure gaps and historically low levels of trade and connectivity. Furthermore, aging infrastructure and export cuts during periods of high domestic demand – particularly during the heating season – contribute to rolling blackouts, hampering economic activity and putting population safety at risk. In 2022, a major technical fault in the regional power grid caused a blackout throughout large parts of

Uzbekistan, Kazakhstan, and Kyrgyzstan as the entire Central Asian grid system collapsed. A week of near-freezing temperatures this past January caused widespread power outages in Uzbekistan, disrupting transportation, heating, natural gas distribution, and water supplies. These infrastructure failures are not only an issue for human welfare, but also of energy security: as part of an effort to address limited supplies of natural gas, Uzbekistan and Kazakhstan both signed new

cooperation agreements with Gazprom, as Moscow seeks new markets for its natural gas to replace Europe and as Central Asian countries face growing domestic natural gas demand.

Aging fossil fuel extraction infrastructure in the region and poor emissions control lead to disproportionately high methane emissions from oil and gas production in Kazakhstan and Turkmenistan – resulting in significant wasted energy resources and major climate impacts. Based on data from the International Energy Agency and the World Bank, more than 400 billion cubic feet of natural gas (or about 12 billion cubic meters) is wasted every year from the region due to vented, leaked, and flared methane. This wasted volume is equivalent to Romania's entire annual gas demand. As a greenhouse gas, methane is over 86 times as potent as carbon dioxide in the near term, making Central Asian methane emissions a substantial contributor to climate change. Turkmenistan is the fourth-largest emitter of methane from the oil and gas sector worldwide, while Kazakhstan's sector is the twelfth largest. The State Department and ENR, alongside other agencies, such as USTDA, EXIM, and DFC, have a strong interest in supporting investment in methane mitigation. We have engaged all the region's governments in signing up to the Global Methane Pledge, through which participants commit to contribute to a collective effort to reduce global methane emissions by at least 30 percent from 2020 levels by 2030.

Of course, the most effective way to increase the energy security of all five Central Asian countries is through the clean energy transition. Shifting from fossil fuels to clean technologies would also contribute substantially to climate action goals and reduce air pollution, though this would require greater electric power integration among the countries.

Worldwide, a pacing factor in the energy transition will be the availability of critical energy minerals. As the world transitions to a clean energy economy, global demand for these critical minerals is set to skyrocket by 400-600 percent over the next several decades. For minerals such as lithium and graphite used in electric vehicle batteries, demand will increase by even more – as much as 4,000 percent. Building stable, secure, and resilient

supply chains for the minerals critical to our clean energy transition is important to our engagement with Central Asia. Central Asia has sizable critical mineral and rare earth element resource potential. The region has produced commodities such as bauxite, chromite, copper, iron ore, manganese, titanium, uranium, and zinc, but the actual extent of the region's mineral resource potential – in terms of diversity and quantity – is still to be fully determined. The use of modern exploration technologies and investment will be essential to unlocking the complex geology associated with these resources. With sound governance and experienced private

sector partners, Central Asia could become an important contributor to advancing the global clean energy transition. At the State Department, ENR inaugurated the Minerals Security Partnership (MSP) to facilitate diversification and securing of critical minerals supply chains. The MSP, which includes 12 countries and the European Commission, aims to facilitate investment in mining opportunities using the highest environmental, social, and governance standards. As the partnership evolves, I expect the MSP will also look at projects in Central Asia that can diversify global critical minerals supply chains in ways that strive to meet our stated goals of high environmental, social, and governance standards.

Our emphasis on secure and stable supply chains also has applications for nuclear fuel supply chains. Kazakhstan produces 45 percent of global uranium supply and seeks to increase its exports to global markets. As we engage with allies and partners on reducing Russia's role in the oil and gas sectors, the Department also is working to build safe, diverse, and reliable supply chains for nuclear fuel and other critical supplies and services. Soviet-built reactors in the European Union, for instance, leave Moscow playing an outsized role in the nuclear sector. G7 nations have resolved to reduce their reliance on Russian nuclear energy and to help other countries seeking to do the same.

Central Asia also has abundant solar and wind energy potential. Each country varies in its readiness and willingness to act on renewable energy expansion, which would also require greater electricity grid integration. Uzbekistan has shown notable ambition in tackling the climate

crisis, with plans to reduce greenhouse gas emissions per unit of GDP by 35 percent of 2010 levels by 2030 and to increase the share of renewable energy sources to 25 percent of total power generation. Kazakhstan's National Green Growth Plan envisions the significant drawdown of coal as an energy source by 2030 and an increase to 50 percent renewable energy by 2050. Tajikistan and Kyrgyzstan both use hydroelectricity for power generation, providing 90 and 53 percent of total power generation, respectively. As climate change shrinks the mountain glaciers supplying their hydroelectric power plants, that zero-carbon power source dwindles, diminishing energy security and exacerbating regional conflicts over water access and management. In my October travel to Istanbul, I met with the deputy energy ministers from Tajikistan, the Kyrgyz Republic, and Uzbekistan, and they emphasized the need to preserve and develop the region's renewable resources. Our foreign assistance, including USAID's Power Central Asia project, advances the clean energy transition and decreases energy sector methane emissions throughout Central Asia.

When Central Asia gained independence from the Soviet Union 31 years ago, the United States was among the first partners and sources of foreign direct investment, notably in the oil and natural gas sector. As we face today's pressing geopolitical challenges, including issues of energy supply security and the needs of the clean energy transition, Central Asia has the potential to be an effective and valuable partner in our work on the geopolitics of energy. Thank you. I look forward to addressing your questions.