Welcome to the

SMR Feasibility Study Public Open House

What is a Small Modular Reactor or SMR?

- It’s the next generation of nuclear technology that is smaller and simpler than conventional nuclear technologies.
- SMRs can produce a large amount of clean electricity for homes, industries, or remote areas.
- The small, modular design can be deployed incrementally to match increasing energy demand.

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Artist rendering for conceptual purposes only.

- ✓ Safe
- ✓ Reliable
- ✓ Carbon-Free

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SMR Feasibility Assessment

Capital Power x Ontario Power Generation (OPG), leaders in the Alberta energy market and nuclear power operations, have entered into a two-year commitment agreement to collaborate on:

- Assessing the feasibility of developing and deploying grid-scale SMR power generation in Alberta
- Determining whether to proceed with further evaluation and pre-development opportunities

Stakeholder and Indigenous Engagement

SMR/Nuclear Policy Framework

Technology Screening

Site Screening

Commercial Strategy

Licensing & Permitting

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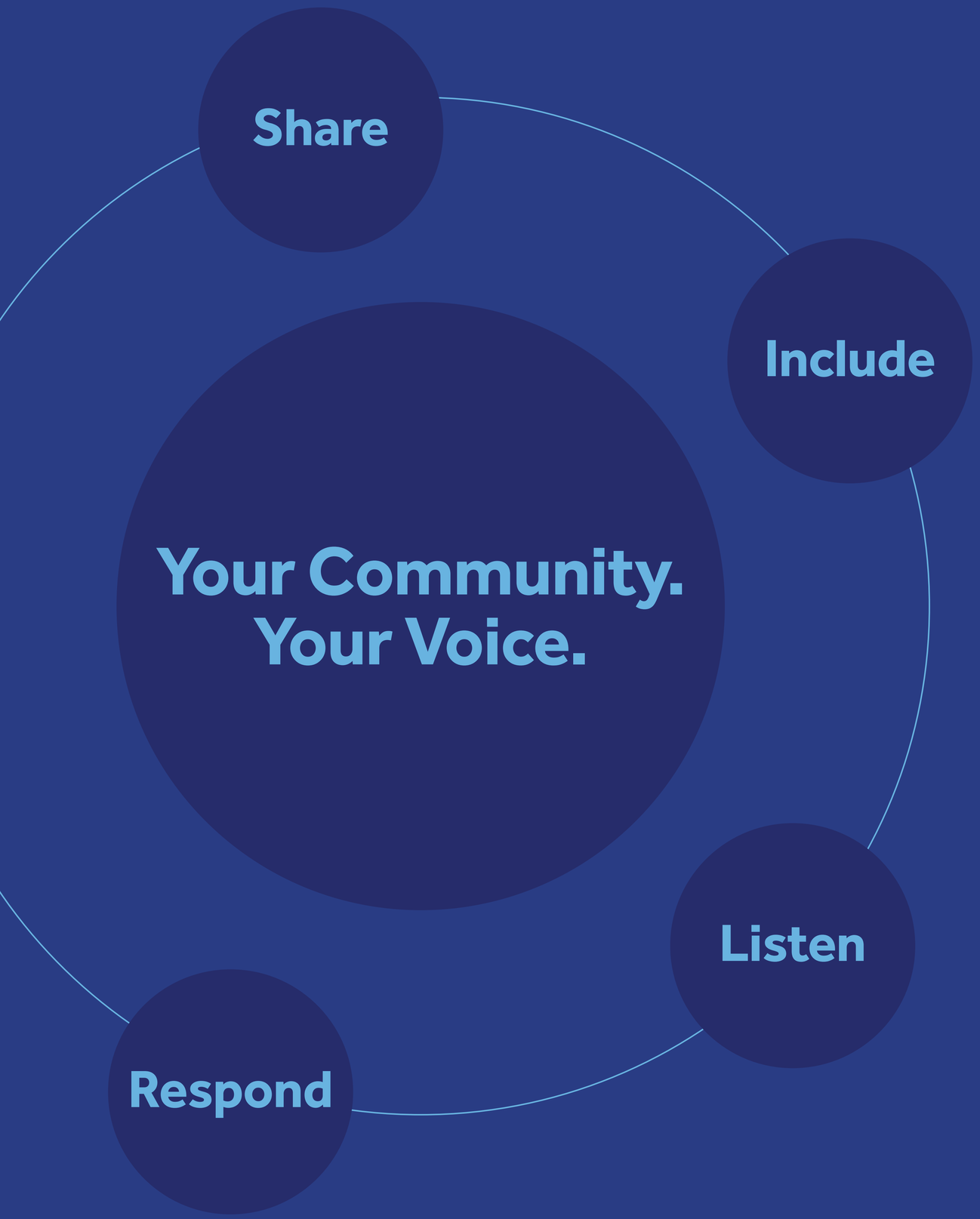

