Aligning Nuclear Regulatory Efforts Under the Technology Prosperity Deal

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The new Technology Prosperity Deal (**TPD**), formalized earlier in September through a memorandum of understanding between the United States (**U.S.**) and the United Kingdom (**UK**), aims to foster collaboration on strategic science and technology initiatives of mutual interest, with a particular emphasis on nuclear power. The TPD takes steps towards integrating American and British nuclear regulatory efforts with the goal of streamlining and accelerating nuclear regulatory approval in both countries. Under the TPD, the two nations plan to deepen collaboration to achieve ambitious reactor licensing timelines, with each nation aiming to complete reactor design licensing within two years of a submittal and site licensing within one year. Other focus areas for collaboration between the U.S. and the UK are expected to include the boosting of commercial partnerships, ensuring a secure and reliable supply chain for advanced nuclear fuels in both countries, advancing global markets in advanced fission reactors and fuels, and playing a leading role in establishing international standards. The TPD arrives as the governments on both sides of the Atlantic are in the midst of a regulatory overhaul. The demand for nuclear power, largely driven by AI and hyperscaler energy needs, is spurring efforts to streamline the approval process for new nuclear builds.

In May, President Trump signed three Executive Orders (**EO**) reshaping the nuclear industry. EO 14300, "Ordering the Reform of the Nuclear Regulatory Commission," placed the blame for a lack of new nuclear construction on the Nuclear Regulation Commission's (**NRC**) "myopic policy." Among other reforms, EO 14300 directs the reworking of the NRC's regulations to impose an 18-month deadline for reviewing license applications for new reactor construction. The NRC is also ordered to curtail its ability to direct changes to reactors during construction, streamline environmental reviews and reassess its reliance on arguably overzealous "flawed" radiation limit analyses. EO 14301, "Reforming Nuclear Reactor Testing at the Department of Energy," established an alternate pathway for the construction of advanced test reactors. EO 14302, "Reinvigorating the Nuclear Industrial Base," took numerous actions to incentivize the entire nuclear fuel cycle and directed the Department of Energy Loan Program Office to deploy resources to "have 10 new large reactors with complete designs under construction by 2030."

In August, the UK Government's new nuclear regulatory taskforce (announced by Prime Minister Sir Keir Starmer in February) released its interim report calling for a "radical reset" of six areas of the current nuclear regulatory landscape of a system perceived as "unnecessarily slow, inefficient, and costly…complex and inconsistent." The interim report also recognizes that inconsistencies exist not only between different regulatory bodies, but also between different personnel within the same regulatory body. Foreshadowing the TPD, the interim report also notes that "[n]uclear technology is ideally placed to benefit from international collaboration through the harmonisation and standardisation of industry and regulatory approaches" and sets out the taskforce's objective to speed up approval of new reactor designs and improve how developers engage directly with regulators.

The regulatory convergence promised by the TPD will undoubtedly build on the preexisting framework for transatlantic cooperation. On March 12, 2024, the nuclear regulators of the U.S., the UK, and Canada signed a trilateral Memorandum of Cooperation (**MOC**) on advanced modular reactor and small modular reactor (**SMR**) technologies. Under the MOC, the three regulators—the NRC, the UK's Office for Nuclear Regulation (**ONR**), and the Canadian Nuclear Safety Commission (**CNSC**)—agreed to cooperate in the following areas:

1. Development of shared advanced reactor and SMR technical review approaches that facilitate resolution of common technical questions to facilitate regulatory reviews that address each Participant's national regulations;
2. Collaboration on pre-application activities to ensure mutual preparedness to efficiently review advanced reactor and SMR designs; and
3. Collaboration on research, training, and the development of regulatory approaches to address unique and novel technical considerations for ensuring the safety of advanced reactors and SMRs.

Prior to the MOC, the NRC and CNSC on the one hand and the ONR and CNSC on the other hand were collaborating under existing bilateral agreements. In respect of the NRC and CNSC bilateral agreement, this included the conducting of joint reviews of advanced reactor designs, including X-energy's Xe-100, Terrestrial Energy's IMSR, NuScale's second SMR design, and GE Vernova's BWRX-300. Following the execution of the MOC, the existing bilateral agreements were superseded. For instance, the NRC and ONR have since exchanged information on designs, including Holtec's SMR-300. Additionally, representatives from the three regulators spoke on the success of collaboration efforts during the 69th General Conference of the International Atomic Energy Agency, with the three nations optimistic that the momentum built under the MOC would be carried forward under the new TPD with the aim of "safe, efficient and accelerated deployment of next generation nuclear technologies."

The TPD marks a significant milestone in transatlantic cooperation on nuclear innovation, regulation, and deployment. By aligning regulatory frameworks and accelerating licensing timelines, the U.S. and the UK are positioning themselves at the forefront of the global nuclear renaissance—driven in part by the growing energy demands of AI and the need for clean, reliable power. Building on the foundation laid by the MOC with Canada, the TPD reflects a shared commitment to harmonization, efficiency, and safety in the development of next-generation nuclear technologies. As both nations undergo regulatory reform, the TPD offers a timely and strategic framework to unlock commercial opportunities, strengthen supply chains, and shape international standards—ultimately enabling the faster, safer, and coordinated deployment of advanced nuclear solutions worldwide.

As the regulatory frameworks continue to evolve, Haynes Boone's teams in both the UK and the U.S. are closely monitoring developments and prepared to support our clients. We encourage all those interested in engaging with the nuclear industry, whether it be as project owners, developers and investors, equipment manufacturers, construction companies, or off-takers, to reach out to discuss risk allocation, regulatory requirements, and other legal considerations.