

The Next Generation of Nuclear Summary of Comments - April 30th, 2025

On April 30th, 2025, OurEnergyPolicy hosted a discussion on the technology and financing of advanced nuclear reactors and New York State's nuclear initiative. Find the audio recording [here](#).

SPEAKERS



Doug Robison

Founder & President
Natura Resources



Ellen Ginsberg

SVP, General Counsel,
& Secretary

Nuclear Energy Institute



Jim Schaefer

Senior Managing
Director

Guggenheim Securities



John Williams

EVP, Policy &
Regulatory Affairs
NYSERDA

OurEnergyPolicy is a non-partisan organization. The following represents a summary of comments from the panelists.

Key Takeaways

- Given significant energy demand increases, we will need nuclear power to supplement fossil fuels as a flexible base load for the grid.
- There is significant bipartisan support for nuclear power today.
- Long-term financial commitments such as Power Purchasing Agreements and federal incentive programs that do not change between administrations are amongst the strongest ways to support nuclear technology development and manufacturing in the United States.
- Molten Salt Reactors have improved safety and production output compared to Light-Water Reactors.

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Fostering the Next Generation of Nuclear

- There are ~440 nuclear reactors on the planet, and roughly 75% of those reactors are American designed and built.
- ~20% of U.S. electric generation comes from 2nd generation nuclear reactors (94 in operation).
- According to a recent [Gallup poll](#), more than 60% of the public support nuclear.
- Long-term commitments are needed to support this industry's growth and operation, which is difficult to obtain from private investors.
- Since cost is connected to time, improvements on local licensing and permitting processes are greatly needed.
- Since the Atomic Energy Act of 1954, derivative regulations required both a construction permit and an operating license for nuclear reactors. A new option authorized by the U.S. Nuclear Regulatory Commission combines both permits so that approval for operation is obtained before construction begins.
- Load growth from the rise of energy-intensive data centers makes it more important than ever to support the nuclear energy industry to replace fossil fuel plants.

Next Generation Nuclear Reactors

- Modern nuclear reactors come in 3 different sizes:
 - Microreactors (1-20MW)
 - Small Modular Reactors (20-300MW)
 - Large Reactors (>300MW)
- Traditional Light-Water Reactors worked at high pressures and used solid fuel.
- Molten Salt Reactors (MSRs) that utilize liquid fuel have improved safety and efficiency features compared to Light-Water Reactors.
 - MSRs can utilize existing spent nuclear fuel from past reactors and capture nuclear isotopes that are valuable for medical treatments.
 - The Molten Salt liquid used to cool MSRs allows production at over twice the temperature of Light-Water Reactors. That high process heat is valuable for chemical manufacturing and water desalinization
 - In the event of Molten Salt leaving containment, it is solid at room temperature.