

Small Modular Reactors: Supply chain opportunities

Saskatchewan Industrial & Mining Suppliers Association

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Growth Opportunities – Saskatchewan Growth Plan



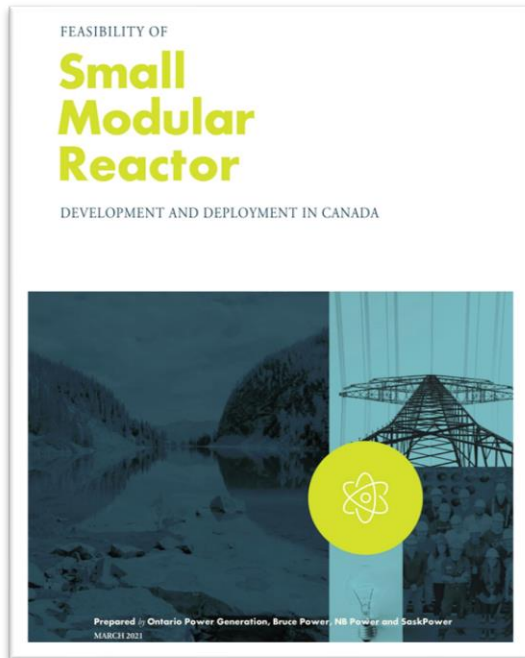
- **Advancing development of zero-emission SMR technology will:**
 - Support the growing economy;
 - Support 1.4 million people living in Saskatchewan.
- **Additional growth goals that SMRs could contribute to:**
 - Increase annual value of uranium sales to \$2B;
 - Create 100,000 more jobs;
 - Grow private capital investment in Saskatchewan to \$16B annually;
 - Grow Indigenous participation in Saskatchewan's natural resource industries; and,
 - Triple the growth of the technology sector.

Provincial SMR Actions

- SaskPower MOU with Ontario Power Generation (2018)
- MOU with SK, ON, NB (2019) and Alberta (2021) to collaborate on the development of SMRs
- Canada's SMR Action Plan – GOS, FNPA, Creative Fire, SaskPower, Fedoruk Centre, UofR, SMA (summer-fall 2020)
- MOU Feasibility Report released (April 2021)
- Targeted SMR engagement on SK's strategic priorities with government, industry, academia, training and Indigenous organizations (May-June 2021)
- SaskPower and FNPA public and Indigenous engagement on future supply options (May-September 2021)
- MOU Strategic Plan (forthcoming)



Growth Opportunities – Feasibility Report



SMRs can create new global markets for SK Uranium

- Global market for SMRs expected ~\$150B/year for 2030-2040
- Even a fraction of this market would significantly increase uranium demand

SMRs can create economic growth

- Thousands of new jobs during planning, construction, operations and decommissioning phases
- GDP Growth of more than \$8B over the life of the project

SMRs are an opportunity for Indigenous participation

- SMR equity partnerships could provide stable, long term financial returns, and create high quality jobs
- Indigenous Peoples make up 10% of SIMSA members' employees

SMR Strategic Planning

Business Case

- Government of Saskatchewan-led study
- Economic benefits: growth, jobs, investments, import/export, supply chain
- Expanded emission reduction opportunities

Supply Chain Study

- Joint study with PrairiesCan and Alberta
- Identify opportunities for Saskatchewan and Alberta's industries to participate in Canadian SMR supply chain

MOU Strategic Plan

- Factors that influence success of SMR development and deployment
- Actions that provincial power utilities will take to finalize assessment
- Project risks and benefits provinces will consider in decision making

