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## SEALER: a small lead-cooled reactor for power production in the Canadian Arctic

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SEALER (Swedish Advanced Lead Reactor) is a 3-10 MWe lead-cooled fast reactor operating on 19.9 % enriched UO<sub>2</sub> fuel. It is designed for commercial production of electricity in communities and mining operations in the Canadian Arctic.

The reactor is capable of passive decay heat removal by radiation through the primary vessel and will make use of novel, highly corrosion resistant aluminum-alloyed steels developed by LeadCold engineers. Passive shut-down is accomplished by gravity-assisted insertion of tungsten-rhenium boride absorber elements.

In this paper, the general technical concept of SEALER is presented, together with the plan for licensing SEALER in Canada, including the pre-licensing design review process with CNSC, the R&D program necessary to qualify the design and associated materials, and the siting of a demo-plant in southern Canada.

Furthermore, the business plan for producing and selling up to 100 SEALER units on the Canadian market is outlined.

### Country/Int. Organization

Sweden/LeadCold Reactors

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