Alberta needs a stable supply of reliable and clean power generation to meet growing demand.

Capital Power and Ontario Power Generation are exploring nuclear power as a key solution to our energy needs today. That’s why community feedback is essential as we consider innovative solutions for a sustainable energy future.

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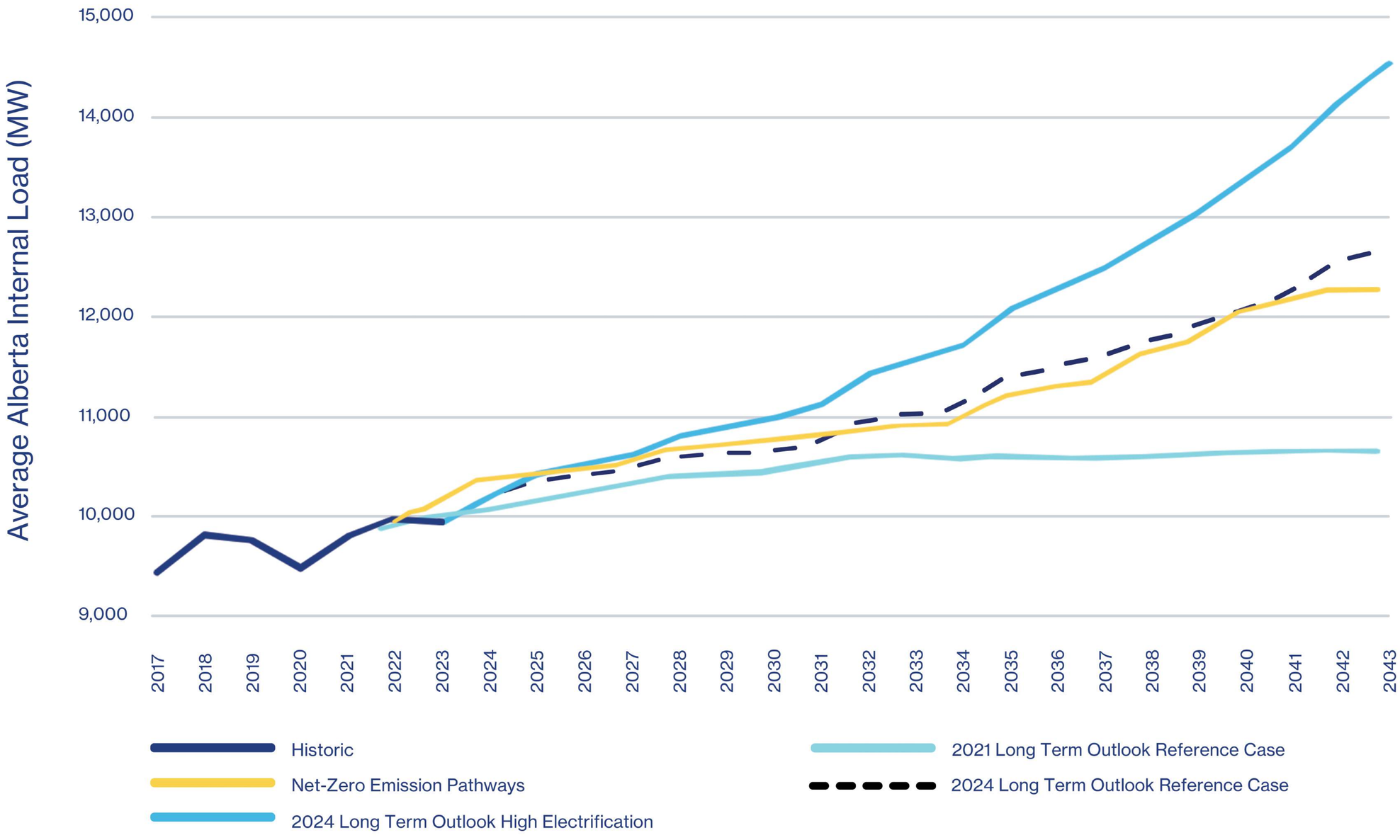
Energy demands are growing



Graph Source: Alberta Electric System Operator Long-Term Outlook

To meet increased electricity demand from electrification, population growth, industrial development and retirement of older natural gas facilities, Alberta will need more power.

