



# TC Energy Overview – Life in the Heartland

APRIL 2023

# Our energy network

## Natural gas pipelines

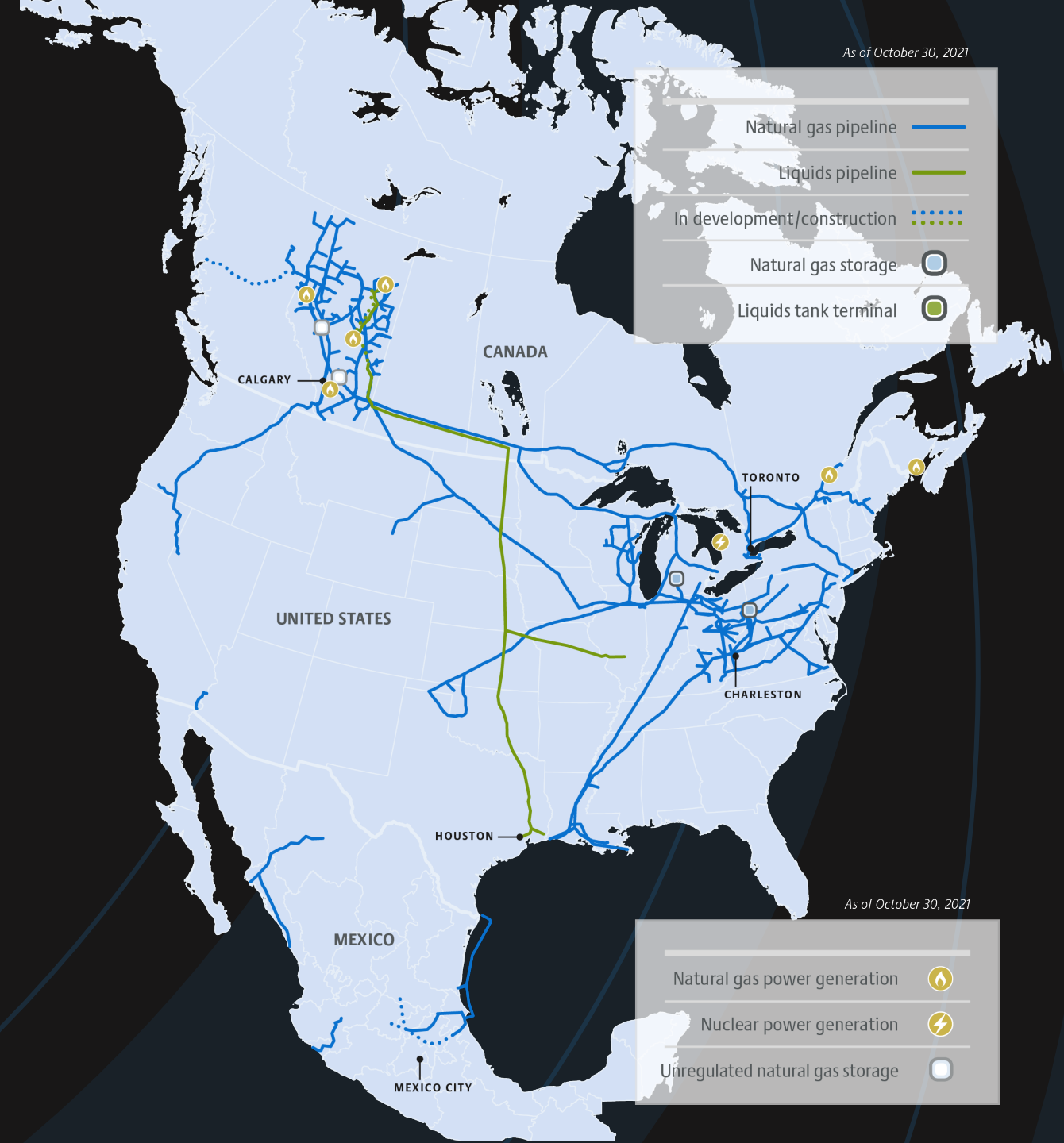
25% of the natural gas that North America uses every day

