From:	Shannon Anderson <sanderson@powderriverbasin.org>
Sent:	Monday, August 12, 2024 4:35 PM
To:	TerraPowerEnvironmental Resource
Subject:	[External_Sender] Docket ID NRC-2024-0078, Notice of Intent to Conduct Scoping Process and Prepare Environmental Impact Statement; US SFR Owner, LLC; Kemmerer Power Station Unit 1
Attachments:	2024 8-12 Scoping Comments for Natrium EIS - NRC license.pdf

Please see the attached comments.
Thank you,
Shannon Anderson

Federal Register Notice: 89FR49917
Comment Number: 973

Mail Envelope Properties (fabf5fb3cd77706935d512cc26b2d8e2)

Subject: [External_Sender] Docket ID NRC-2024-0078, Notice of Intent to Conduct Scoping Process and Prepare Environmental Impact Statement; US SFR Owner, LLC; Kemmerer Power Station Unit 1
Sent Date: 8/12/2024 4:35:14 PM
Received Date: 8/12/2024 4:35:39 PM
From: Shannon Anderson

Created By: sanderson@powderriverbasin.org

Recipients:
"TerraPowerEnvironmental Resource" <TerraPowerEnvironmental.Resource@nrc.gov>
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MESSAGE	69	8/12/2024 4:35:39 PM	
2024 8-12 Scoping Comments for Natrium EIS - NRC license.pdf			91544

Options
Priority: Normal
Return Notification: No
Reply Requested: No
Sensitivity: Normal
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Powder River Basin Resource Council * Snake River Alliance * Multicultural Alliance for a Safe Environment * Savannah River Site Watch * Uranium Watch * Nuclear Information and Resource Service * Nuclear Energy Information Service * Citizens Awareness Network * Oregon Conservancy Foundation *

August 12, 2024

Office of Administration
Mail Stop: TWFN-7-A60M
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001
ATTN: Program Management, Announcements and Editing Staff
Submitted via electronic mail to: TerraPowerEnvironmental@nrc.gov

RE: Docket ID NRC-2024-0078, Notice of Intent to Conduct Scoping Process and Prepare Environmental Impact Statement; US SFR Owner, LLC; Kemmerer Power Station Unit 1

Dear Ms. Vokoun,

On behalf of our millions of members throughout the United States that are negatively impacted by current nuclear energy projects or will be negatively affected by newly proposed nuclear energy projects, thank you for the opportunity to submit the following comments to inform the scope of the Nuclear Regulatory Commission's (NRC) environmental review of the proposed Kemmerer Power Station Unit 1 by US SFR Owner, LLC (a subsidiary of TerraPower). This proposed project, and NRC's review of it, is precedent setting for the future of nuclear power in our nation and it warrants careful review.

The proposed project is deeply concerning to our members and supporters because it has been pushed forward with a dangerous and reckless focus on speed rather than ensuring safety and minimizing impacts to the environment and community infrastructure. As you know, the NRC's regulatory framework is a mismatch for this proposed reactor and we are concerned that the agency does not have the tools in its regulatory toolbox to adequately protect the public and prevent safety risk. Additionally, we are extremely concerned about the cost of the project and the extraordinary price tag being picked up by taxpayers - this project is not the proper use of federal funding in the midst of our current climate crisis.

We look forward to the NRC taking a rigorous approach to its EIS analysis to appropriately consider and address the myriad of impacts of this project, as discussed below.

Streamlining & Regulatory Exemptions

Our organizations are very concerned about how this experimental reactor has been

pushed forward with “streamlining” regulations, allowing for exemptions, and by withholding key information as confidential. The emphasis has been on speed not safety and that unnecessarily puts our communities and people’s lives at risk. This is especially true given the experimental nature of this reactor and the long history of problems with reactors that have used sodium as coolant. This includes meltdowns, fires, leaks, and nuclear non-proliferation issues. In your EIS, please disclose fully the extent of streamlining and regulatory exemptions or modifications that the NRC is using to review this license application. Please include a review of alternative options for these regulatory requirements or mitigation measures that can be put in place to address the issues for this new reactor design.

Lack of Transparency

What makes the push to license this facility without an adequate regulatory framework even worse is there is a serious lack of transparency around this project, as indicated by the numerous redactions of information in the license application that normally would be provided to the public for its review. We ask that NRC deny these confidentiality requests to disclose the information to the public for its review and comment during this EIS process. A clear system of transparency needs to be established and explained, especially with the significant cost of taxpayer financing for this proposed project.