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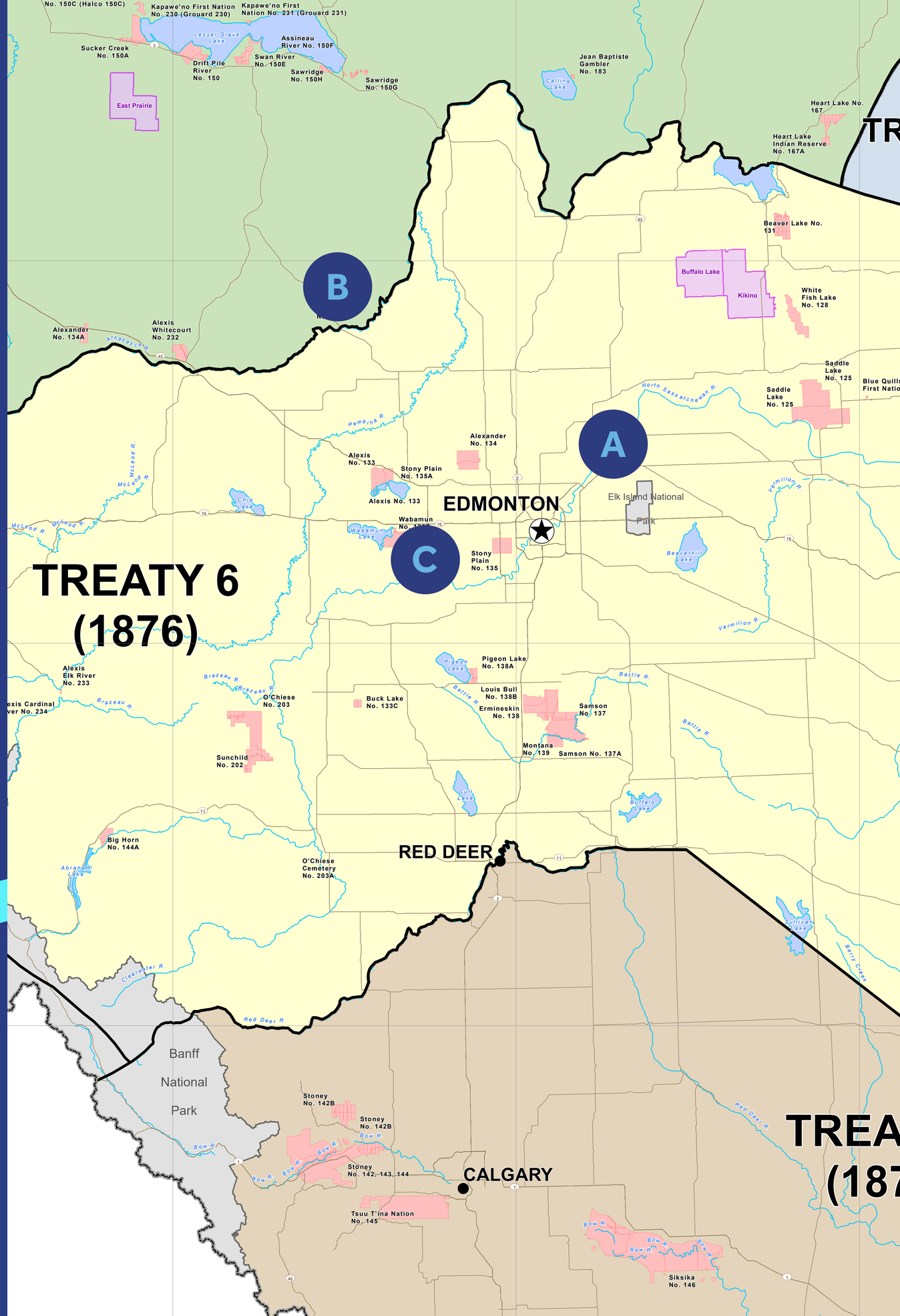
Potential Host Sites

