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## Unlocking Clean Energy: IMII Releases Study on Small Modular Reactors for Saskatchewan's Minerals Sector

*The potential exists for using small modular reactors to meet clean heat and power requirements in Saskatchewan's mining and minerals industry*

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**Saskatoon, SK (Canada)** – The IMII is pleased to unveil its study on the potential applications of small modular reactors (SMRs) in providing clean heat and power for Saskatchewan's thriving mining and minerals sector. This research, crafted on behalf of participating members BHP, Fission Uranium Corp. and Hatley Engineering, and project partner SaskPower, and March Consulting Associates Inc. (March), highlights the potential to use SMRs as an innovative solution for a more sustainable energy future.

"The decarbonization of industrial sectors is crucial to achieve global net zero emissions targets, and both the province and its minerals industry share in this effort," said Al Shpyth, Executive Director at IMII. "Other studies have identified SMRs as a promising technology to support the decarbonization of the mining sector as they offer the potential to provide reliable, low-carbon heat and electricity for minerals operations. This report on SMRs for Saskatchewan's industry confirms the potential while also identifying considerations and future next steps for more fully realizing the clean energy benefits that may come from deploying SMRs in support of the minerals industry."

The study aimed to achieve several goals, including providing an overview of heat and power requirements for mining applications, evaluating small modular reactor (SMR) technologies and their suitability for these applications, and identifying opportunities and strategies for deployment. It also examined economic, environmental, and other factors across three different scenarios. Finally, the study offers a roadmap for those interested in promoting SMRs as a decarbonization technology for Saskatchewan's minerals industry, alongside considerations by SaskPower for the province.

"Decarbonizing industrial operations to mitigate climate change and address corporate ESG performance is an important objective that involves a complex system of challenges and opportunities. We were pleased to partner with IMII and other project partners to lead this study which examined the challenges of integrating SMR sourced heat and power with industrial operations for Saskatchewan's mining operations," said Ritu Malhotra, President & CEO of March. "While the study considered several factors, further analyses will aid in refining the integration and deployment scenarios of SMR technologies, including understanding and optimizing economic trade-offs. The study concludes that SMRs provide a promising opportunity to decarbonize mining operations in Saskatchewan."

A condensed version of the report that shares highlights from the study can be found on the IMII website here - [SMR Applications for the Saskatchewan Mining and Minerals Industry – International Minerals Innovation Institute](#).



On behalf of its members, IMII has been exploring innovative technologies to reduce GHG emissions from as well as the carbon intensity of mining and minerals operations. IMII considers SMRs to be among a range of clean energy technologies that could support the industry in achieving its emissions reduction targets. As such, IMII hopes that policymakers and other mining sector stakeholders use this report as a resource in understanding the considerations the industry has in determining how best to meet clean energy demand for heat and electricity. IMII also notes that as the demand for clean energy continues to grow, the importance of ensuring reliable and diversified supply chains for such will continue to grow.

### For More Information

For more information on IMII, visit [www.imii.ca](http://www.imii.ca)

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#### **About SMRs:**

SMRs are a category of nuclear reactor designs that are smaller in power output and physical size. As advanced reactor technologies, many SMR designs offer enhanced safety features.

SMRs are designed to be modular with maximum factory-construction, making them scalable to specific energy demands. SMR designs vary in electrical output from as high as 300 MWe per module for grid-connected reactors (and being considered by SaskPower), down to 3 MWe per module, which could be suited for remote or industrial applications such as mining (and being considered by the SRC).

#### **About IMII:**

IMII is a non-profit organization jointly funded by industry and government and is committed to developing and implementing innovative education, training, research and development partnerships for supporting a world-class minerals industry.

IMII serves as an Innovation Steward to strengthen the Saskatchewan minerals industry's competitiveness and growth through Research, Development & Demonstration and Education & Training to drive the future's Qualified & Representative Workforce.