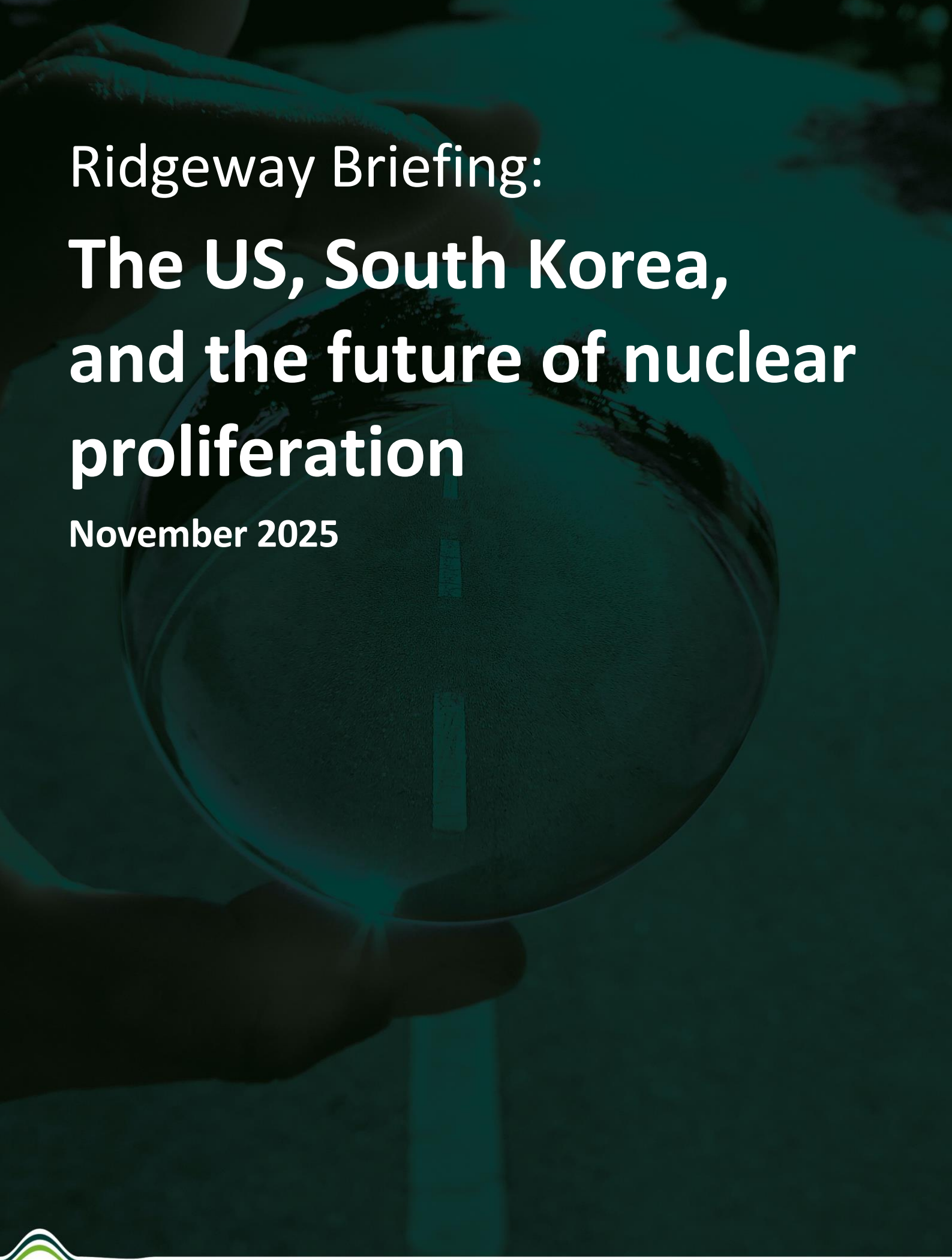


Ridgeway Briefing:

The US, South Korea, and the future of nuclear proliferation

November 2025

Ridgeway Briefings offer handy 2000-word analyses of emerging issues in international relations and security, prepared by Ridgeway's team of open-source analysts, linguists and subject-matter experts.

At a glance

- The United States recently expressed its support for South Korea's ambitions to develop uranium enrichment and spent fuel reprocessing capabilities for its civil nuclear programme.
- Korean-language sources indicate that key figures in Seoul view the step as having a deterrent component (a so-called *latency strategy*). As such, the US declaration of support represents somewhat of a policy departure and may have proliferation implications.
- Probable downstream effects of any such expansion of South Korea's nuclear infrastructure would include [1)] significant additional burdens being placed on the safeguards work of the International Atomic Energy Agency; [2)] clamour for similar arrangements by other states in sensitive geopolitical contexts; [3)] accusations of hypocrisy around the United States' nuclear diplomacy; and [4)] the emboldening of other actors in the global nuclear market – including Russia – to incorporate proliferation-sensitive technologies in their offers to partner states.