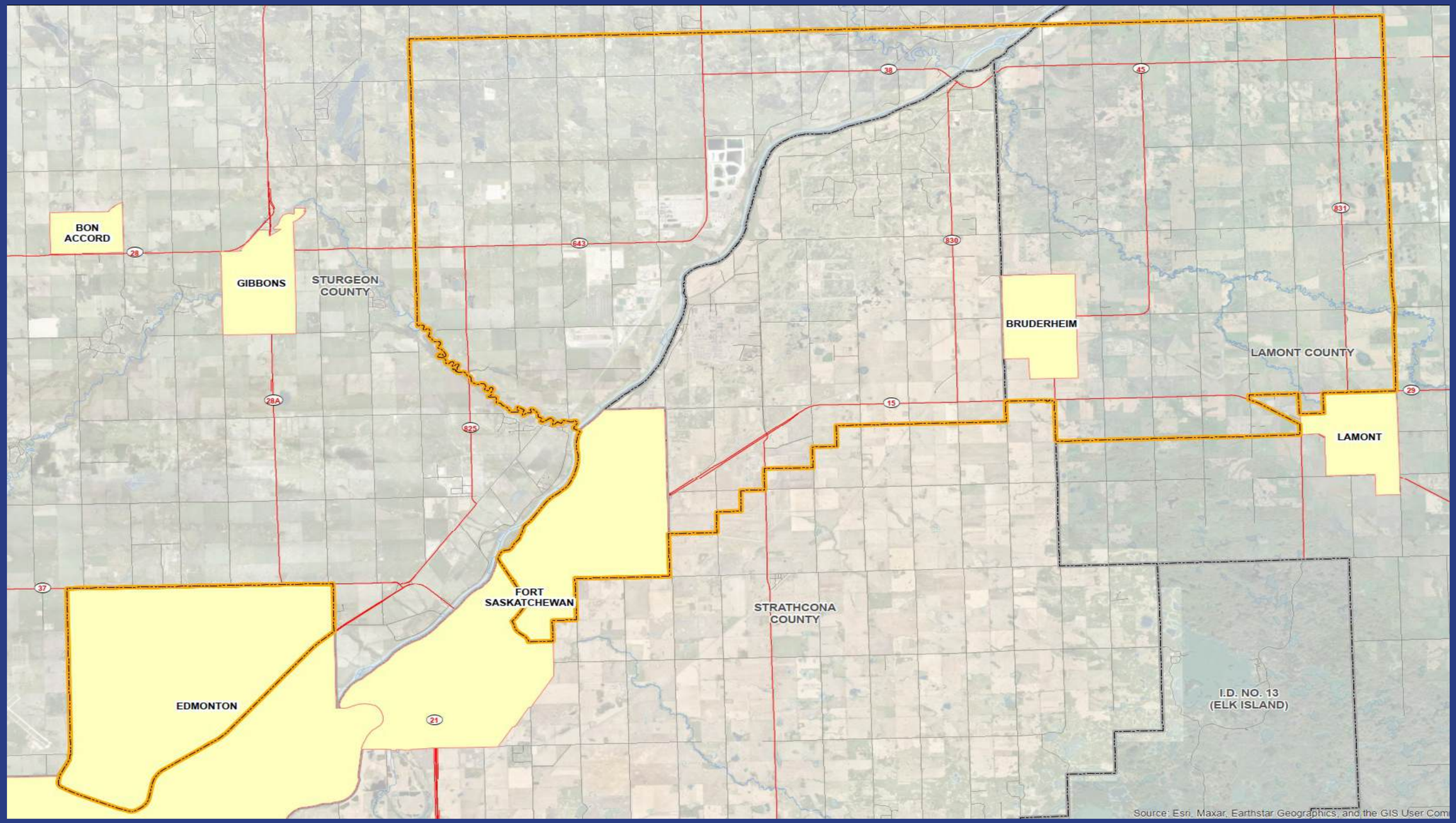
A. Industrial Heartland
(Sturgeon County, Strathcona County, Lamont County)

