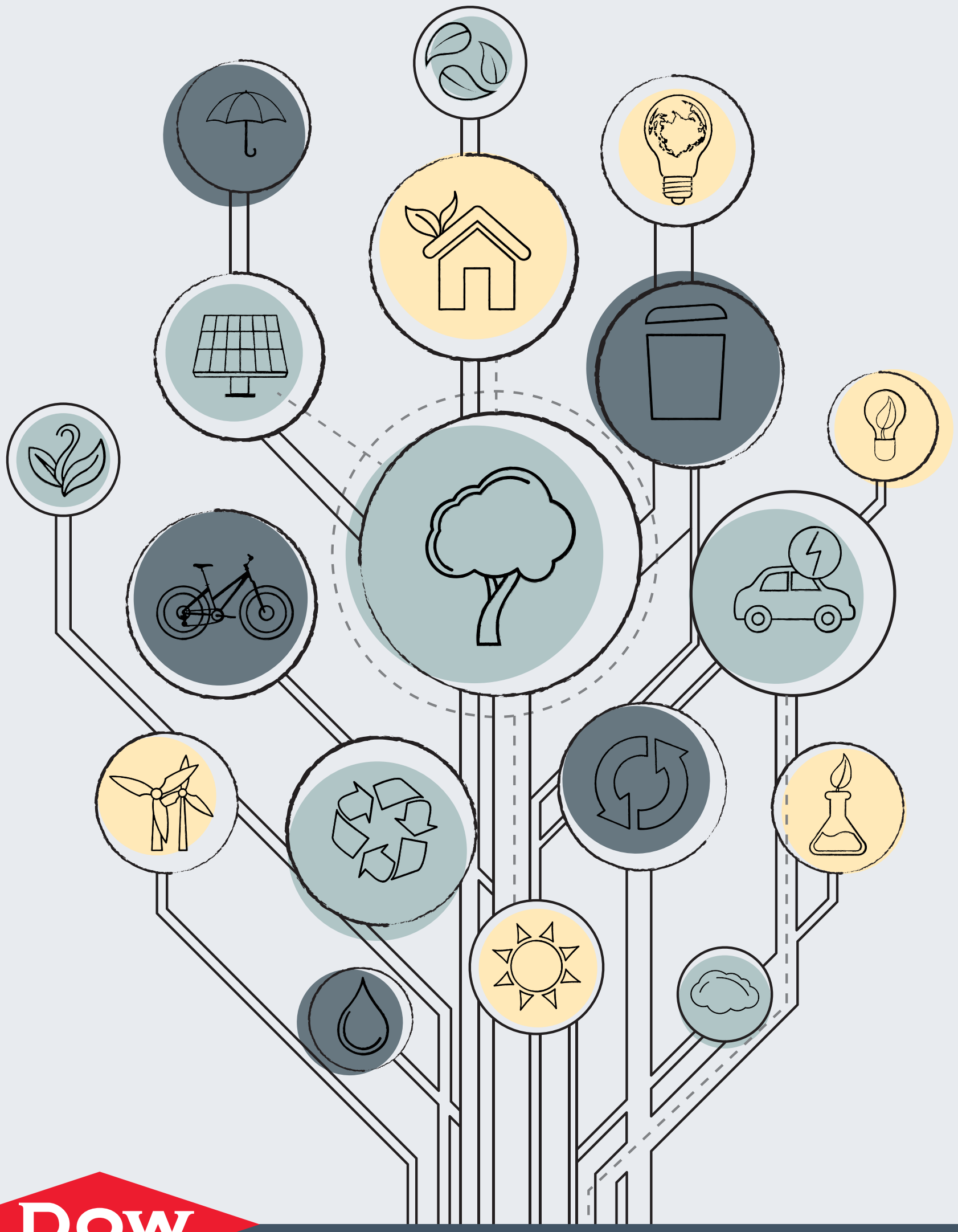
Fort Saskatchewan

PATH2ZERO

DOW **GROWTH & NET-ZERO** TRANSFORMATION



DOW®

About the Project

In 1897, The Dow Chemical Company began as a one-product start-up founded by Herbert H. Dow, a Canadian-born (Belleville, Ontario) industry pioneer. Inspired by our founder's wonder and creativity, Dow has transformed into a science and technology leader, providing solutions to the world's most difficult challenges.