SMR Supply Chain Study

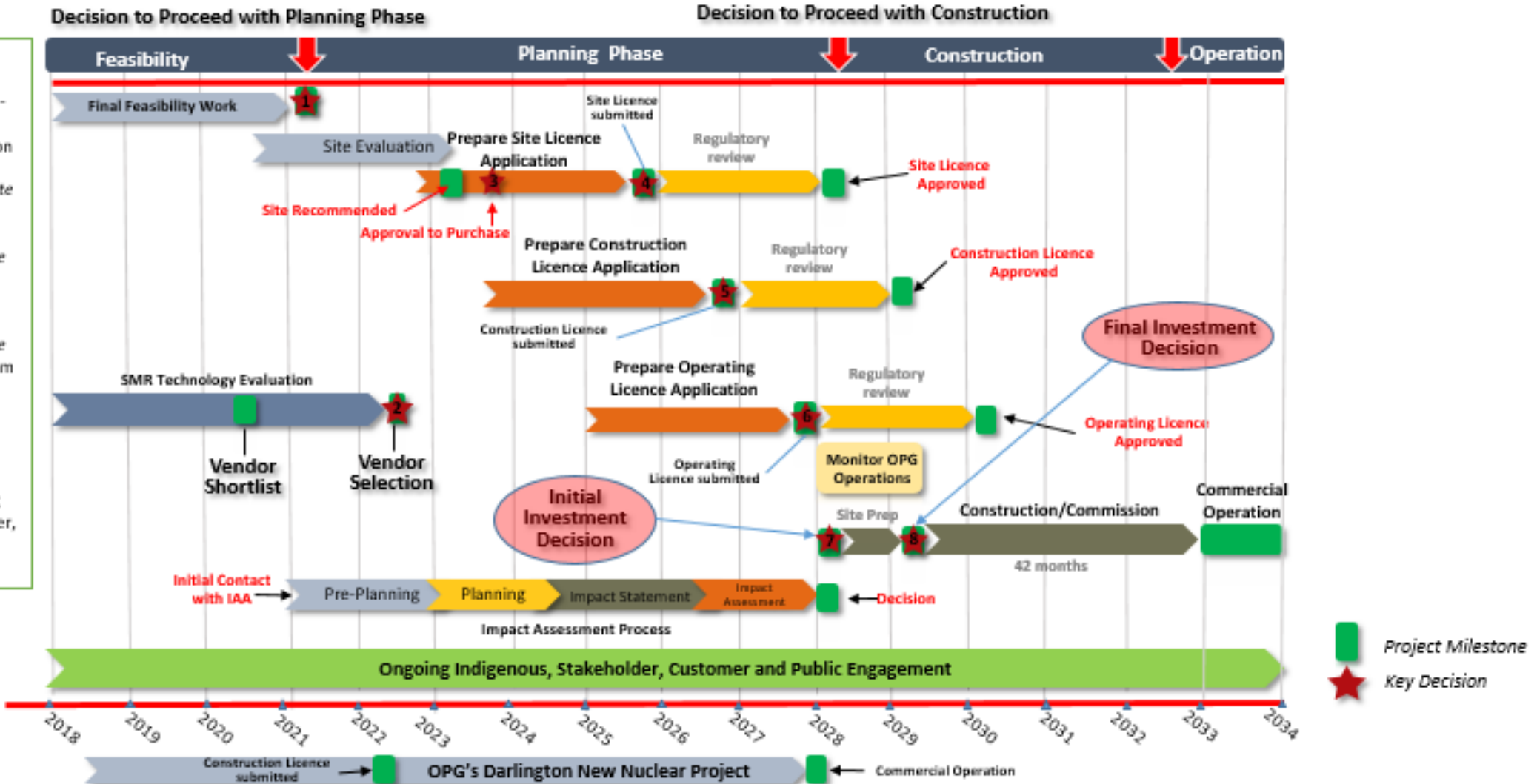
- Three phases:
 - **Asset Mapping (complete):** Identification of 100 Saskatchewan businesses and organizations, including 14 Indigenous organizations
 - **Supply Chain Study (Winter 2021):** Industry outreach, validation of asset map, and industry capacities and interests
 - **Supply Chain Qualification (2022-onward):** Education and awareness for businesses interested in becoming qualified suppliers via OCNI's nuclear qualification program (i.e., Fit4SMRCanada)

SMR Supply Chain Study Supplier Categories

Category	Definition
Manufacturing	Metal bending, fabrication, advanced manufacturing
Engineering	Engineering solutions, contractors and specialists
Construction	Industrial construction
Research	Research, development and innovation related
Education and Training	Education and training, post-secondary institutions
Multi-function	General purpose, multi-functions (2+), funding & finance
Policy & Engagement	Policy, advocacy and communication
Regulator	Regulators of nuclear systems, electrical grids and utility operations
Potential End-User	Potential industrial end users or utilities
Consultancy	Business consultancy firms related to energy, nuclear, engineering, or certifications

SMR Timelines

- Planning Phase includes:**
- SMR site selection;
 - SMR technology down-selection;
 - Preparation, submission and approval of a License to Prepare a Site from the CNSC;
 - Preparation and submission of a License to Construct an SMR from the CNSC;
 - Preparation and submission of a License to Operate an SMR from the CNSC;
 - Environmental, social, economic and Indigenous impact assessment; and
 - Extensive and ongoing Indigenous, stakeholder, customer and public engagement.



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