B. Woodlands County
(Whitecourt area)

C. Leduc County
(Genesee)



Industrial Heartland



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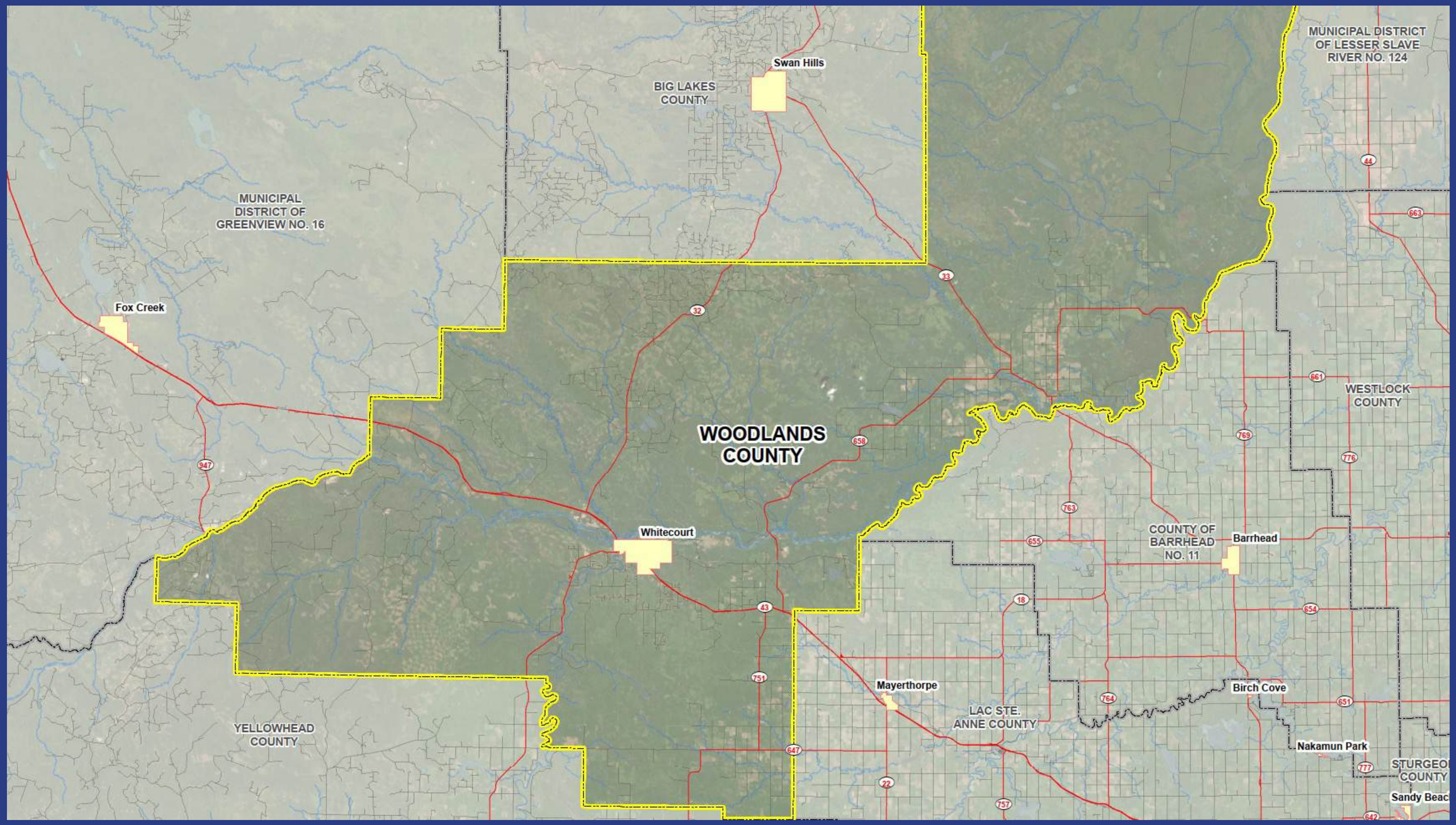
Woodlands County