## Oil and liquids pipelines

~20% of the western Canadian oil that goes to the U.S. Midwest and Gulf Coast

## Power generation

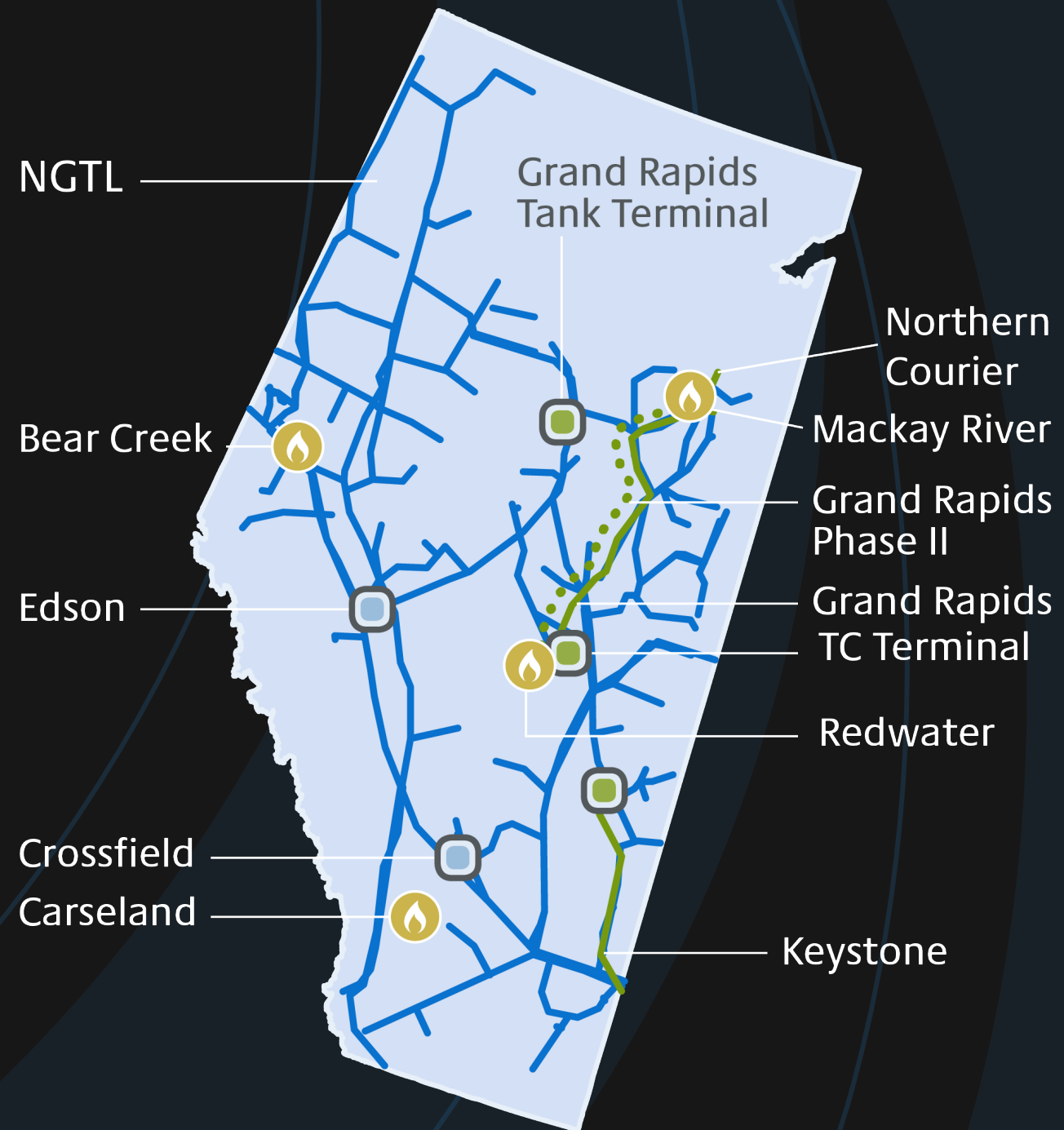
Powering more than 4 million homes

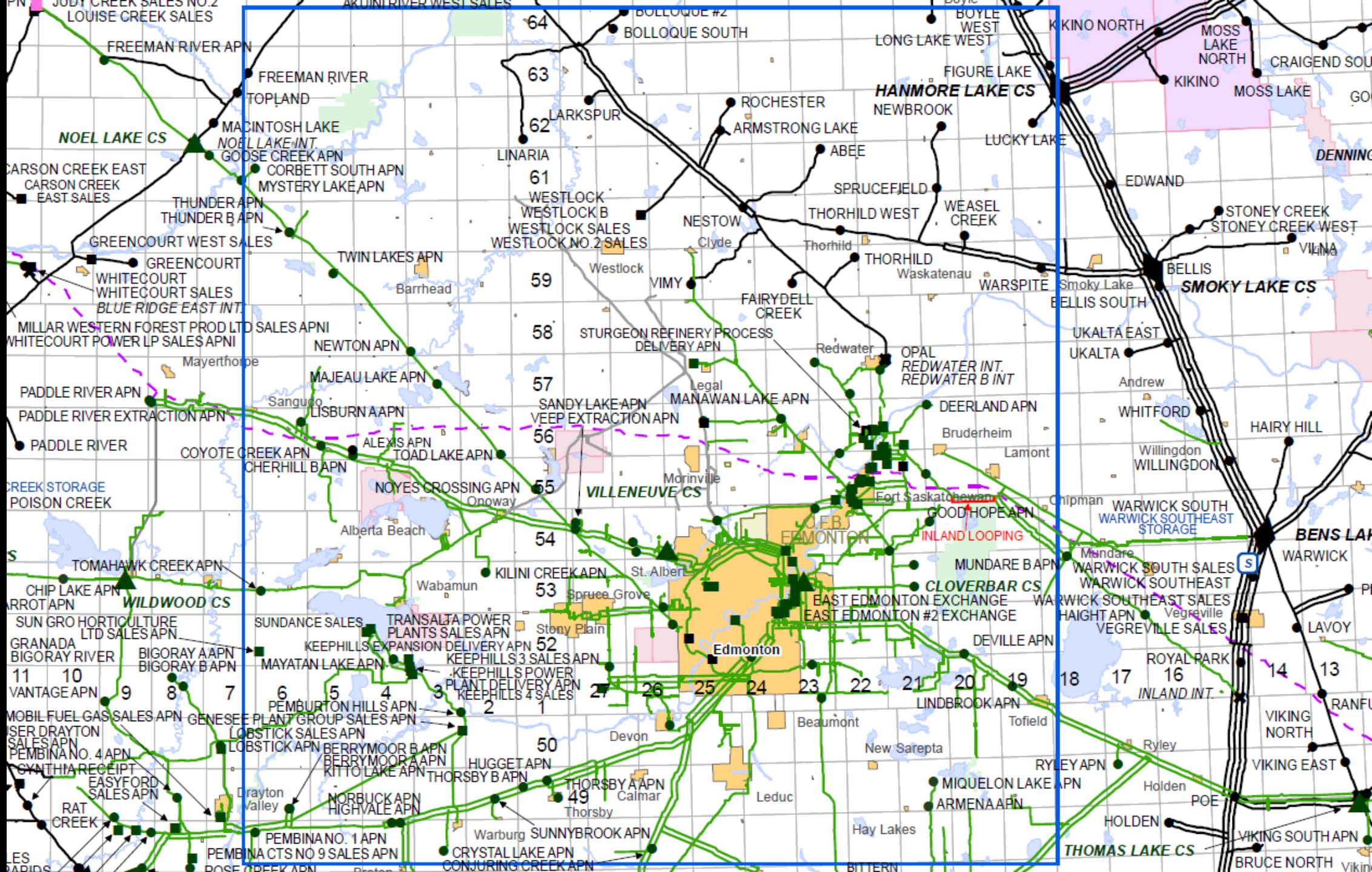


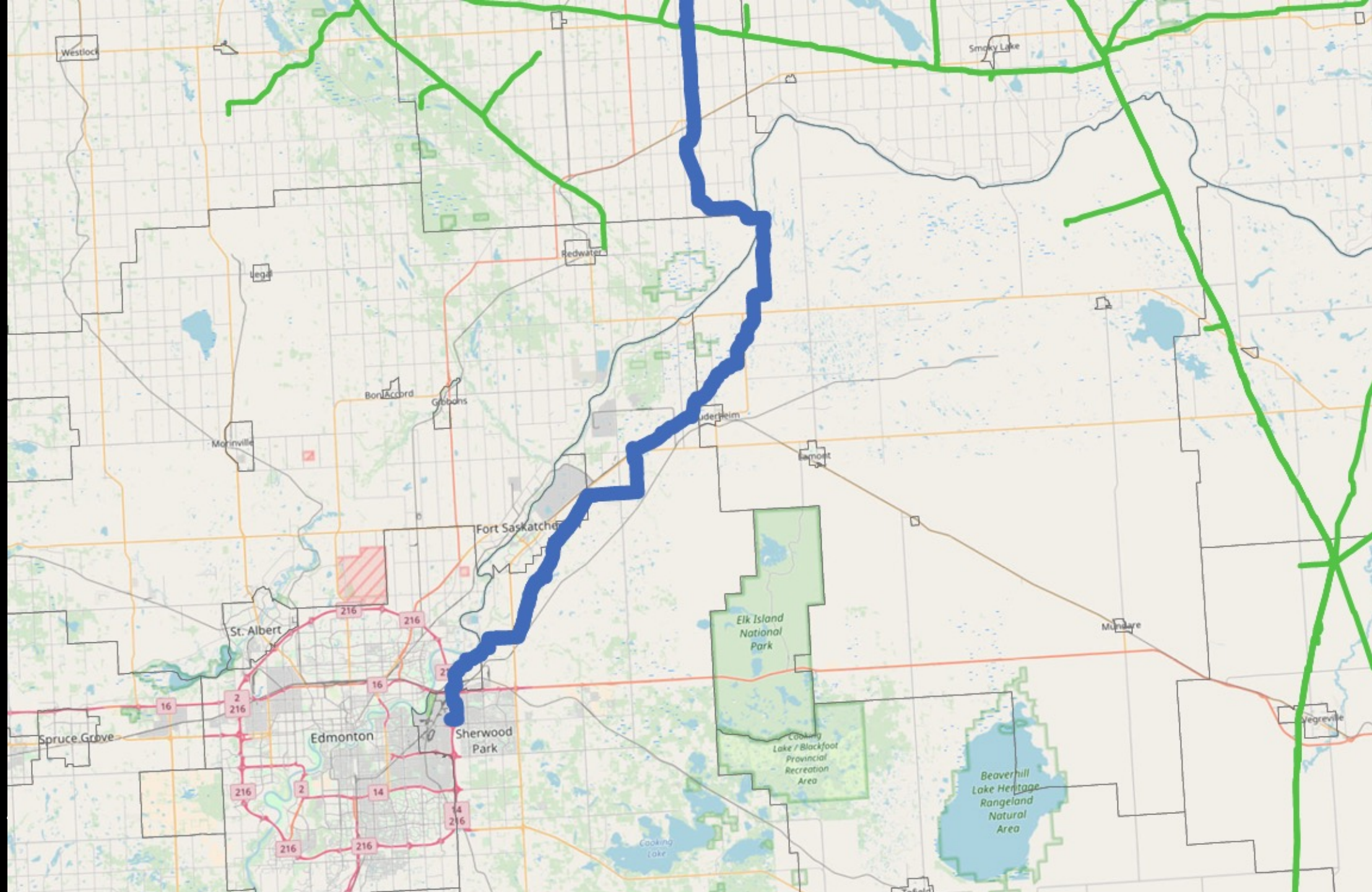
# TC Energy in Alberta

## Economic impact | By the numbers

- Property taxes paid: \$141.4M
- Goods and Service Tax (GST): \$14.02M
- Federal Fuel Tax for NGTL and Foothills: \$0.41M
- Community Investment: \$3.73M
- Number of employees: 3,839
- Salaries: \$654 million







# Our roadmap to 2050

## FIVE FOCUS AREAS



### 1. Modernize our existing systems and assets

Reduce fugitive methane emissions, leaks, venting and flaring associated with regular operations and maintenance, and improve overall operational efficiency.



