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RUSSIA: Rosatom's Nuclear Energy Exports Dominate Market, Providing New Source of Influence

Summary

Rosatom, Russia's state-backed nuclear energy corporation, controls most of the global nuclear energy export market through providing apparently attractive financial programs, expertise, and end-to-end services supporting all facets of nuclear power production. These services also allow Rosatom to enter new markets where previous industry competitors current do not operate. This growing export industry provides Russia not only with a new source of revenue, but also with new diplomatic leverage. While Rosatom will likely continue to dominate the market for at least the next five to seven years, it will soon likely face more competition from China over the next decade, as well as other potential issues that arise from Russia's management of nuclear projects.

Rosatom Emerges as Top Nuclear Exporter

Russia's export strategies allow it to dominate the global nuclear energy market. Russia leads the world in nuclear energy exports, exporting 60% of global nuclear energy plants (NPPs). Rosatom controls most of this output and operates or plans to operate in about 37 countries. Rosatom offers considerably cheaper designs, with proposals ranging from 20-50% less than competitors. Additionally, as the Russian government subsidizes Rosatom, it can absorb expensive risks like construction setbacks and nuclear meltdowns. Rosatom services likely appeal to countries new to nuclear energy production, which reflects the numerous countries it in which it operates.

Rosatom's competitors generally lag behind Russian exports, but China may soon compete with Rosatom. US based Westinghouse only recently recovered from bankruptcy, and French company Framatome currently has only one active contract: two reactors to be built in the UK, in addition to its pending projects in China and Finland. South Korea also emerged as a competitor, with its company KEPCO constructing reactors in the UAE and in Saudi Arabia. All of these suppliers have reliable technology, but currently do not match Rosatom's perceived value across a plant's life cycle. All these corporations impose strict protocols on safety, containment and disposal of nuclear waste, especially following the Fukushima Daiichi disaster in 2011. This presents another difference from Rosatom, which generally does not follow as stringent of standards on its own practices of disposal and safety. China may provide the biggest potential competition for Rosatom, as the Chinese government provides strong support for its nuclear export industry. China's main export reactor, the Hualong-1, however, deters potential buyers because of its lack of thorough testing. Additionally, until recently, China sought to meet domestic demand for energy instead of foreign. Russia, having developed its nuclear technology over the last 50 years, leads by providing relatively more proven technology along with its other services. Of course, a Chernobyl-like disaster still lingers as a potential risk in buyer's minds. Rosatom officials assert that Russia focuses keenly on nuclear safety to dispel worries about Chernobyl-like catastrophes and point out that it no longer produces the graphite-moderated reactors that caused the Chernobyl disaster, and instead produce reactors that use pressurized water. As China continues to develop its technology, however, it may eventually catch up to Russia.

Another trend of Russian nuclear power export is Rosatom increasingly seeks to market its nuclear technology to nations new to nuclear energy production. This trend shows up among

nations that often lie on the periphery of Russia's influence, such as Turkey, Egypt and Bangladesh. Russia's agreements with these three nations in particular show the partnerships and revenue Russia can create through nuclear energy contracts. While Russia will financially support each project, nations will pay back Russia with various loan agreements specific to each country. Additionally, Russia sometimes operates on a Build-Own-Operate (BOO) contract with some nations to ensure a profit. Under BOO contracts, Russia owns and operates the NPP and sells the electricity to the local utility company.

Turkey

- Rosatom will construct its first NPP, scheduled for completion in 2023. Russia will finance the entire \$25 billion the project costs, with Turkey repaying the loan over 15 years.
- The NPP will operate under a BOO contract.

Bangladesh

- Russia made a formal proposal to establish a NPP in Bangladesh in 2009, offering financial help in addition to its export of nuclear technology. An agreement in 2010 also provided basis for fuel supply and disposal, with original proposal expanding to include two reactors in 2017.
- The Rooppur NPP commenced construction in 2017, with its second reactor's construction beginning in 2018. Russia will finance 90% of the \$12.65 billion cost and Bangladesh will repay the loan over 15 years with a five-year grace period.

