

Submission to the House of Commons Science and Research Committee Study of SMRs

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I have a Ph.D from the University of British Columbia specializing in ecology and evolutionary biology and have worked for over 30 years as a research scientist.

In this short brief I argue that Small Modular Nuclear Reactors (SMRs) can play no role in addressing the climate emergency. Instead, development of SMRs will only delay action on the climate crisis.

Recent reports by the Intergovernmental Panel on Climate Change (IPCC) indicate that we are running out of time to address the climate emergency. The 2018 report indicated that global GreenHouse Gas (GHG) emissions must be reduced by 45% by 2030 in order to have a 50% chance of avoiding unstoppable runaway global warming. The most recent IPCC report indicated that the window of opportunity for climate action is brief and rapidly closing. GHG emissions must reach their peak by 2025 and then decline rapidly.

If development of SMRs began now, they would not be operational for 10 to 20 years, if ever [1, 2]. Thus, SMRs would not be able to help reduce GHG emissions in time to meet the critical 2025 and 2030 targets. Furthermore, the billions of dollars that would be needed to construct these reactors would be diverted away from true green technology (e.g., wind, solar, geothermal energy) which is already available to reduce GHG emissions.

In conclusion, because SMRs would not be available in time to address critical climate targets in 2025 and 2030 and would divert funds away from already available green technology that could address these targets, I and XRNB believe that SMR development should not be supported by federal funds meant for climate action.

Thank you for considering my contribution.

Citations

[1] Lyman, Edwin. 2021. *"Advanced" Isn't Always Better: Assessing the Safety, Security, and Environmental Impacts of Non-Light-Water Nuclear Reactors*. Cambridge, MA: Union of Concerned Scientists. <https://doi.org/10.47923/2021.14000>

[2] O'Donnell, Susan and Edwards, Gordon. 2022. New nuclear plants (SMRs) in New Brunswick: Wild card or sure bet? NB Media Co-op, January 27, 2022.