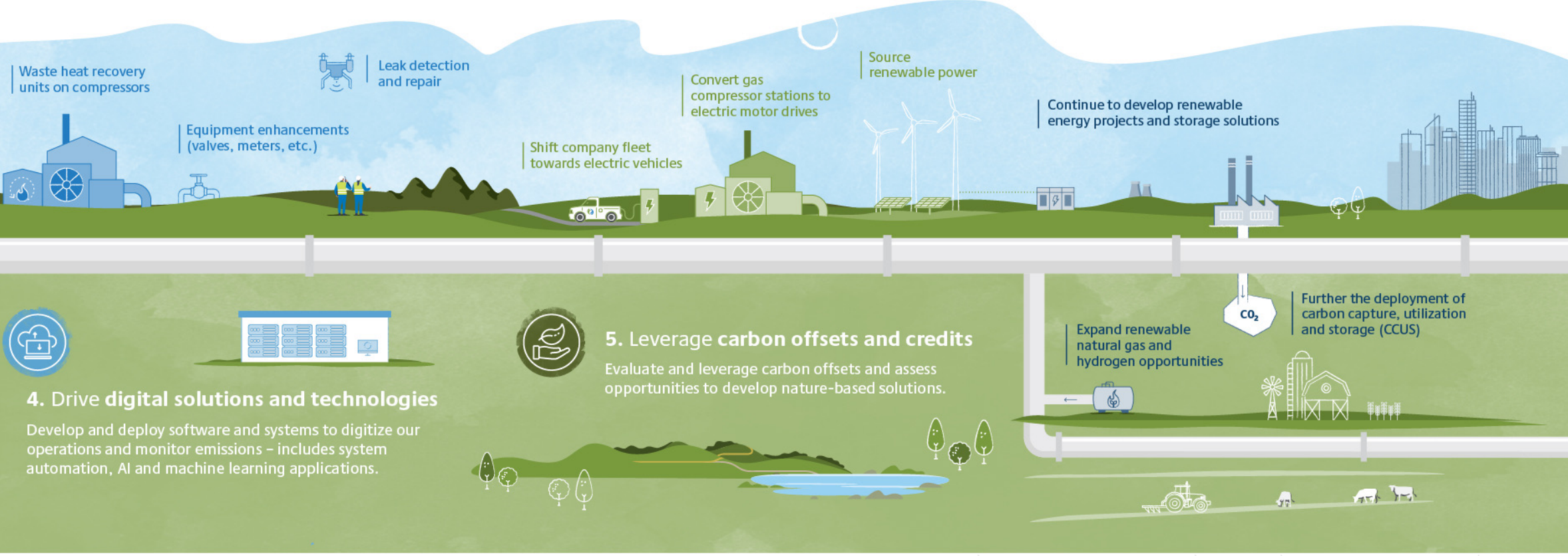
### 2. Decarbonize our energy consumption

Seek low carbon energy sources to support our operations.



### 3. Invest in low-carbon energy and infrastructure

Develop a broad range of new low-carbon energy solutions for today and for the future.



### 4. Drive digital solutions and technologies

Develop and deploy software and systems to digitize our operations and monitor emissions – includes system automation, AI and machine learning applications.



### 5. Leverage carbon offsets and credits

Evaluate and leverage carbon offsets and assess opportunities to develop nature-based solutions.