Egypt

- Russian President Vladimir Putin and Egyptian President Abdel-Fattah El-Sisi jointly announced Egypt's first NPP at El-Dabaa, which Russia will complete by 2029.
- Russia will finance over 80% of the \$30 billion project, with the loan repaid over 22 years starting in 2029.
- Russia will also provide fuel supply, spent fuel disposal, training and regulatory infrastructure.

Nuclear Exports as Diplomatic Tool

While Russia primarily exports fossil fuels, nuclear exports are growing as another lucrative export industry for Russia, creating a new geopolitical weapon for Moscow. As Russia's claim on the nuclear energy export market grows, some observers draw parallels on Russia's policies on fossil fuel exports. As one of the largest producers of fossil fuels, Russia frequently wields its gas and oil exports as a geopolitical weapon, ostensibly using pipeline shutdowns to create leverage for economic and political gain against commercial competitors and nations. For example, Russia cut gas lines to Ukraine on several occasions in the past decade. Exporting nuclear reactors and other technology can present its own risks, but nuclear technology brings in more revenue than fossil fuels, as Rosatom's programs include a variety of extra services, like spent fuel disposal and engineer training. Additionally, even one plant often costs upwards of multiple billions of dollars and lacks the market volatility of fossil fuels. Therefore, one contract can secure a relationship with Russia for decades. Russia may take advantage of this close relationship, especially in nations where nuclear energy will contribute a large portion of their

electrical supply. Russia could exert influence in multiple ways, such as increasing fuel costs, calling in loans, or even bringing a Rosatom-controlled reactor offline.

Outlook and Implications

At present, Rosatom dominates the global nuclear energy market and will likely continue to do so. Additionally, while China does not present a strong competitive threat presently, China will almost certainly catch up to Russia's current export capabilities over the next decade. Like Russia, China enjoys significant government backing, allowing it to extend similar packages to Rosatom. As China continues to develop and improve its own nuclear technology, it will increasingly become a viable competitor for Russia. As China and Russia continue to grow, it likely means other exporters, such as Westinghouse and Framatome will continue to see a decline in contracts. In addition to competition presenting potential obstacles for Russia's growth in nuclear energy exports, some watchdogs raised environmental and safety concerns. Russia imposes more lenient protocols when disposing of spent fuel compared to the strict waste control imposed by Japan, the US and other countries. As Russia often constructs NPPs for nations new to nuclear power production, failure to develop crucial infrastructure for disposal of waste and overall safety may create a dangerous precedent for countries just starting the development of their nuclear power production.

Rosatom's strong presence in the market gives Russia a new source of political leverage and allows it to augment its global influence. Contracts allow Russia to develop close relationships with countries it cooperates with and make some political and economic gains. Russia may take advantage of this close cooperation to create political dependency, especially in nations new to nuclear power production and in nations where nuclear energy will supply much of their electrical power. Additionally, agreements that place Russian personnel and assets in nations close to its border may present Russia an opportunity to increase its influence there in the name of security. Like fossil fuels previously providing a platform for Russia to grow its global presence, nuclear power will likely augment Russia's influence further.

[Gianna Geiger, Paris Lorts, Janessa Leon Guerrero]

EUROPEAN UNION-CHINA: Regulatory Changes Unlikely Despite Joint Agreement

Summary: The EU and China released a joint declaration promising fairer market conditions for European companies in China, but despite the agreement meaningful change by the Chinese remains unlikely.

Development: On 9 April, the EU and China announced new principal agreements regarding trade and European companies operating in China through a joint statement. Specifically, China agreed to loosen regulations requiring European companies to release intellectual property to the Chinese government before operating in China, and both sides made a commitment towards fostering fairer market regulation between European and Chinese companies. EU officials called the declaration a breakthrough to achieving fair competition between European and Chinese businesses in China.

