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Hello Madison and Henry;

Thanks for your letters to Chairman Svinicki regarding your thoughts on climate change and nuclear power, including TerraPower and similar advanced reactor designs. I apologize for the delay in getting back to you.

Please keep in mind the NRC's mission is solely focused on ensuring the safe U.S. civilian use of radioactive materials, including nuclear power plants. The NRC is prohibited by law from promoting nuclear power; the Department of Energy is responsible for supporting the country's various options for generating electricity, including direct funding support.

The NRC has successfully carried out its mission for more than 40 years. The agency currently oversees almost 100 operating U.S. nuclear power plants that provide about 19 percent of the nation's electricity generation. The NRC is also overseeing four reactors under construction, two in Georgia and two in South Carolina. The agency has also issued licenses for seven additional new reactors; the utilities holding those seven licenses have yet to announce construction plans. More information on these efforts is available on the NRC website: <https://www.nrc.gov/reactors/new-reactors/colholder.html>

The NRC has also been working for several years with both the Department of Energy and interested companies on small modular reactors and advanced reactor designs. The NRC's website has more information on these efforts at <https://www.nrc.gov/reactors/new-reactors/smr.html> ; <https://www.nrc.gov/reactors/new-reactors/advanced.html> ; and <https://www.nrc.gov/public-involve/conference-symposia/adv-rx-non-lwr-ws.html>

Many advanced reactor vendors have discussed how their designs can offer safety and security advantages. These designs involve high-temperature gases and similar approaches to cooling their reactor cores, which would use novel fuel types. As described in the workshops linked to above, these approaches and novel fuels require a great deal of research and testing. The NRC requires this confirmatory evidence to

determine whether these advanced reactor designs could operate safely in the United States. The NRC continues discussions with both the DOE and reactor vendors on approaches that meet the agency's mission while providing the vendors tangible proof of progress towards design approval.

Please feel free to e-mail me at Scott.Burnell@nrc.gov if you have any other questions.

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/RA/

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