Expand renewable natural gas and hydrogen opportunities

CO<sub>2</sub>

Further the deployment of carbon capture, utilization and storage (CCUS)

# Renewables in Alberta

Building our portfolio

## Solar

### Saddlebrook Solar

- A 102.5 MW solar facility set to be in operation late in 2024.
- Utility-scale solar-plus-storage electricity generation facility. Estimated cost \$120 million and will create construction jobs in the near term.

### East Strathmore Solar

- Acquired 20 MW of solar energy and clean electricity will be sold to the Alberta Energy System Operator (AESO). Agreement includes all rights to current and future environmental attributes of the project.

### Claresholm Solar

- Acquired 74.25 MW of solar energy which will be sold to the AESO. Agreement includes all rights to current and future environmental attributes of the project.

## Wind

### Sharp Hills Wind Farm

- 297-MW wind farm, being build by EDP Renewables, anticipated to be operational in late 2023
- Acquired a 15-year virtual power purchase agreement for the offtake, making it the largest vPPA in the country.

## Pumped Hydro Storage

### Canyon Creek Pumped Hydro Storage

- To produce 75 MW of power when operational in 2025.
- Utilizes existing site infrastructure from a decommissioned open pit coal mine.
- Facility to provide up to 37 hours of on-demand, flexible, clean energy and ancillary services to the Alberta electricity grid.
- Approved by the Alberta Utilities Commission and Alberta Government for hydro projects under the Canyon Creek Hydro Development Act,