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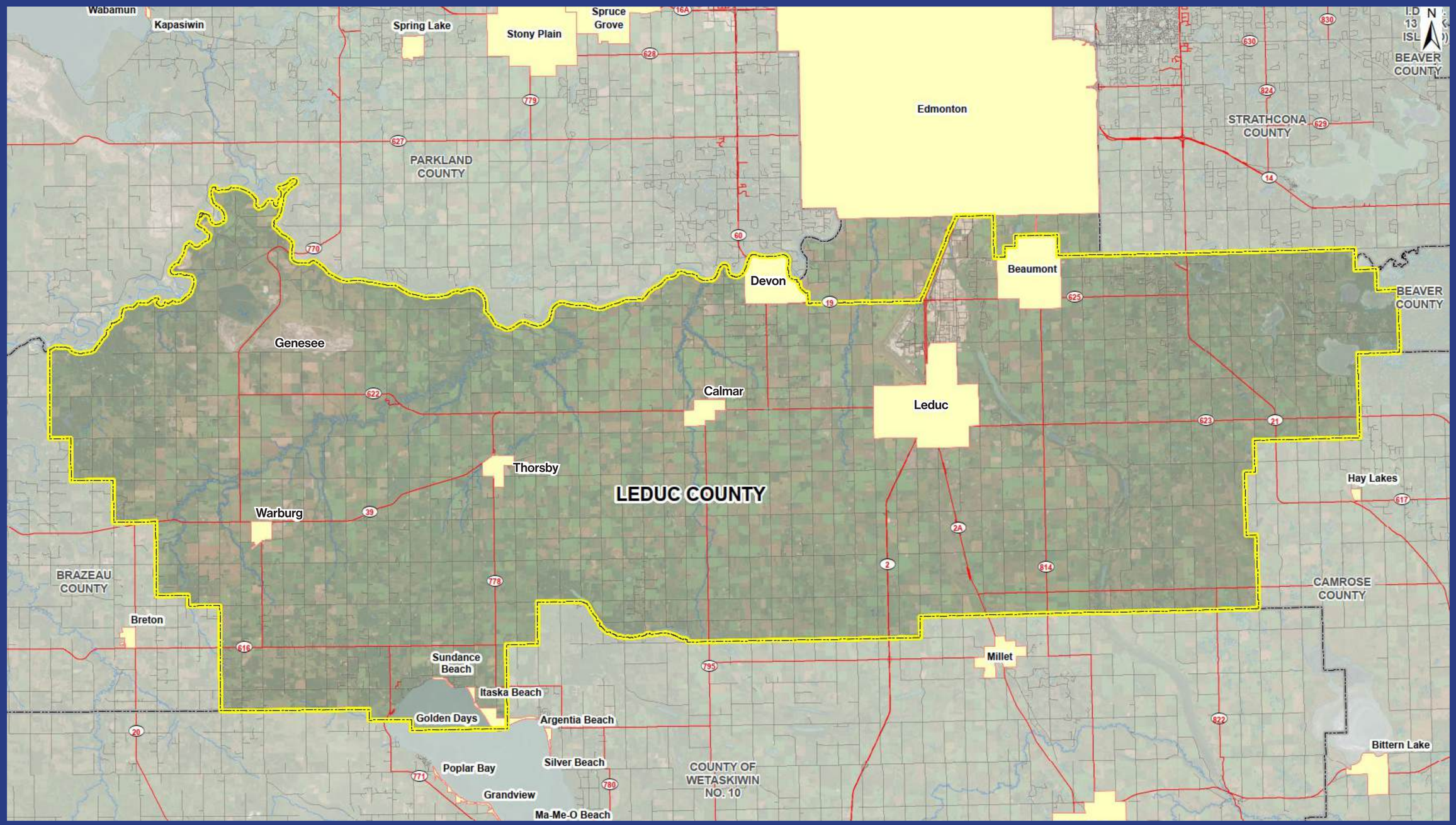
Leduc County (Genesee)



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Site Screening Study

Technical Considerations

- Access to land, water, and power generation infrastructure
- Transportation and logistics
- Seismic and geological stability
- Other industrial development

Engagement Considerations

- Indigenous perspectives, cultural heritage, and traditional land and resource use
- Interests, issues and concerns, and community support

Economic Benefits

- Ongoing study on economic benefit of SMRs in Alberta by Conference Board of Canada

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Safely powering Canadian communities for over 50 years

- The Canadian nuclear industry is one of the most regulated industries in the world
- Each plant must track emissions and all nuclear waste to protect employees, communities, and the environment
- Strong safety culture to protect nuclear energy workers and the public
- Criteria as set out in the Canadian Nuclear Safety Commission guidelines and international best practices

Understanding Radiation

In nuclear energy, radiation is carefully controlled, monitored, and managed to ensure safety for both people and the environment.

