Maine Joint Committee on Energy, Utilities and Technology – Chair Lawrence & Chair Sachs
LD 343 Testimony – FOR
March 13, 2025

- Good afternoon and thank you to Chair Lawrence & Chair Sachs, and the Committee for the opportunity to express our support for LD 343. My name is Kati Austgen; I'm a nuclear engineer and Director of Public Engagement & New Nuclear at the Nuclear Energy Institute, or NEI. NEI is the nuclear energy industry's premier trade group, representing 345 members from all facets of industry, universities, research laboratories, and labor unions.
- NEI applauds the bill sponsors for introducing this bill and seeking information to consider the opportunity to plan for use of nuclear energy in Maine.
- I'm here today to share with you information about the next generation of nuclear energy. Currently there are over 30 projects planned or considered in the U.S. and Canada. NEI's U.S. utility members, who produce nearly half of all U.S. electricity, anticipate 100 GWe of new nuclear opportunity by the 2050s. Additionally, there is global interest in deploying new nuclear energy, as evidenced most recently at the 28th Conference of the Parties (COP28) by the leaders of 24 countries signing on in agreement to triple nuclear energy worldwide by 2050.
- Next generation nuclear designs take the lessons learned and operating experience of today's fleet and incorporate that information to further enhance the safety and economics for deployment of reliable, clean energy in amounts suited to the needs of customers. Whether you need a lot of clean energy at a grid scale, or smaller increments of addition or replacement, next generation nuclear offers right-sized energy generation in the form of electricity or high heat. This is particularly valuable as we look beyond electrification to decarbonizing the full energy economy.
- It is wise to explore options as next generation nuclear encompasses a variety of technologies, from light-water cooled small modular reactors like GEH's BWRX-300 planned to deploy at Ontario Power Generation's Darlington site in the early 2030s; to non-water-cooled designs in three categories 1) high-temperature gas cooled, 2) liquid metal cooled, and 3) molten salt cooled.
- Non-water-cooled designs are also expected to be available in the early to mid-2030s as Kairos Power has already received construction permits for

their demonstration molten salt reactors in Oak Ridge, TN; TerraPower's liquid metal cooled Natrium Reactor construction permit application for Kemmerer, WY is under Nuclear Regulatory Commission review; and a construction permit application for X-energy's high-temperature gas reactor, the Xe-100, to be co-located with Dow's Seadrift, TX facility, is anticipated this year.

- The versatility of next generation nuclear offers opportunities for factory fabrication, emissions free electricity and industrial grade heat, and even potential to recycle nuclear fuel – making the most of our precious resources. I would be happy to share more about these technologies at the Committee's discretion.