Dow has outlined a clear path to decarbonize our manufacturing facilities while growing and delivering low emissions products to customers.

Dow's Fort Saskatchewan Path$_2$Zero expansion project will create the world's first net-zero emissions integrated ethylene cracker and derivatives site with respect to scope 1 and 2 greenhouse gas emissions.

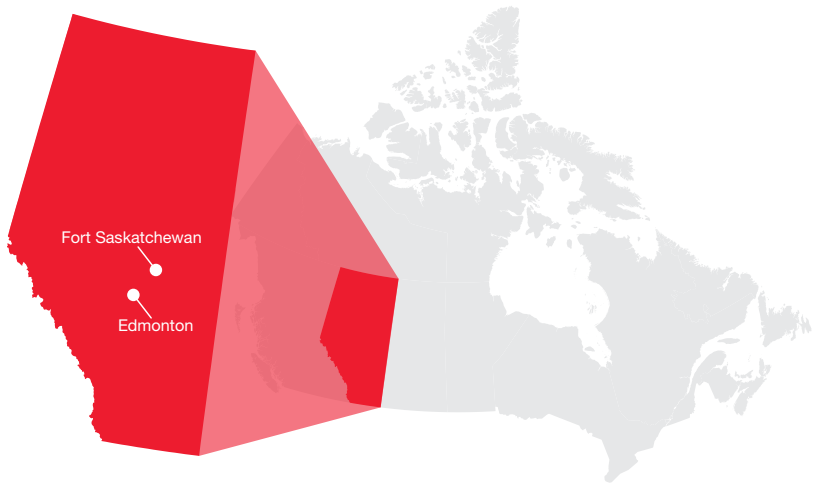
This project will:

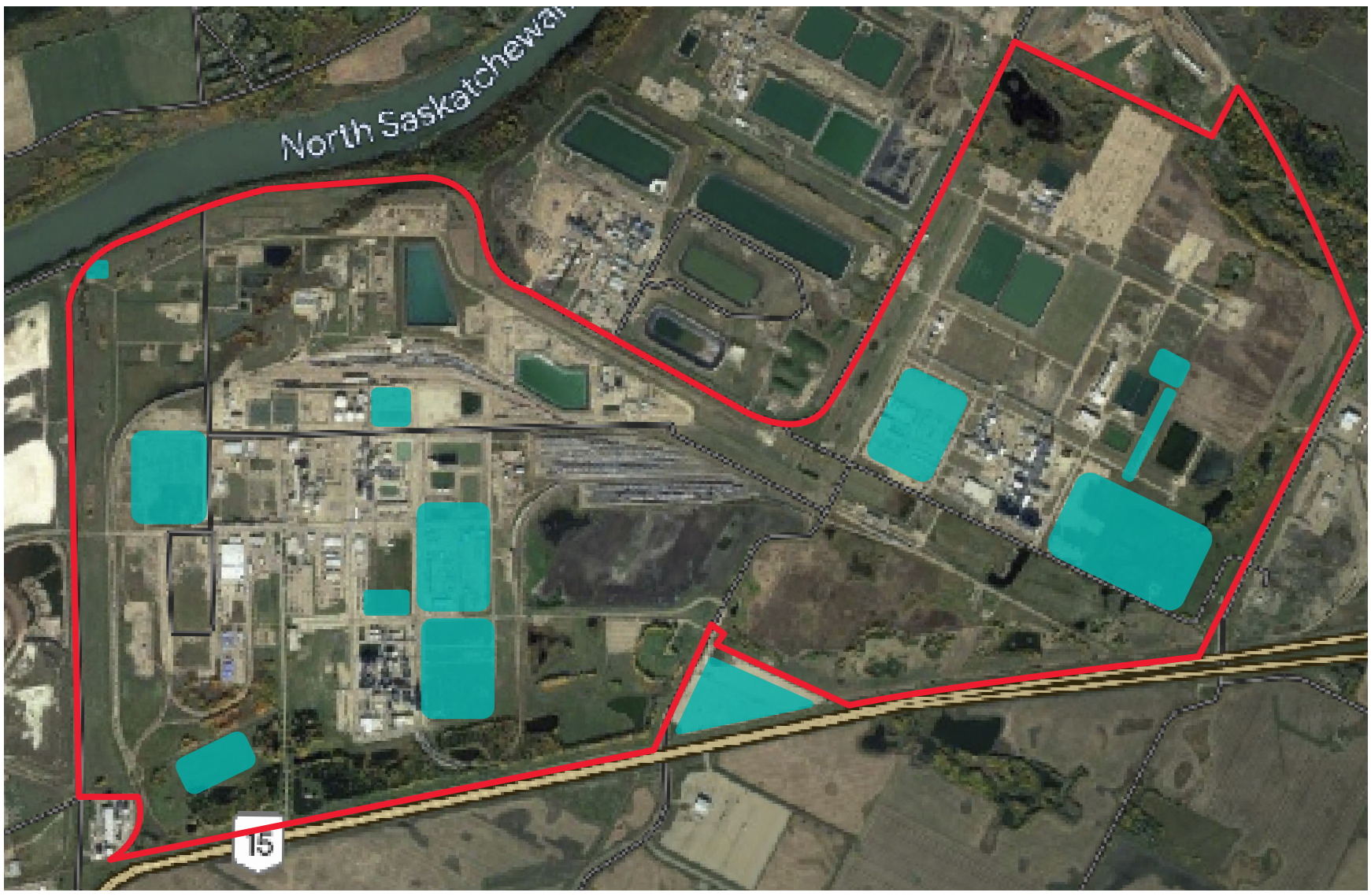
- Include a brownfield expansion and retrofit of Dow's existing manufacturing site in Fort Saskatchewan.
- Decarbonize approximately 20 percent of Dow's global ethylene capacity while growing polyethylene supply by about 15 percent.
- Triple Dow's ethylene and polyethylene capacity from the site, while retrofitting the site's existing assets to net-zero emissions.
- Add approximately 1.9 million metric tonnes of ethylene capacity in a phased manner through 2030.
- Create approximately 6,000-7,000 jobs during peak construction and approximately 400-500 full-time jobs once operational.
- Produce and supply approximately 3.2 million metric tonnes of certified low- to zero emissions polyethylene and ethylene derivatives for customers and joint venture partners around the globe.
- Build on Dow's strong leadership position and allow us to meet the increasing needs of customers and brand owners seeking to lower the carbon footprint of their products.
- Build upon the progress Dow has already made by reducing net annual emissions by an additional 15 percent, and net annual emissions by approximately 30 percent by 2030 (since 2005).
- Highlight Alberta's growing global leadership in emissions-reducing technology like carbon capture utilization and storage.

Project Components

The Fort Saskatchewan Path$_2$Zero expansion project will consist of:

- Hydrogen-fueled ethylene cracker
- Expanded polyethylene production
- Power & steam cogeneration
- Carbon sequestration (off-site)
- Site infrastructure upgrades including roads, rail and utilities
- Control centers with office, storage, and maintenance facilities
- Design consistent with world-class engineering and safety practices
- Emergency response plans consistent with Dow, and industry, procedures and standards
- Continuous monitoring with 24/7 staffed operations