Nuclear power plants use nuclear fission, which in Canada involves using uranium atoms. During nuclear fission, a neutron collides with a uranium atom and splits it, releasing a large amount of energy in the form of heat and radiation.

Living near a nuclear plant is like eating 10 bananas over 1 year.

DID YOU KNOW?

Bananas are slightly radioactive due to their potassium content.

Banana* Equivalency Index

Dental X-Ray	50 Bananas
Daily Background	100 Bananas
Flight from Toronto to Vancouver	400 Bananas
Mammogram	20,000 Bananas
Chest CT	70 Bananas
Fatal Dose	100,000,000 Bananas (at once)

* 1 banana = 0.1 uSv of dose

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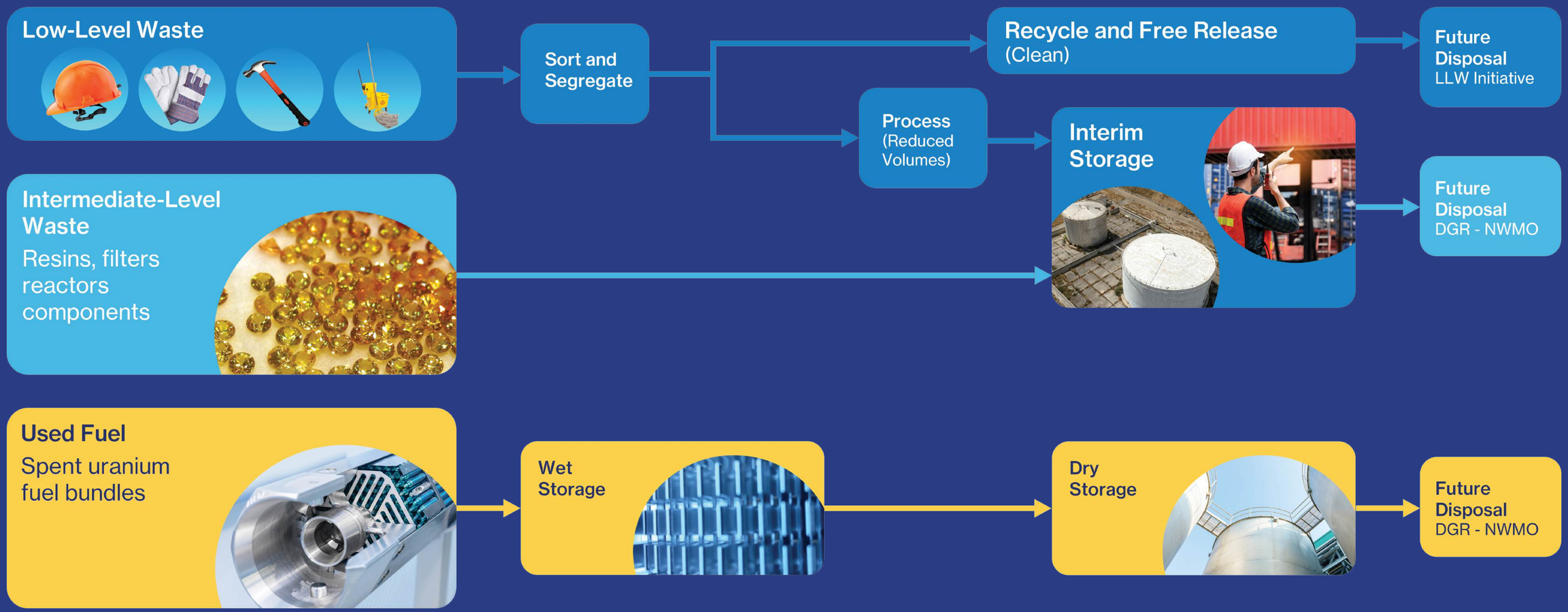
The 3 Types of Nuclear Waste

Nuclear waste is produced from the nuclear generating cycle that can either be reused, recycled or reduced in volume.