Ridgeway Analysis

Nestled unobtrusively towards the end of a **White House press release** on recent talks between the United States and the Republic of Korea is a single sentence with potentially wide-ranging implications for nuclear proliferation worldwide. Coming after more detailed commitments on tariffs and trade, the penultimate bullet point of the 2,000-word fact sheet reads:

> Consistent with the bilateral 123 agreement and subject to U.S. legal requirements, the United States supports the process that will lead to the ROK's civil uranium enrichment and spent fuel reprocessing for peaceful uses.

The wording is careful, and little is actually promised, but for the United States to adjust its approach to nuclear cooperation with South Korea is nevertheless significant. If Seoul were to gain enrichment and reprocessing capabilities with American assistance, significant downstream consequences could be expected far beyond the Korean Peninsula.

What is at stake here is not South Korea's possession of nuclear energy per se. South Korea already possesses nuclear reactors, and has even marketed its domestic reactor technologies abroad with some success. What Seoul lacks, however, is the capacity both to enrich uranium for use as nuclear fuel, and to reprocess spent fuel for future re-use. In principle, the Republic of Korea has an absolute right to possess a full nuclear fuel cycle, including both of these technologies, and to partner with the United States in obtaining them; but there is a significant limiting factor. Even when designed for peaceful purposes, enrichment and reprocessing both provide plausible routes to the production of fissile material suitable for nuclear weapons. They are, in other words, inherently 'dual use' technologies, and as such are treated with justifiable caution. Whilst the Treaty on the Nonproliferation of Nuclear Weapons grants all states the 'inalienable right' to the develop and use nuclear energy for peaceful purposes, nuclear weapons states – such as the US – are forbidden to 'assist, encourage, or induce any non-nuclear-weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices', while non-nuclear weapons states – such as South Korea – are forbidden to 'seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices'.

This is where the problem arises. Nuclear energy is permitted; nuclear weapons are prohibited. But what about the acquisition of ostensibly peaceful nuclear technologies as a form of insurance policy, a means of accelerating a hypothetical nuclear weapons programme should the need arise? This idea, sometimes referred to in nonproliferation literature as a latency policy, or as possession of nuclear 'potential', adds a

dangerous level of ambiguity to questions of nuclear co-operation. For this reason the United States has historically preferred to encourage partner states to abstain from pursuit of domestic enrichment and reprocessing capability, particularly in already tense geopolitical contexts

If ever there were a state to which the description 'tense geopolitical context' applied, it would be South Korea. As such, the question of whether and how ardently a latency policy might be pursued by the South Korean government inevitably arises. The present administration may not be as hawkish as its predecessor, but its strategic position is the same: the presence of an antagonistic and (to some extent) unpredictable nuclear-armed neighbour on its border makes any South Korean government a prime candidate for a hedging strategy.

Sure enough, Korean-language sources indicate a significant level of interest in the strategy among members of the South Korean government. Perhaps most notably, the current Director of the National Intelligence Service Lee Jong-Seok has **argued for the acquisition of a full fuel cycle** on an explicitly defence-related basis. Writing in March of this year, prior to his appointment, he argued that nuclear potential

> can be secured through reprocessing spent nuclear fuel or uranium enrichment within the scope permitted by the NPT. This process is transparent and subject to the strict supervision and control of the US-led International Atomic Energy Agency. This is the path we must take.... expanding the scope of peaceful uses of nuclear energy and possessing nuclear potential are two sides of the same coin.

A few weeks previously, **Lee had argued** that while his first preference was to 'trust the ROK-US alliance', latency offered a reasonable 'second-best option' which, he said, could be achieved

> by securing the rights to reprocess spent nuclear fuel and enrich uranium. Currently, this right is restricted by the Korea-US Nuclear Energy Agreement. Experience has shown that reclaiming this right through negotiations with the US is not easy. However, if we leverage the unique situation in South Korea—where North Korea's possession of nuclear weapons has heightened public security anxiety and fueled a surge in public opinion toward nuclear armament—into negotiations with the US, it is not entirely impossible to revise the Korea-US Nuclear Energy Agreement.

Voices from among the opposition PPP have been even more forthright, with one politician, Yu Yeong-Weon, describing the acquisition of latency as 'not an option but an **essential mission**'.

Of course, none of these public pronouncements necessarily amount to a whole-government commitment to nuclear latency, still less to an actual intention to weaponise at some future date. Indeed, there is reportedly **disagreement between senior figures** (namely, Wi Sung-Lac, the President's National Security Advisor, and Lee Jong-Seok, quoted earlier) as to the desirability of latency as a policy. Wi, too, is **on record** as favouring a renegotiation with the US, but only on the premise that South Korea would not pursue nuclear weapons or 'nuclear potential'. Even so, there are enough senior voices expressing favourable views of latency – and enough public pressure within South Korea for robust deterrence policies vis-à-vis North Korea – for it to be acknowledged as a cause for concern in any US-South Korean nuclear cooperation going forward. To put it simply: in current conditions, for the United States to support South Korea's acquisition of enrichment and reprocessing technologies is effectively to endorse a South Korean nuclear latency strategy.

