Connecticut Department of
ENERGY &
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Public Hearing – March 3, 2022
Energy and Technology Committee

Testimony Submitted by Commissioner Katie S. Dykes

House Bill No. 5202 - AN ACT EXEMPTING EXISTING NUCLEAR POWER GENERATING FACILITIES IN THE STATE FROM THE NUCLEAR POWER FACILITY CONSTRUCTION MORATORIUM.

Thank you for the opportunity to present testimony regarding **House Bill No. 5202 – AN ACT EXEMPTING EXISTING NUCLEAR POWER GENERATING FACILITIES IN THE STATE FROM THE NUCLEAR POWER FACILITY CONSTRUCTION MORATORIUM.**

The purpose of this bill is to lift the moratorium that prohibits the construction of new nuclear power generating units at existing nuclear facilities operating in the State. DEEP is supportive of nuclear generation as a valuable resource for reliable grid decarbonization and is actively engaged in efforts at the national level to clarify the regulatory framework for approval, licensing, and/or siting advanced nuclear reactors and management of waste disposal. DEEP **does not oppose** exempting existing nuclear power facilities in the State from the construction moratorium in C.G.A. 22a-136. DEEP recommends continued engagement with the federal government, national advisory committees, and other stakeholders on the emerging technological innovations around advanced nuclear power to ensure potential impacts on public health and safety and the environment are adequately addressed.

Connecticut has one nuclear power generating facility, the Millstone Power Station located in Waterford. Under CGS 16a-102 the commissioner of the Department of Energy and Environmental Protection (DEEP) has been designated to coordinate all atomic energy development activities in the State. DEEP is supportive of nuclear generation as a valuable resource, providing baseload emission-free generation to meet the State's and the region's electricity needs for fuel security and decarbonization. As noted in DEEP's Integrated Resource Plan, the continuing availability of existing nuclear resources has the potential to provide a lower-cost path to achieving a zero-emission electricity supply by 2040. Technological innovation such as advancements in solar, wind, and battery storage have transformed the energy sector. This transformation is also underway with advanced nuclear technologies.

The existing statutory moratorium prohibits construction of new nuclear generating facilities in the State until a federal solution for disposal of spent nuclear fuel and high-level radioactive waste is achieved. Since the enactment of this moratorium, no national solution to disposal of spent nuclear fuel and high-level waste (i.e., a geologic repository) has yet been implemented or is expected in the near term. Although Connecticut's currently operating nuclear power generating facility has demonstrated the ability to provide safe and secure interim storage of spent nuclear fuel, the operation of any new commercial nuclear generating facility in the state will necessitate the on-site storage of the additional spent nuclear fuel and high-level radioactive waste generated for an indefinite period. While the issue of safe disposal of nuclear waste still

remains, the industry has also engaged in advancing innovative technologies such as advanced reactors to develop the next generation for nuclear power.

Congress recognized there could be significant environmental benefits to advanced nuclear technologies in the Nuclear Energy Innovation Capabilities Act (NEICA) passed in 2018. In addition, the federal Nuclear Regulatory Commission (NRC) has been working on an overall strategic framework as outlined in the NRC's Advanced Reactor Implementation Plan (IAP). The IAP outlines six core strategies to advance a risk-informed performance-based approach to ensure readiness in deploying advanced reactor applications. DEEP has been engaged with the NRC as part of the process and would welcome opportunities to update stakeholders within Connecticut on major developments in the IAP process.

DEEP also recommends engagement with the Nuclear Energy Advisory Council (NEAC), established by section 16-11a of the Connecticut General Statues (CGS). NEAC was established to provide transparency and oversight of nuclear activity in the state, while recognizing the potential benefit of advanced nuclear power.[1] NEAC's 2021 report recommended that the NRC develop regulatory structure procedures and processes for licensing of advanced commercial reactors as well as research and test reactors. NEAC can play an important ongoing role in advocating for NRC to develop the necessary regulatory structure and provide a standardized procedural framework through the development of the IAP. Under the Nuclear Waste Policy Act (NWPA), the U.S. Department of Energy (DOE) is required to open a repository and take title to spent nuclear fuel. The NWPA required DOE action by 1998 but yet this remains an unresolved issue on the federal level.

Additionally, the 2021 NEAC report noted two ongoing studies by the National Academies of Sciences, Engineering and Medicine (the National Academies) intended to examine the potential role of advanced nuclear power and the waste aspects of new and existing nuclear fuel cycles.[2] Neither of these two reports are finalized, but both are expected by the end of the year.[3] DEEP believes that the findings and recommendations from these studies will be quite informative.

For these reasons, DEEP would recommend continued engagement through NEAC with all of the stakeholders to advance the planning efforts already underway at the NRC to inform the policy discussion on advanced nuclear applications and their waste implications in Connecticut. We welcome the opportunity to work with the committee to report on or provide additional information on the planning efforts noted above. Lastly, DEEP would suggest engagement with

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[1] https://portal.ct.gov/-/media/DEEP/radiation/NEAC-Annual-Report--2021-final.pdf, page 7.

[2] Recognizing the need to validate the claims of advanced reactor developers, the U. S. Congress, in the Further Consolidated Appropriations Act of FY2020 (Public Law 116-94) and the Consolidated Appropriations Act of FY2021 (Public Law 116-260), directed the U.S. Department of Energy (DOE) to contract with the National Academies to evaluate these claims, with particular consideration to fuel cycles, waste management, and nonproliferation.

(a) Merits and Viability of Different Nuclear Fuel Cycles and Technology Options and the Waste Aspects of Advanced Nuclear Reactors (https://www.nationalacademies.org/our-work/merits-and-viability-of-different-nuclear-fuel-cycles-and-technology-options-and-the-waste-aspects-of-advanced-nuclear-reactors)

(b) Laying the Foundation for New and Advanced Nuclear Reactors in the United (https://www.nationalacademies.org/our-work/laying-the-foundation-for-new-and-advanced-nuclear-reactors-in-the-united-states)

[3] DEEP's Radiation Division Director is a member of the National Academies study on waste aspects of advanced reactor fuel cycles. However, until the report is approved, he is unable to share specific insights of the committee at the time of this testimony.

the Connecticut Siting Council (CSC) to further understand the requirements for CSC review for the development of advanced nuclear reactors at Millstone. Under CGS section 16-50i the definition of facility includes any electric generating or storage facility using any fuel, including nuclear materials. While the CSC is preempted by the NRC, the Connecticut Supreme Court has held that the CSC could only consider non-nuclear environmental effects. [4] Further analysis and consideration of CSC's decisions related to non-nuclear environmental effects is warranted.[5]

Thank you for the opportunity to present testimony on this proposal. Should you have any questions, please do not hesitate to contact Harrison Nantz at Harrison.Nantz@ct.gov.

[4] See *CT Coalition Against Millstone v. CSC, 286 Conn. 57 (2008)*
[5] See CSC's Facility List - Waterford (ct.gov)