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SMRs and the Environment

Air

SMRs do not produce greenhouse gas emissions.

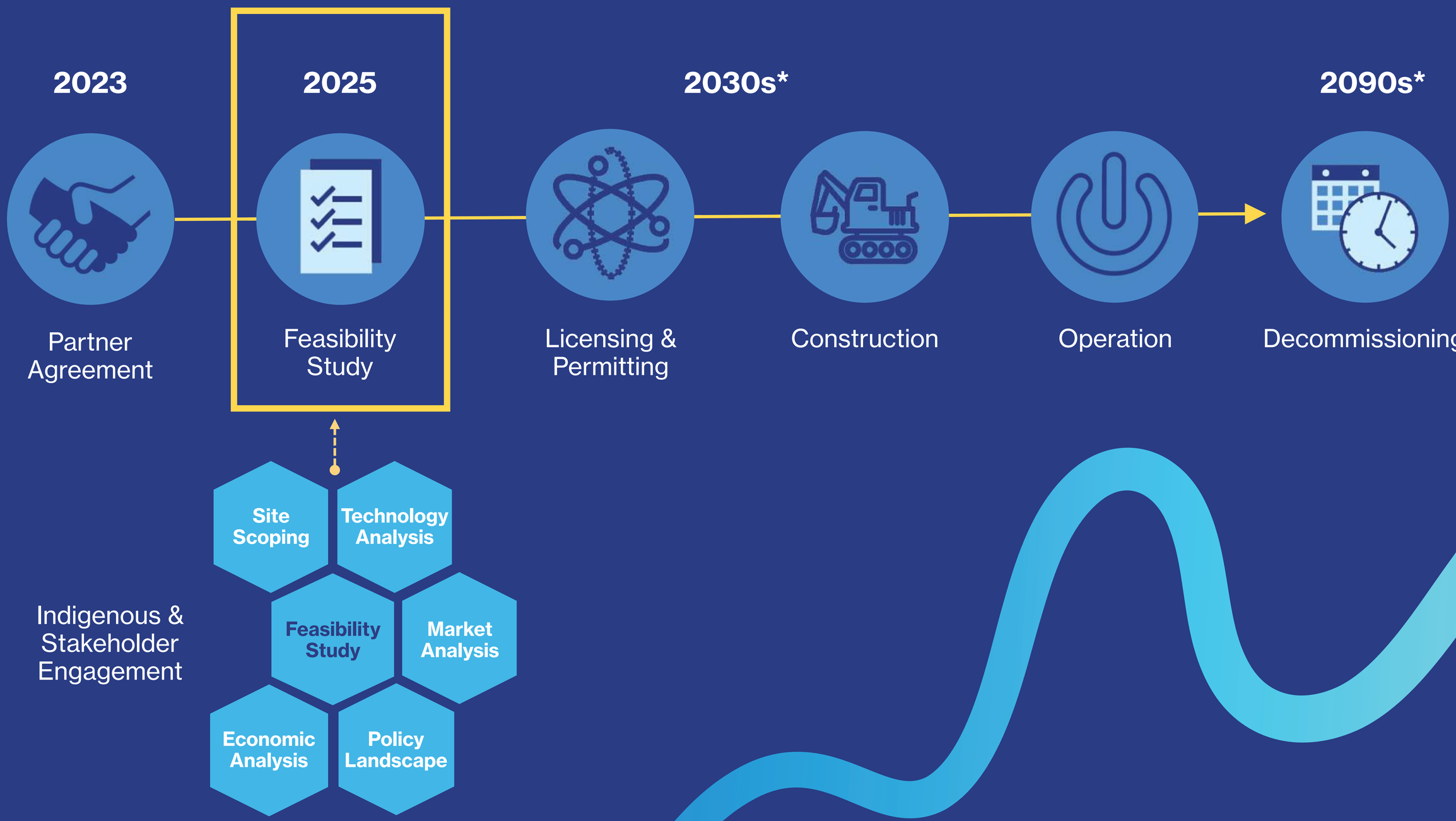
Land

The footprint of a typical SMR facility is about the size of a standard football field.

Water

SMRs operate using a closed-loop system where water used for the reaction process is continuously recirculated within the reactor. This water is not sourced or released into the environment.

Where we are in the process



*Timeline is conceptual and subject to change

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