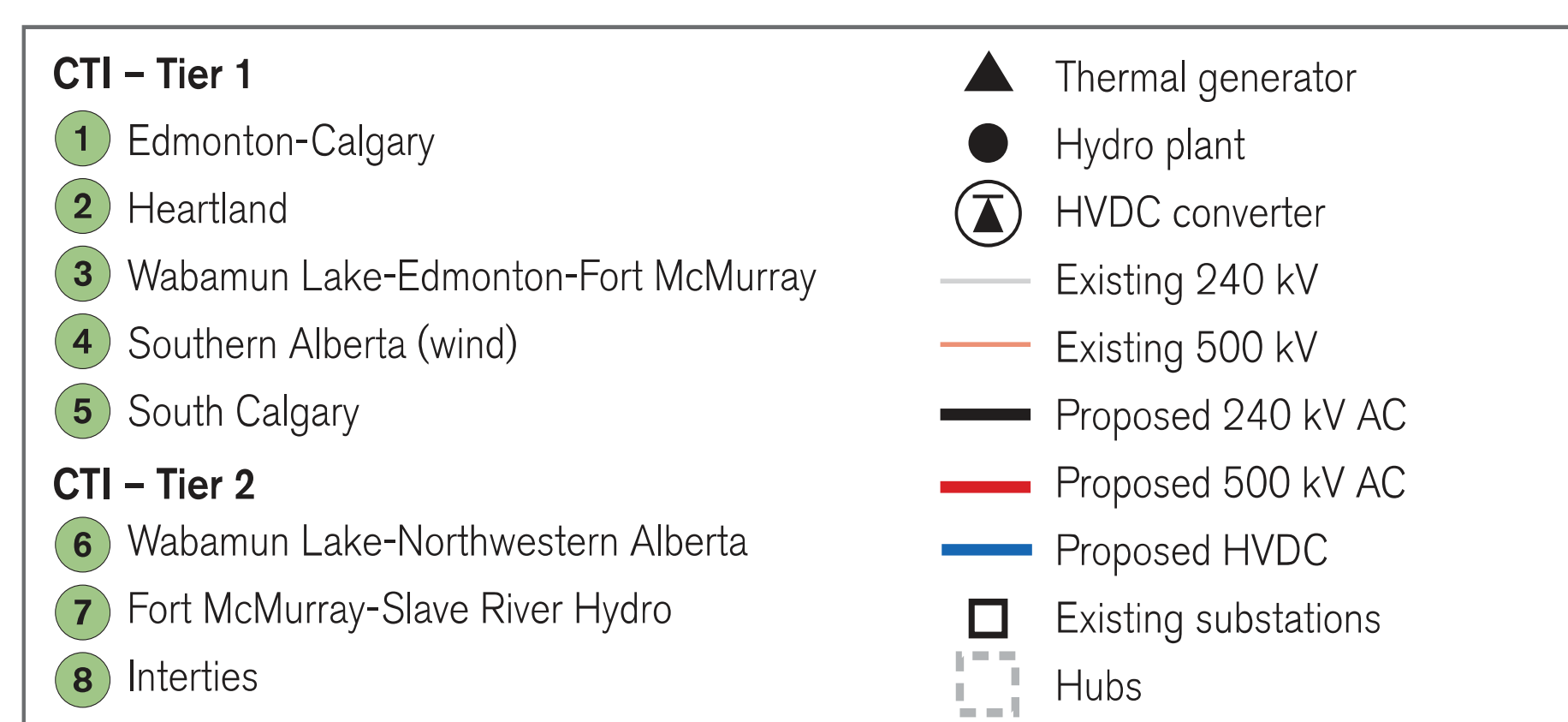


# Critical Transmission Infrastructure (CTI)

## Tier 1 Projects will:

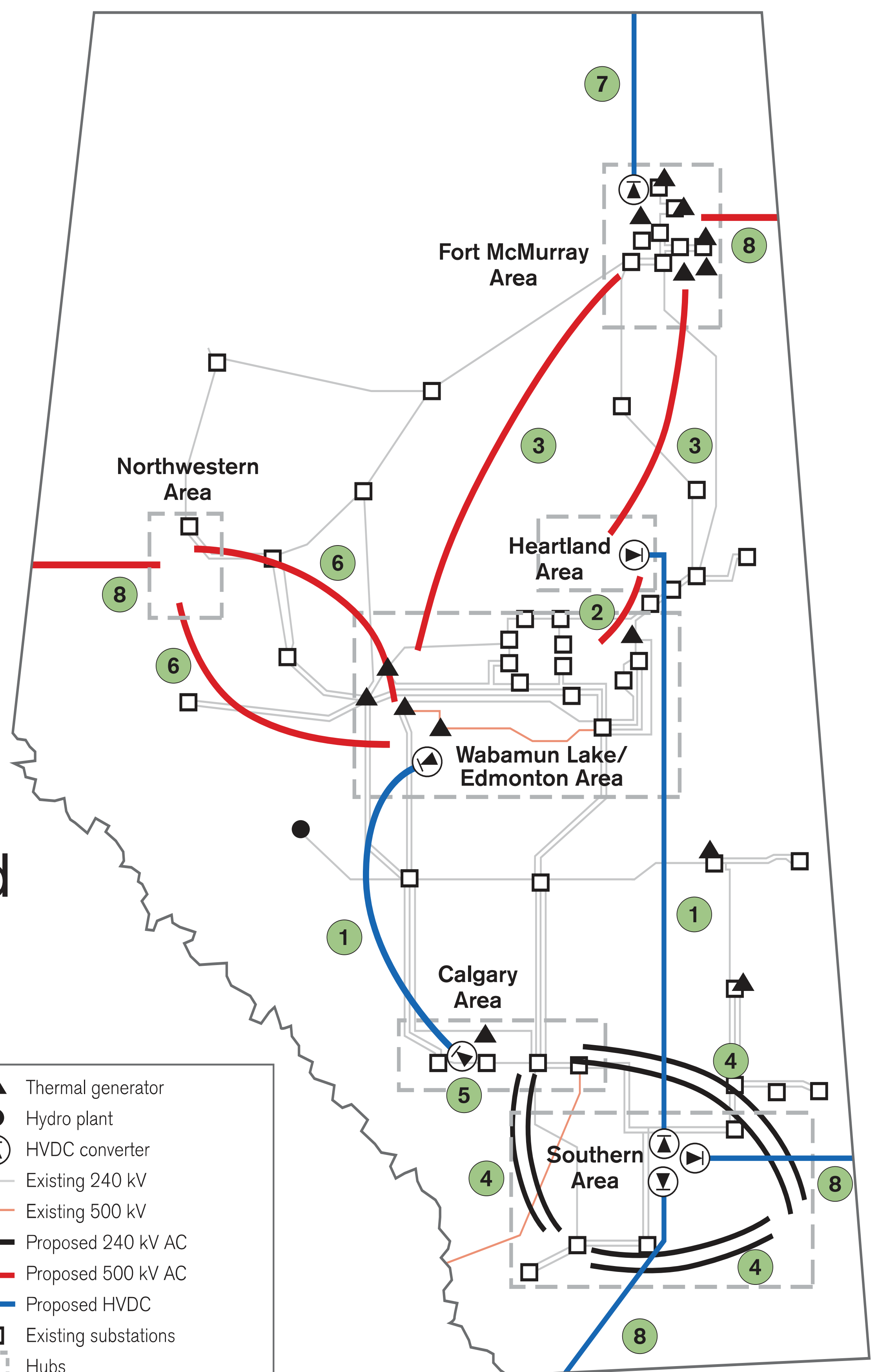
- Create a stronger system between **Edmonton and Calgary**
- Address the power needs of industry in the **Industrial Heartland** around Edmonton and north to **Fort McMurray**
- Add capacity in **southern system** to connect new wind farms
- Upgrade the system in and around the city of **Calgary**

**Tier 2** Projects include critical transmission infrastructure that requires further technical analysis and public consultation.