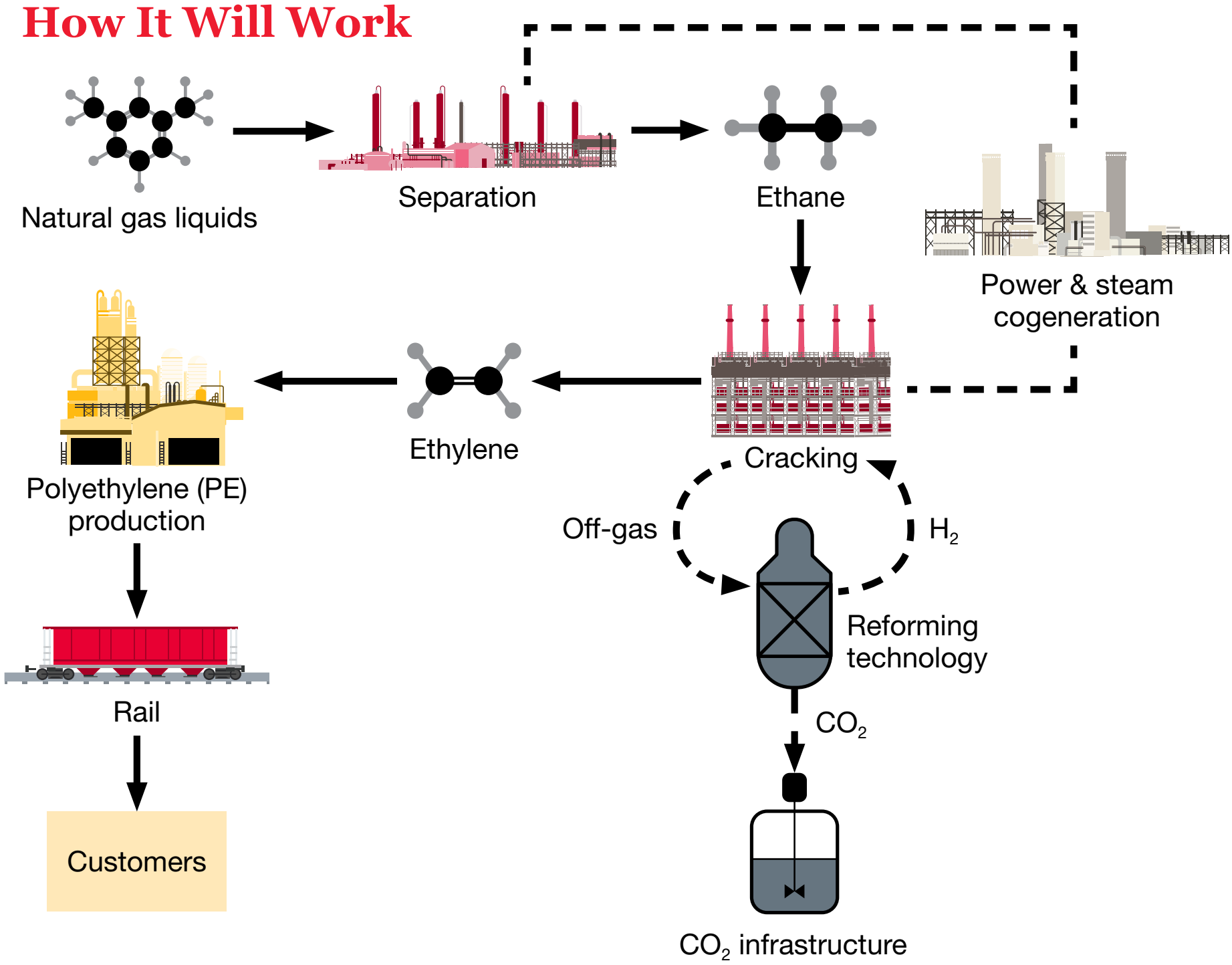




Site Expansion

Site Perimeter

How It Will Work



Expected Project Timeline

Dow is working closely with stakeholders to ensure the most accurate and current project information is being shared.