Analysis: Though EU officials appeared satisfied with this agreement, it will likely only change China's behavior on a superficial level. The high degree of economic interdependence between the EU and China likely explains China's willingness to make high-level agreements to treat EU companies fairly in China. China probably sees an obligation respond to EU criticism that it treats European companies unfairly to maintain positive relations and deter the EU from seeking tariffs or other similar measures. However, the Chinese government has a clear conflict of interest because they benefit from preferential treatment towards their state-controlled businesses and from the ability to view and use foreign intellectual property. Therefore, China will not likely make truly meaningful changes to their policies regarding foreign commerce in China.

[Zach Coffee]

LIBYA: Rogue General Orders Airstrikes in Tripoli

Summary: Khalifa Haftar's Eastern Libyan Forces struck the only working airport in the Western Capital, signaling his push to take the capital and seize control of the nation and displacing thousands of refugees.

Development: On 8 April, the Libyan National Army, a militant group led by Hifter, launched an airstrike on Tripoli's only operating airport. The airport later reopened and resumed operations. UN officials attempted to draw a truce, but the UN postponed a meeting due to the violence. The combat in Tripoli sparked a severe refugee crisis, displacing over 3,400 and killed about 50 people in the city. Guards abandoned many citizens inside detention centers to escape the fighting, leaving many without food or water. Additionally, the detention centers double as a common stop for human traffickers and smugglers taking advantage of hopeful migrants.

Analysis: The Libyan National Army will almost certainly continue its assault on Tripoli, likely displacing thousands more people. Haftar commands a much stronger military force than the western government and will likely seize control of Tripoli by exploiting the lasting turmoil from the recent civil war. Haftar established himself as a credible threat to take Tripoli due to his military victories in the south. The violence may also prevent NGOs from intervening, due to the danger for their workers. The Libyan National Army recently targeted and killed two doctors attempting to evacuate refugees, demonstrating the group's indifference towards citizens caught in the crossfire. To escape the conflict, some citizens may leave Tripoli, but those trapped in detention. The UN helped clear one such center, but Hifer's forces will likely hinder the UN's ability to conduct further rescues, which puts hundreds at risk for starvation, dehydration, and further complications. With the detention centers abandoned by security personnel, traffickers may capture or recruit those stuck inside by promising them a way out. These trafficking victims will most likely go to Europe or Libya's neighboring nations. This development will also likely halt the expected UN talks scheduled for 14-16 April and postpone the election that the international community expects the UN to monitor.

[Kaylee Coffman and Paul Ballard]

[MALI: Protesters Call for President to Step Down](#)

Summary: Mali citizens demonstrated together in the capital to demand President Keita step down, potentially leading to a change in leadership.

Development: On 5 April, roughly 30,000 people crowded Bamako, Mali, to call for President Ibrahim Boubacar Keita to resign. Protesters believe Keita failed to prevent the rise of violence in the nation, which came to a head in late March when an attack on the Fulani ethnic group left over 100 dead. Additionally, jihadists continue to battle UN forces in northern Mali, an almost seven-year-old conflict. The demonstration represented several groups of people, including the Fulani and many prominent Muslim religious leaders. The protests remained peaceful, although some protesters threw stones at police officers. Additionally, police officers used tear gas to disband a group of protestors marching towards Keita's home.

Analysis: This protest illustrates the frustration of Malian citizens and may lead to a regime change. Protests will almost certainly continue, and as pressure from both his country and the international community grows, Keita will most likely resign. If he does not, demonstrations may become violent as tensions mount. If Keita steps down, the election to replace him will most likely focus on the growing violence as the primary voting issue. Even if Mali replaces Keita, a new administration would most likely not succeed in tackling the violence, as many of the conflicts have roots in complex ethnic tensions potentially outside the president's scope of control. Additionally, as UN support in Mali weakens, the violence will almost certainly grow regardless of who sits in office.

[Kaylee Coffman]

This is a global intelligence briefing prepared by the students of the Global Security and Intelligence Studies program at Embry-Riddle Aeronautical University in Prescott, Arizona. The views expressed in this briefing are those of the students, not the university.

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