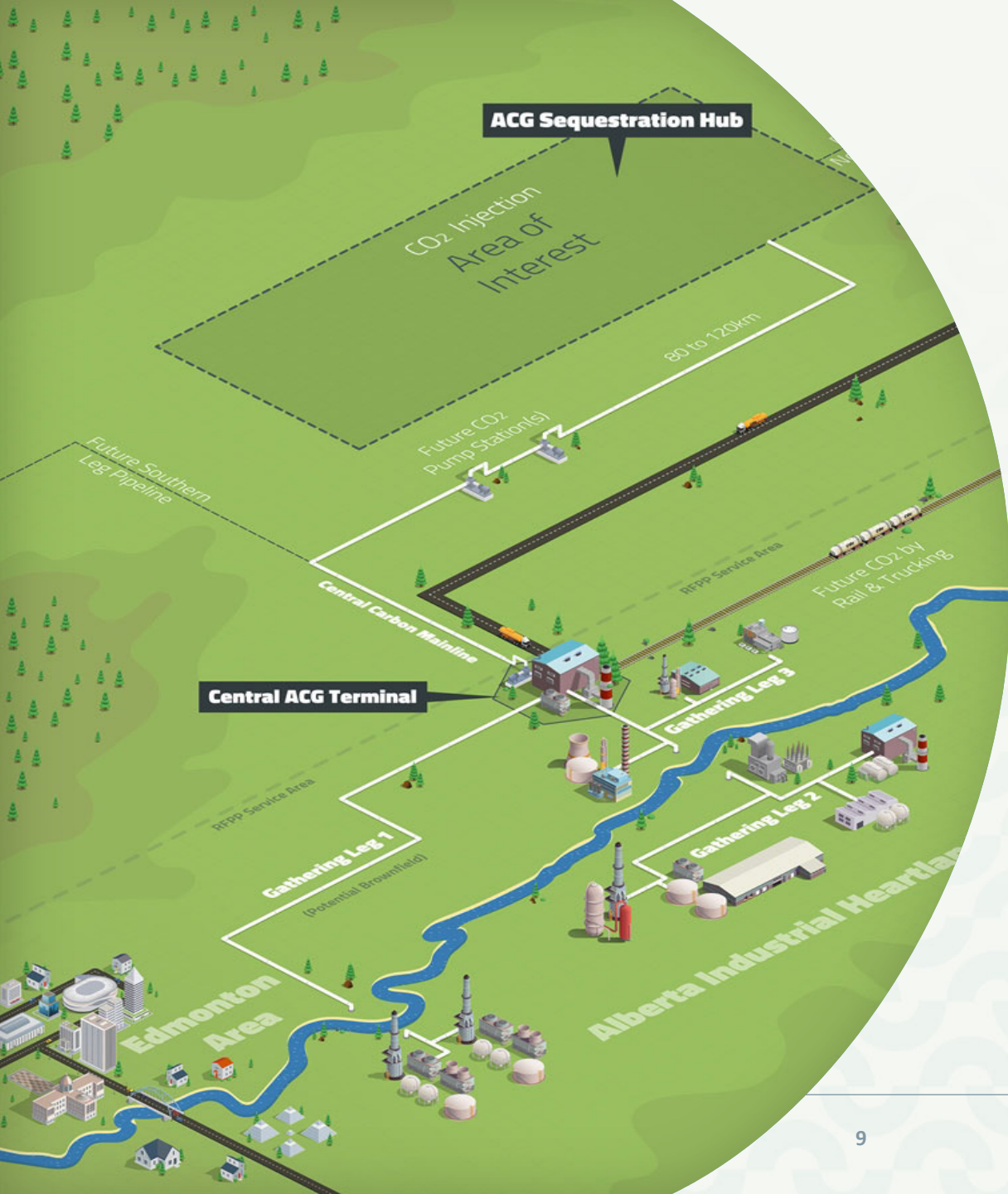


# Alberta Carbon Grid (ACG) Overview

- A **collaboration** between Pembina Pipeline and TC Energy
- **World-leading carbon transportation and sequestration solutions** across Alberta
- Designed to serve **multiple customers and industries**
- Multi-year effort to help **meet Canada's emissions targets** and **benefit the Alberta economy**
- Exploring options to create **several ACG storage hubs** throughout Alberta
- Long-term vision is to annually transport and store **up to 20 millions tonnes of CO2** through multiple hubs





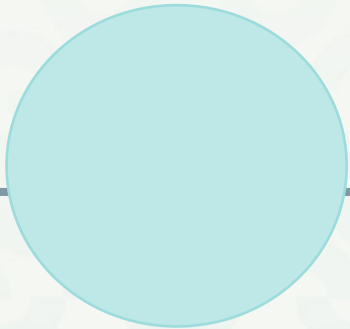


## ACG Industrial Heartland Project

- **First ACG hub** selected to move forward by the Government of Alberta in the first RFPP
- Entered into an **evaluation agreement** with Government of Alberta
- Secured the rights to explore **premier pore space (Area of Interest)** in the Alberta Industrial Heartland region
- Developed in phases with the potential to transport and store up to **10 million tonnes** of CO2 annually when fully developed
- **Cost-effective, safe and reliable** solution for emitters in the area to permanently store CO2

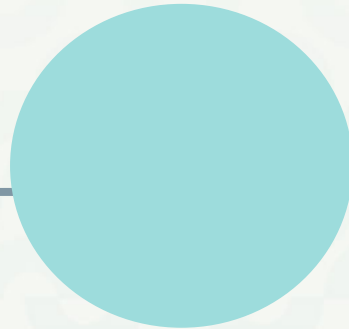
# Project Timeline

2022



ACG selected to move forward  
Carbon sequestration evaluation agreement signed

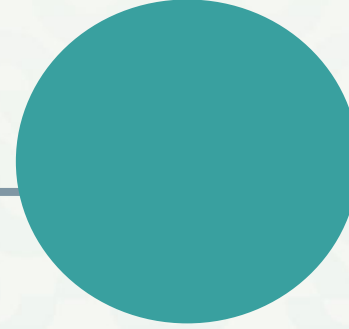
2023 / 2024



Evaluation program

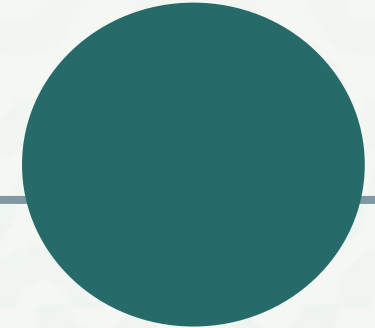
- 2D Seismic testing
- Well testing
- Data Analysis
- Sequestration Permit

2024 / 2025



Final investment decision

2027



Targeted project completion



Thank you