

**TO: Canadian Nuclear Safety Commission**

**FROM: Anne Lindsey**

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**Comments on Licence Application Guide: Small Modular Reactor Facilities, Regulatory Document  
REGDOC - 1.1.5**

**Preamble**

A Regulatory Guidance for Small Modular Reactors is premature, given that neither general public discussion nor consultation with Indigenous Peoples on the desirability for this “new generation” of the nuclear industry have taken place, and given that there is no agreed upon national framework for the management of nuclear waste in Canada.

In its own Discussion Document entitled Small Modular Reactors: Regulatory Strategy, Approaches and Challenges, DIS- 16-04, 2016, CNSC acknowledges that SMRs will present novel technological design, and that both single reactors and multiple units on site may be contemplated as well as “fleet” deployment across a variety of locations. These facts present new challenges from a regulatory perspective and existing regulatory methodology may not be adequate to address these challenges.

**Environmental Assessment**

REGDOC – 1.1.5 is vague about the requirements for Environmental Assessment of SMRs. As it stands, new nuclear reactors in Canada are subject to EA under the projects list for CEEA 2012. The same project list is currently proposed for the new Impact Assessment Act. SMRs are nuclear reactors, and as noted in DIS – 16-04, will therefore be subject to EA, under current rules. While baffling, (given that CNSC is supposed to be the body overseeing public safety in the nuclear industry), it is no secret that the Commission has been lobbying to have SMRs removed from the projects list. Removing this requirement is unacceptable as it will effectively reduce public transparency and scrutiny as well as the possibility of third party expert review. This is perhaps especially true if a “fleet” of reactors of the same design are proposed to be deployed to multiple sites (with concomitant variations in environments, and therefore in the interactions between each reactor and its environment across those sites).

**Graded Approach**

This section contemplates a “proportional” level of scrutiny for the safety case for SMRs. Since SMRs are entirely an experimental and new technology and approach to electricity generation, including the fact that the fuel types used will almost certainly differ from historic experience in Canada, it would be appropriate to assign a higher level of scrutiny, and to state this in the regulatory guidance.

**Vendor Design Review Process**

It is reasonable for regulatory processes to be transparent to proponents, and that there be a mechanism for providing advice and interpretation of regulations. It would also be reasonable for use of such a mechanism to be transparent to the public. However, the VDR Process for SMRs seems nothing short of behind the scenes, taxpayer funded assistance to industry at the very design stage to ensure regulatory problems will not be encountered. It would seem to put the regulator in the position of being

almost a co-proponent rather than an objective reviewer, and due to claims of proprietary information by proponents, is opaque to public scrutiny.

### **Nuclear Waste Management**

The document is silent on the treatment and storage of the waste generated by SMRs after it is removed from the facility, beyond the assertion that it would be transported off site to a separate waste management facility. This was the premise in communities which have hosted experimental reactors in the past, specifically the WR-1 reactor at the WNRE in Manitoba. Current plans call for near surface in-situ disposal of the WR 1 nuclear reactor itself, and associated waste, in contravention of internationally accepted practice, and in breach of a social contract with citizens of Manitoba and Indigenous communities. It is no longer acceptable to gloss over the waste generation without a fully-conceived and reviewed plan for the waste disposition.

Canada still does not have a comprehensive framework for the management of nuclear waste, again in breach of international best practice. Waste from SMRs (new reactors) is not currently included in the mandate of the Nuclear Waste Management Organization, and it is irresponsible to produce additional nuclear waste from new reactors until such times as a nuclear waste management framework (brought about through full and meaningful public consultation with the general public and Indigenous People) is in place.

Thank you for the opportunity to provide comments.

Anne Lindsey.