Fort Saskatchewan Net-Zero Scope 1 & 2 Emissions Site	
4Q 2023	Board of Directors approved FID
2Q 2024	Construction started
~ 2025	Complete detailed design and equipment procurement
~ 2027	**Phase 1** - Adds ~1,300 KTA of net-zero emissions ethylene/ polyethylene and retrofits existing cracker to remove ~1MM MTA of current emissions
~ 2029	**Phase 2** - Adds ~600 KTA of net-zero emissions ethylene and polyethylene

~$1B/yr of EBITDA growth and ~1MM MTA CO_2e reduction by 2030

Community Collaboration

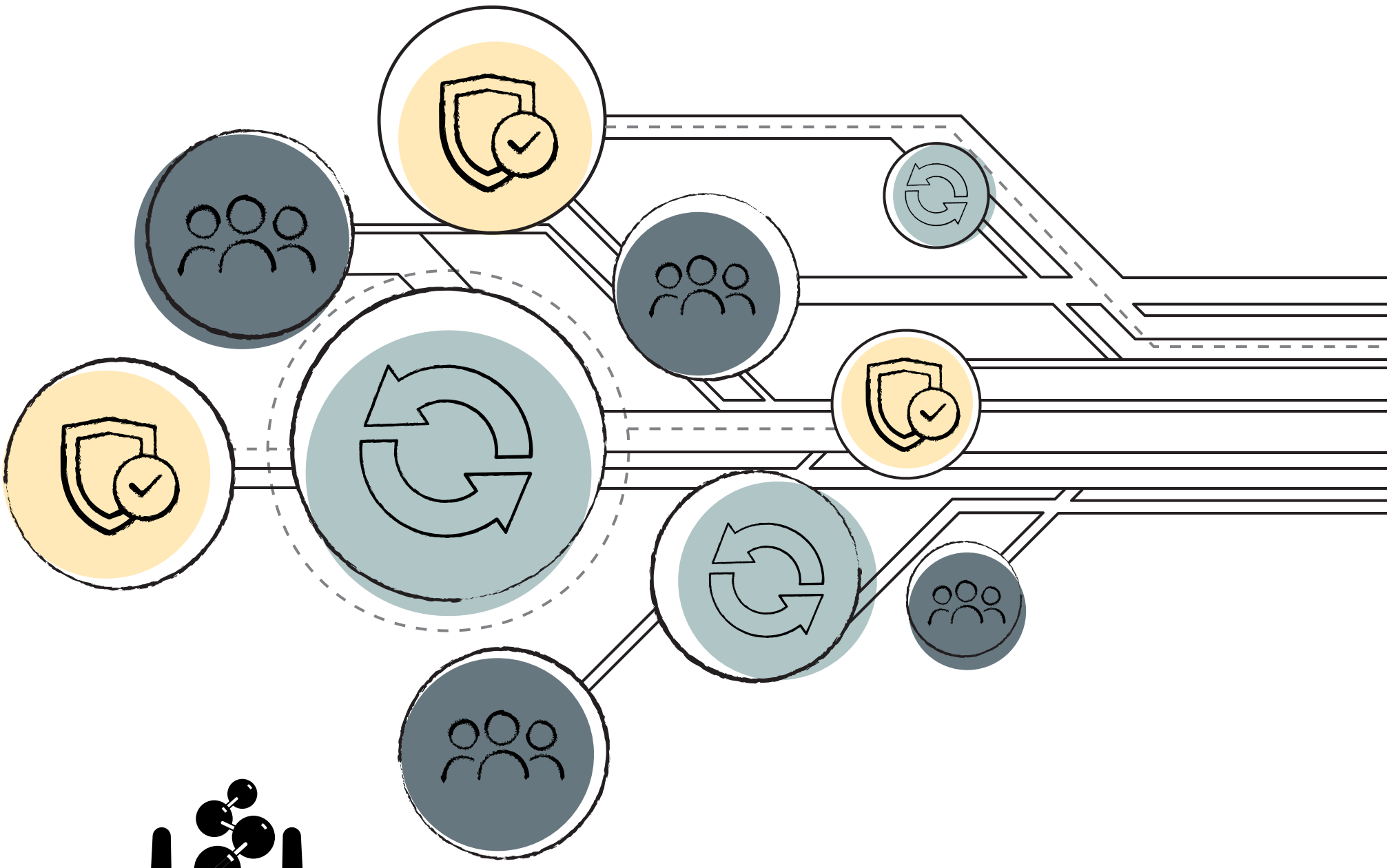
For more than 60 years in Alberta, we have been committed to playing an active role in helping shape the communities where we live and work. Our actions are aimed at strengthening Dow communities, where all people have the ability to thrive and be their best. We know this is good for business and society.

