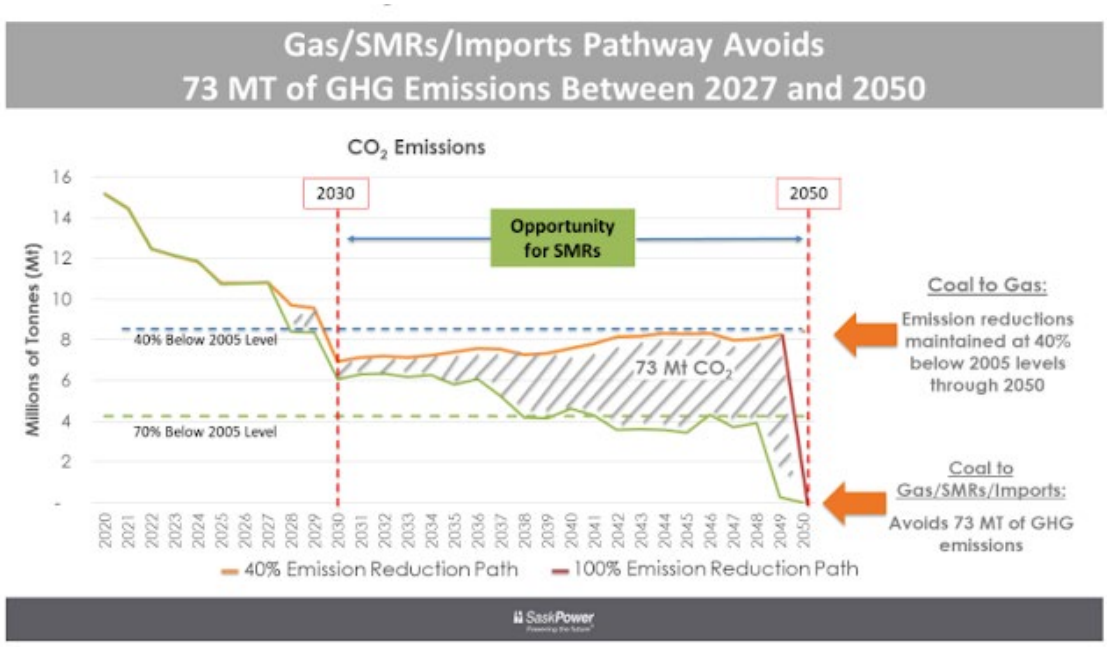
Good day,

I wanted to briefly write and express my support and excitement for Canada's growing interest in Small Modular Reactors.

I live in Saskatoon, Saskatchewan. Over 80% of the electrical energy in Saskatchewan is currently supplied by fossil sources (1). Over 75% of the natural gas consumed in the province is supplied from Alberta (2). With a national coal phase-out planned for 2030 and a growing provincial dependence on natural gas to support weather-dependent, intermittent renewable sources, SMRs will be extremely important for providing reliable, secure, and dependable base-load electricity for the province.

I found the below image in the SMR Feasibility Report (3) by the generating utilities of Ontario, Saskatchewan, Alberta, and New Brunswick. The province of SK can displace 73,000,000 tonnes of greenhouse gas with the SMR path. If we skip SMRs we become entrenched in our natural gas dependency for an additional two decades before those gas assets are up for replacement.



The importance of energy independence and energy security cannot be understated. Canada should not repeat the German/European energy crisis or the significant power reliability issues that some of the biggest, most prosperous areas of the United States (California and Texas) have been experiencing in recent years. The ability to store many year's worth of nuclear fuel on-site at a nuclear power facility is a significant and under-appreciated benefit of nuclear power: it is not dependent on wind, sun, coal trains, or gas pipelines.

Nuclear waste is a "beautifully small" problem. I have calculated (4) - using back-of-napkin accuracy math - the magnitude of spent nuclear fuel and other waste if Saskatchewan deployed four BWRX-300 SMRs to be on the order of 20,000 tonnes. These 4 hypothetical SMRs could generate 600 TWh of electricity for the province. 600 TWh could also be generated by 305,000,000 tonnes of coal (emitting 607,000,000 tonnes of CO2) or 126,000,000,000 cubic metres of natural gas (emitting 248,000,000 tonnes of CO2). Conclusion: SMRs would generate 10,000 times less waste than gas (by mass) and have

the benefit of the waste being tightly controlled and containerized, vs. uncontrolled emission into the atmosphere.

Thank you for reading. Please let me know if I can elaborate on any of the above comments.

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(1) SaskPower 2021-22 Annual Report
(2) SaskEnergy 2021-22 Annual Report
(3) SMR Feasibility Report, 2021
(4) Personal blog post https://blog.brahm.ca/2022/08/ge-brwx-300-in-saskatchewan.html