Dow Request for Two Single Circuit Lines to Site

Project Background

- World's first net-zero emissions integrated ethylene cracker and derivatives site.
  - $6.5B USD investment
  - "This project is one of the largest private sector investments in Alberta's history." - Premier Danielle Smith
  - "This is historic work." - Minister François-Philippe Champagne
  - "… could represent one of the largest job-creating investments in Alberta in over a decade." – Jason Kenney
- 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 greenhouse gas emissions.
- Add approximately 1.8 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.

Justification

The Fort Saskatchewan Path2Zero expansion ("Project") will substantially change the operation of the Dow Fort Saskatchewan Site by increasing the production capacity as well as transitioning our operations to net-zero emissions. After Phase 2 of the Project, Dow's only connection to the Alberta Interconnected Electric System ("AIES") , at Substation 1199S, will require enhanced reliability and redundancy.

Dow will be more reliant on grid power, especially during times of on-site generation outages as Dow does not expect to have excess power generation on-site.

Therefore, interruption in grid power supply may cause generating assets to trip as they balance to support site power demand, which will require the ethylene and polyethylene plants to shed load. Automated load shedding is likely to cause unplanned plant shutdowns.

- Unplanned plant shutdowns have several likely impacts, including disruptions in production processes, safety hazards and environmental concerns.
  - The shutdown of an ethylene cracker would result in significant lost production each day that a unit is offline.
  - Thermal process units will likely have to switch to natural gas which will cause CO2 emissions.
  - There will likely be a large amount of flaring on-site, releasing CO2.
  - Pressure relief valves may be activated, and other automated protocols would be initiated to protect people, equipment, and the environment.
  - Personnel may have to take immediate action to mitigate the effect of such an unplanned event at each of the several facilities on-site.
    - After the FS P2Z expansion is completed, there will be approximately 1,000 people working on-site.

Summary

Given the above justification, Dow requests that two single circuit lines be built to connect the Dow Fort Saskatchewan Site to the AIES to mitigate the risk of a power line failure. Being in a designated industrial zone (the Alberta Industrial Heartland), surrounded by other industrial facilities, Dow believes that this is a reasonable request and should be granted to ensure the continued safe and reliable operation of the site.