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Application of SMART to Achieve Net Zero Emissions

SMART (System-integrated Modular Advanced Reactor) is an advanced integral reactor developed by Korea Atomic Energy Research Institute. It is emphasized that technologies implemented in SMART had been proven through comprehensive technology validation programs. Therefore, SMART can be deployed immediately. Alberta's oil sands plants are dependent on natural gas to meet requirements of steam and electricity. However, they emit huge amount of greenhouse gas. SMART can provide carbon-free heat and/or power for oil sands operations. If SMART is built in Alberta, it can significantly contribute to net zero emissions in oil sands industries. Multiple units of SMART are expected to be built in Alberta, which also contributes to job creation and GDP increase in Alberta. Furthermore Canada will play a leading role in the emerging SMR market. In this presentation, design characteristics of SMART will be briefly provided and recent activities to deploy SMART in Canada are also presented.

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