By sharing project information with neighbors and Indigenous communities, Dow gains valuable insight into local and regional interests. We make every attempt to use this information in our project planning and operations. We recognize the importance of building long term relationships based on trust and respect.

Committed to Safety

A commitment to safety, employee health and world-leading environmental performance has been a priority at Dow since our earliest days. Our goal is to have every worker go home safely at the end of their work day.

To ensure worker safety, Dow uses a comprehensive, integrated operating discipline management system that includes policies, requirements, processes, best practices and procedures related to our Environment, Health & Safety, Quality and Operations standards, and applicable external standards. Through this system, we lay the foundational expectations of hazard assessment and risk mitigation, aligned to Responsible Care®.



Responsible Care®
Our commitment to sustainability.

Permits and Approvals

The Project must be designed, operated and commissioned in accordance with municipal, provincial and federal environmental regulations and laws. Dow conducted specific studies to assess environmental effects associated with key environmental concerns such as: air quality, noise, water, traffic, and waste.

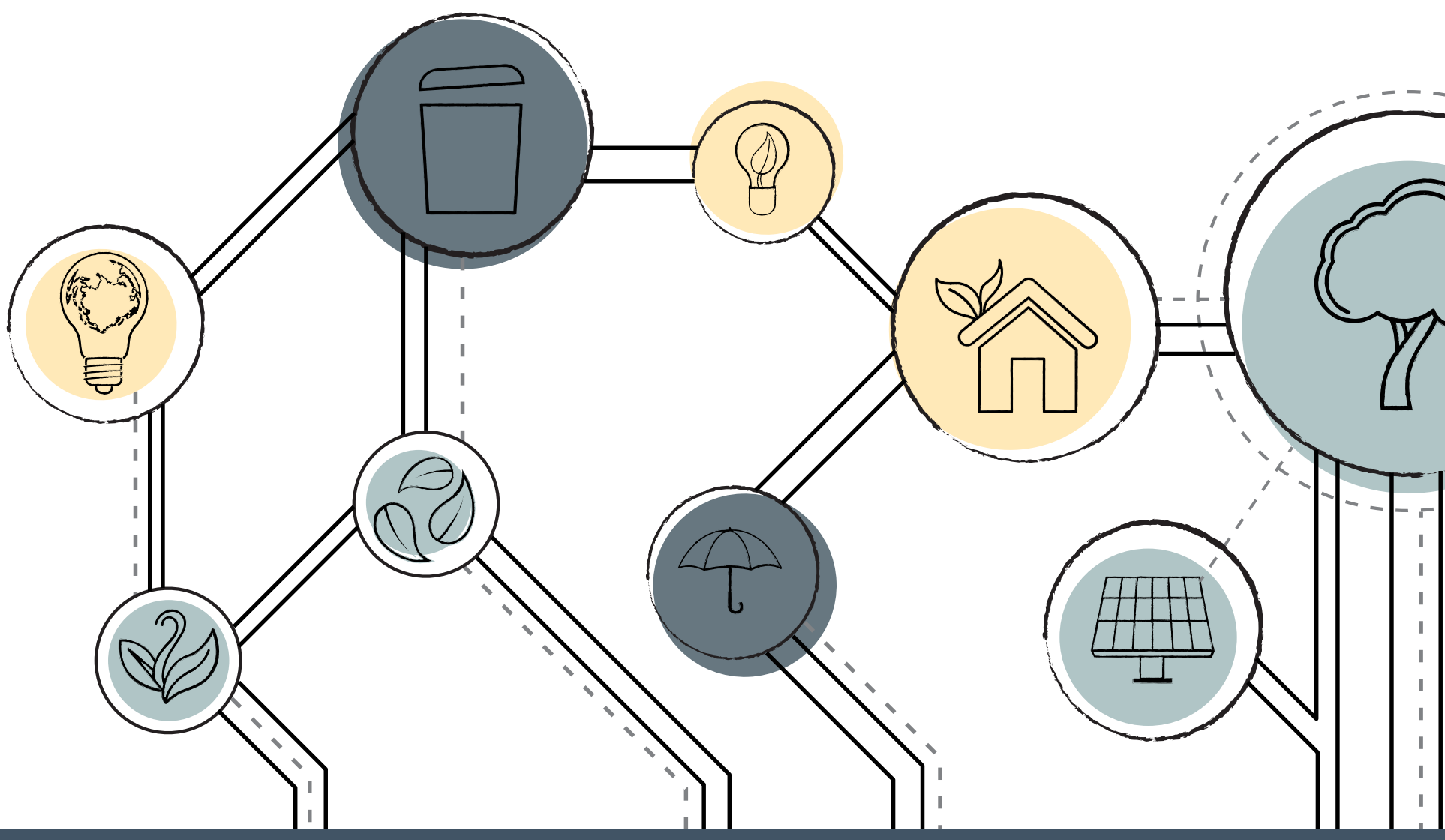
For this expansion project, Dow will require:

- An amendment to our existing Alberta Environmental Protection and Enhancement Act approval; and
- An amendment to our existing Alberta Water Act License to Divert and Use Water approval.

Air Quality. Air emissions must meet the requirements of the Alberta Ambient Air Quality Objectives and Guidelines established by Alberta Environment and Parks (AEP). Dow plans to ensure that air emissions are minimized from the operating equipment.

- Regional air quality is expected to be maintained with potential air emissions identified and controlled.
- A core feature of the project is a net-zero scope 1 and scope 2 emissions expansion including retrofit of existing site assets.

Noise. Dow will continue to participate in the Regional Noise Management Plan (RNMP) which is managed by the Northeast Capital Industrial Association (NCIA) to ensure industry in Alberta's Industrial Heartland complies with AER Directive 038 noise requirements.



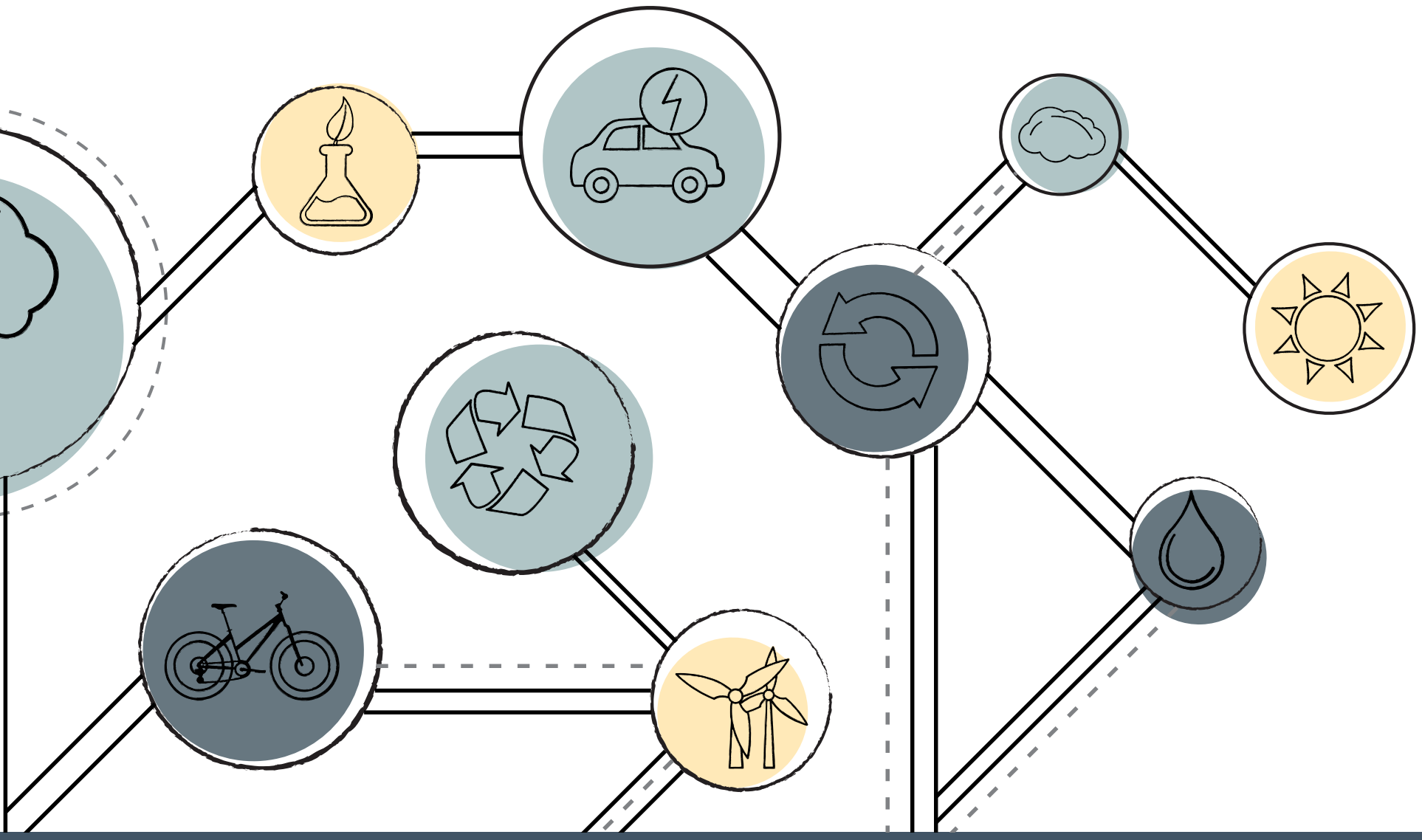
Water Use. Dow is aware of the vital importance of clean water to the province, and is planning to commission a facility that minimizes water use. Surface water will be collected and managed on the project. The collected surface water will be used in the plant when possible.

- For the Dow facilities water use is expected to increase but is expected to remain within the current water license, closer to maximum volume.
- Some increase of wastewater to the North Saskatchewan River is possible, but is anticipated to be within existing permitted levels.
- Where possible wastewater will be treated for reuse on site minimizing fresh water demand and direct discharge to the North Saskatchewan River.

Traffic. There will be an increase in traffic flow primarily during the construction phase of the project. This traffic flow will involve the movement of equipment, materials and workers. Dow will work with municipal and provincial authorities to minimize the disturbance to residents and commuters in the area.

Waste. Dow will work to minimize waste and all waste generated were disposed of appropriately and within government regulations and requirements.

In addition to these issues, other issues such as the potential effects of the project on land, historical resources and groundwater were assessed as part of the AEPA approval process.



About Us

Dow (NYSE: DOW) is one of the world's leading materials science companies, serving customers in high-growth markets such as packaging, infrastructure, mobility and consumer applications. Our global breadth, asset integration and scale, focused innovation, leading business positions and commitment to sustainability enable us to achieve profitable growth and help deliver a sustainable future. We operate manufacturing sites in 31 countries and employ approximately 35,900 people.

Contact Us

Phone: 780-992-2894
Email: canada@dow.com

For more information, please visit www.dow.com/fsp2z and follow us:

@DowCanada @Dow_Canada

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