That alone would be a significant development, but the ramifications of such a development extend far beyond the Korean Peninsula. Here, four possible consequences can be briefly sketched.

1 First, an expansion of South Korea's nuclear fuel cycle to incorporate large-scale enrichment and reprocessing would place significant additional pressure on the International Atomic Energy Agency's ability to apply safeguards. The Agency is already under-staffed and under-funded, even as its safeguards burden increases. Low-end projections have **global nuclear capacity** increasing by about 50% by 2050; if the uptake of small modular reactors is as dramatic as the technology's proponents predict, the capacity increase could be closer to 160%. At best, the addition of large-scale, highly-sensitive fuel cycle technologies in a geopolitically complex context would add appreciably to this burden. (It is worth bearing in mind that Japan, a comparable state which already possesses a full nuclear fuel cycle, and which some pro-latency South Koreans

have cited as an example to emulate, presents so labour-intensive a safeguards challenge that the International Atomic Energy Agency has a permanent field office in Tokyo, one of only two worldwide). If there were to be any hope of current safeguards standards being maintained, a US-endorsed expansion of South Korean nuclear activity would need to be accompanied by a significant uplift in the IAEA's safeguarding capacity. (Whereas in actual fact the recent trend of US funding is resolutely downwards).

2 Second, where South Korea leads, others will swiftly follow. The United States has comparable nuclear relationships with several other states, and has shown interest in striking similar agreements with others, some of whom maybe equally amenable to a latency strategy. First among these would likely be Saudi Arabia. Speaking in Riyadh in April, US Secretary of Energy Wright said that the US was "continuing dialogues about how best to cooperate with Saudi Arabia" to "build a commercial nuclear power industry in the Kingdom." When asked by reporters about the contents of such an agreement, Wright responded "Are there solutions to that that involve enrichment here in Saudi Arabia? Yes." The Saudi Arabians themselves are demonstrably interested in possession of enrichment technologies in particular: in January, Saudi Arabia's Minister of State for Foreign Affairs and Climate Envoy Adel Al-Jubeir noted that "it makes sense that once you mine it you engage in the processing to turn the uranium into fuel that you can sell at a higher price." As in the South Korean case, geopolitical factors cannot be disaggregated from decisions about civil nuclear energy policy: in recent years, members of the Saudi Arabian government have **described** the acquisition of nuclear weapons as 'definitely an option' if Iran's own nuclear programme should progress.

3 Third, a pivot to supporting enrichment and reprocessing in South Korea exposes the United States to a charge of hypocrisy. Speaking in Munich in May of this year, **U.S. Vice President J.D. Vance suggested** – inaccurately – that only states with nuclear weapons possessed civil nuclear power and enrichment capabilities, and argued that the United States was therefore justified in opposing Iranian efforts around uranium enrichment. Vance asked:

> *Which regime in the world has civil nuclear power and enrichment without having a nuclear weapon? And the answer is: no one. No one right now has a civil nuclear program with their entire enrichment infrastructure that can enrich to the, you know, 90-plus percent needed to get to fissile material and a nuclear weapon…. We don't care if people want nuclear power. We're fine with that, but you can't have the kind of enrichment program that allows you to get to a nuclear weapon, and that's where we draw the line.*

For the United States to then endorse an ally's pursuit of exactly such a program would at the very least seem to bring the consistency of this policy into question.

4 Fourth, by facilitating South Korean enrichment and/or reprocessing the United States would risk setting a troubling precedent within the global nuclear market. The United States is not the only actor in the global nuclear market, nor even, by [most] measures, the largest. Other states, including Russia and China, are also active in the field, and – like the United States – have tended to use nuclear cooperation as a means of advancing their own bilateral priorities. Russia, in particular, would likely be emboldened in its own nuclear diplomacy, potentially shifting from its present primarily 'turnkey' approach to nuclear reactor sales to, potentially, a fuller fuel-cycle offering (with, it would be reasonable to imagine, rather fewer scruples around the risks of their clients pursuing latency than the United States has tended to express).

There are, in short, good reasons to pay close attention to what has so far been somewhat of an under-reported set of developments in the US-South Korean relationship. Not only may the United States government be close to endorsing – perhaps even facilitating – an ambitious nuclear latency policy in South Korea: they might also, in so doing, be about to place significant additional pressure on international nuclear safeguards, encourage Saudi Arabia and others to pursue similar policies, open themselves to charges of hypocrisy on the

international stage, and embolden Russia (and others) to act irresponsibly on the global nuclear market. The field of nuclear nonproliferation may soon look very different.

Find out more

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