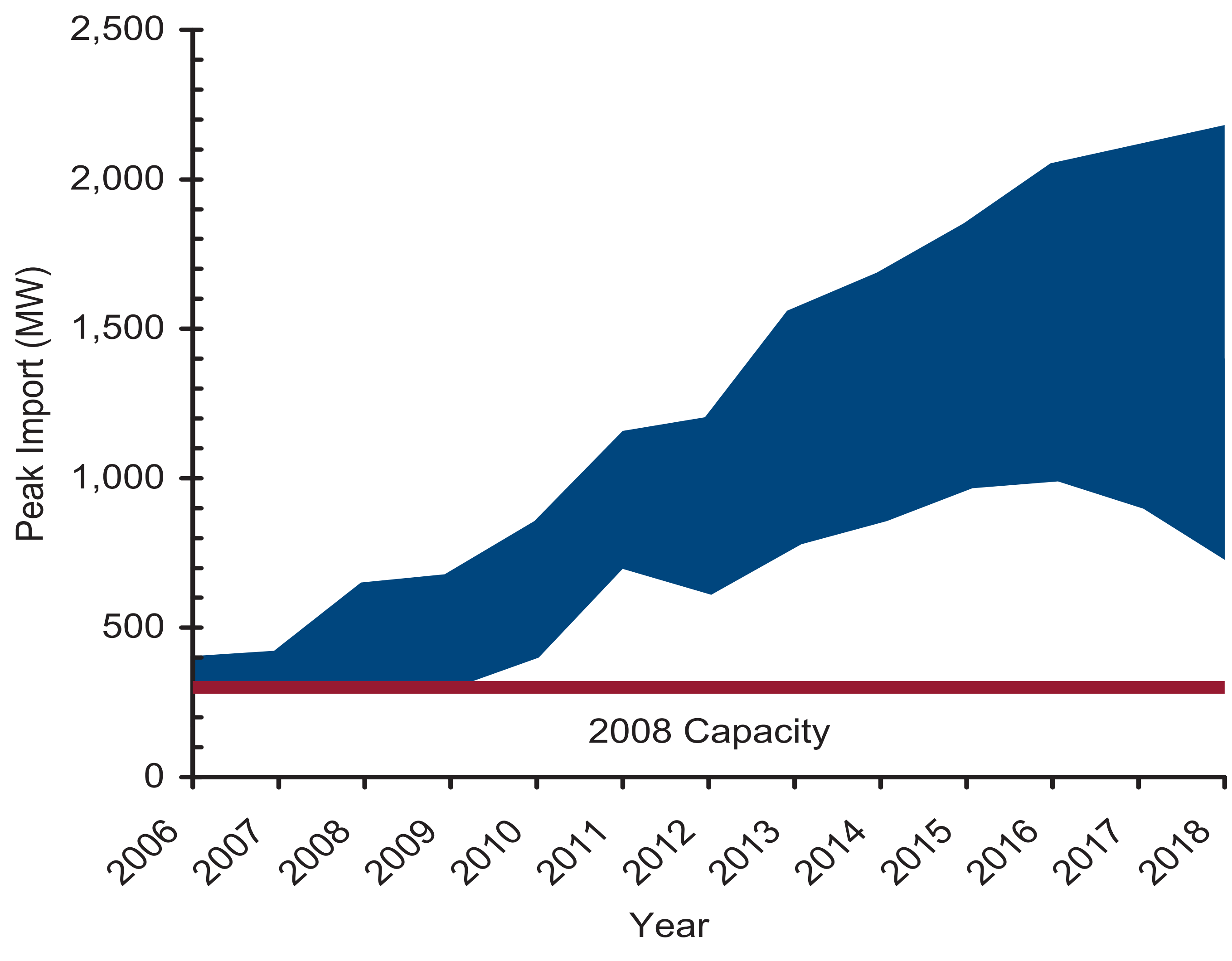


Note: For illustrative purposes only; does not depict actual line routes or substation locations.