Cost

We further ask the NRC to fully disclose the estimated cost of the proposed reactor, including front end engineering and design aspects. Recently, TerraPower founder Bill Gates disclosed on national television that his estimate for the project is upwards of $10 billion.[1] NRC’s review of the project must include a financial review, ensuring that the facility is adequately financed, but NRC’s review must also disclose the cost to the American public from this project. In doing so, please also disclose the full cost of other subsidies that are going into the nuclear fuel cycle related to this facility, such as production of HALEU fuel.

Please explain the relationship between Rocky Mountain Power/PacifiCorp and TerraPower and disclose any agreements or contracts in place that set forth the ratepayer responsibilities for financing the project up front and/or paying back debt financing/investment after construction is complete. Please disclose any anticipated ratepayer impacts that will result from the project, such as higher utility bills or long-term debt financing, costs of maintaining the facility and associated transmission, and any cost associated with accidents or safety risk (e.g. insurance costs).

Relatedly, in your alternatives analysis, please consider other energy options that can easily meet the energy capacity anticipated by the project, such as renewable energy with battery storage or geothermal energy. Please analyze the costs of these alternatives vis-a-vis the proposed reactor.

Timeline

[1] https://www.cbsnews.com/news/bill-gates-transcript-face-the-nation-06-16-2024/

Please also disclose in your EIS the full timeline for the project, including anticipated construction timing and operations timing. Please explain what other regulatory approvals are necessary prior to project completion and start-up. Finally, please include an analysis on the risk of delays, which are likely to occur.

Related to the timeline, please analyze whether the project is likely to make any meaningful impact to abate climate change given the late date of the power coming online versus the immediate needs to decarbonize the western grid.

Nuclear Waste Storage & Radioactive Waste Disposal

The NRC should also consider the lack of long term storage for spent nuclear fuel and any impacts that result from that as part of the scope of its analysis. There is currently no deep geologic permanent repository for spent nuclear fuel and other high level nuclear waste. Until there is a permanent deep geologic repository new nuclear plants should not be built. Please explain this situation and why the NRC would consider allowing this kind of waste to be produced without a safe permanent place to store it.

This is especially concerning because scientific literature has found that SMRs and non LWRs like Natrium will produce more radioactive waste per MW of generation than conventional reactors.[2]

Relatedly, please disclose all decommissioning costs and funds and any risk associated with permanent facilities, waste, or other impacts associated with site decommissioning and remediation after operations are completed. The NRC needs to study this issue comprehensively, because the public needs transparency on whether the NRC needs to provide a site-specific decommissioning cost estimate for Natrium, or if the agency needs to come up with a new formula for estimating the decommissioning costs for reactors like it (i.e., liquid metal-/sodium-cooled fast neutron reactors) in order to meet the decommissioning funding assurance requirements for holding a reactor operating license. (See 10 CFR 72.30 Financial assurance and recordkeeping for decommissioning.) The volume of low-level radioactive waste that Terrapower will need to dispose of when the Natrium reactor is decommissioned should be evaluated as a major factor in the amount of money NRC must require Terrapower to set aside to meet the requirement.

Nuclear Fuel & Transportation of Fuel and Sodium

Please fully evaluate any impacts and transportation risks associated with the transportation of nuclear fuel, sodium, and other materials to/from the proposed site within the scope of your review.

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[2] Krall, Lindsay M., Allison M. Macfarlane, and Rodney C. Ewing. “Nuclear waste from small modular reactors.” *Proceedings of the National Academy of Sciences,* 119 (23) e2111833119. May 31, 2022, https://www.pnas.org/doi/10.1073/pnas.2111833119

Please also review and disclose all impacts associated with uranium mining, milling, processing, and the production of HALEU fuel and fuel fabrication for the proposed power plant, including a review of environmental justice impacts.

Please consider a range of alternatives and mitigation measures to address these impacts.

Water

The water rights associated with the Naughton coal plant hold tremendous value for the company and its ratepayers. Please provide an in depth analysis of the water requirements and sources for the facility, including water needed for cooling of spent fuel. Please provide an analysis of the opportunity cost of using these water rights for this proposed project vis-a-vis other options, including pumped storage hydropower or allowing PacifiCorp to sell and repurpose the water rights into the Colorado River compact system.

Socio-Economic Impacts

Please explain how this plant will impact the community and surrounding region, including impacts to housing, public infrastructure, government services, schools, and other issues. Since project proponents lobbied to receive an exemption to Wyoming's Industrial Siting Act, please explain how these impacts will be mitigated and what funding is available to the community to address the significant impacts that will result from an influx of temporary construction workers.

Thank you for your time and consideration. Please keep our organizations on your mailing list associated with the NEPA process for this project.

Sincerely,

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