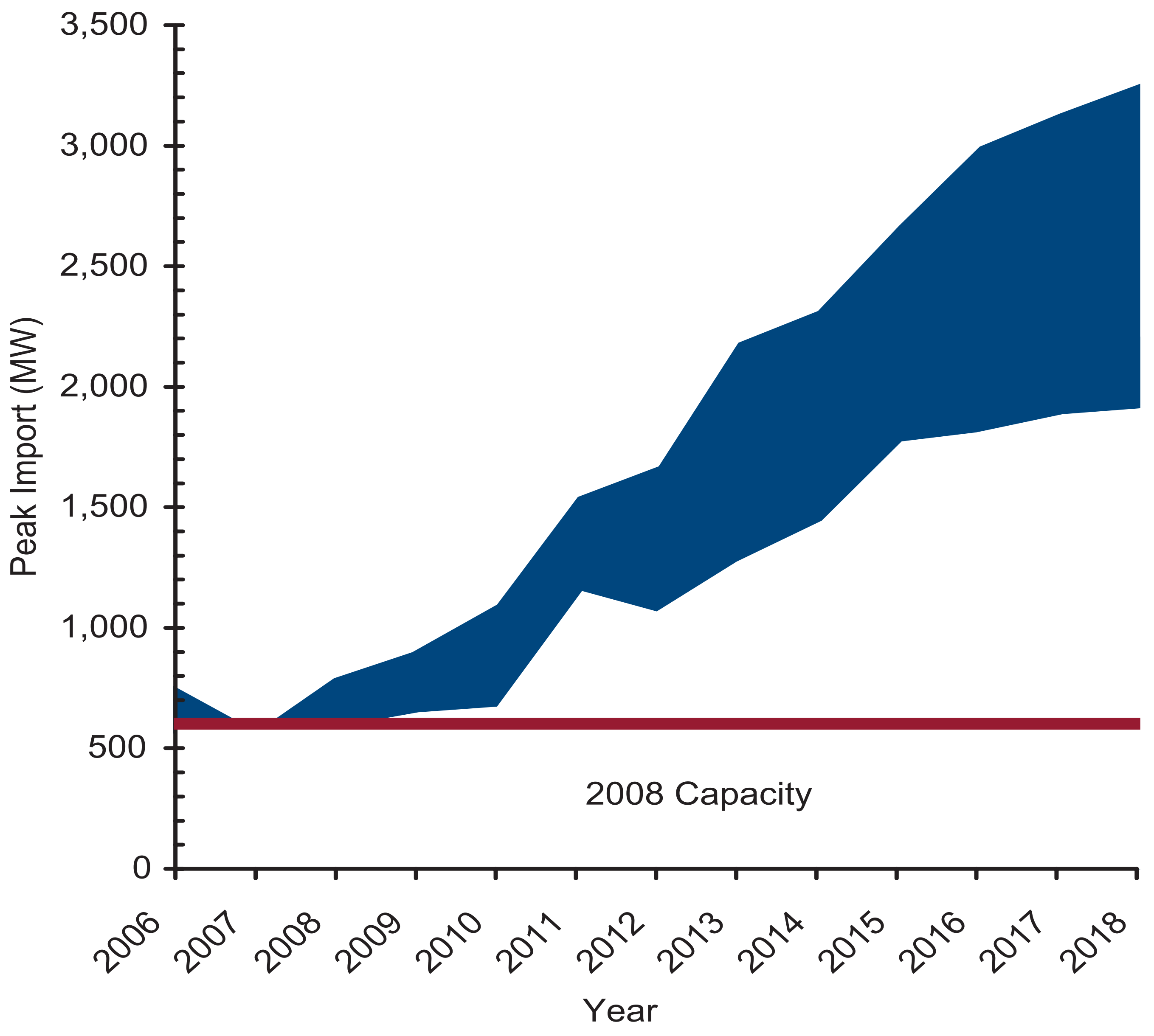
HVDC: high voltage direct current  
kV: kilovolt  
AC: alternating current



## Forecast Range of Required Bulk Transmission Supply Capability Fort McMurray Area



## Forecast Range of Required Bulk Transmission Supply Capability Northeast Region





## 500 kV Underground Transmission Feasibility Study

As a result of stakeholder feedback received through the consultation process, the AESO:

- initiated a study into the feasibility and life cycle cost of 500 kV AC underground technology for all or a portion of the Heartland project
- engaged independent consulting firm Cable Consulting International (CCI) to perform the study
- engaged RETA and the Heartland project team prior to finalizing the scope and extent of the study
- on September 18, 2009, representatives from the AESO, AltaLink and CCI hosted a technical stakeholder session to discuss technical aspects of underground cable technology
- in July 2009, representatives from the AESO, AltaLink and CCI visited Tokyo, Japan and met with leading experts on the use of underground cable technology
- Tokyo has the only comparable underground cable that is similar to the type of cable required for the Heartland project

The 500 kV Underground Transmission Feasibility Study is intended to be released in February 2010.