The proposed Genesee 4 and 5 combined cycle natural gas-fired generation facility is a joint venture project between Capital Power and ENMAX. Its planned location is entirely within the boundaries of the existing Genesee Generating Station, 70 kilometers west of Edmonton. Capital Power will lead the development and construction of the project and subsequently be the operator. The agreements include an eight-year tolling arrangement under which ENMAX will purchase 50% of Capital Power’s share of the facility’s output for eight years. The project has received all regulatory approvals required from the Alberta Utilities Commission (AUC) and Alberta Environment and Parks (AEP, formerly Alberta Environment and Sustainable Resource Development).

Capital Power and ENMAX continue to assess the time frame for starting work on this project. Continuation and timing of the project will be further considered when new generation is required to balance supply and demand. Capital Power submitted an application for a time extension to complete construction of Genesee 4 and 5 to the Alberta Utilities Commission (AUC) and requested that the approved construction completion date of December 31, 2018 be amended to March 31, 2022 for Unit 4 and from December 31, 2018 to March 31, 2023 for Unit 5. The AUC approved this application on December 11, 2018. With the project’s flexible two-phase construction and staged completion, and commercial agreements with flexibility on the timing of the in-service date for the project to be timed to correspond to the need for new power generation in the Alberta market, we are well positioned to complete the project before the end of the decade when nearly 1,000 MW of coal generation is scheduled to retire.

State-of-the-Art Technology
Agreements have been finalized with Mitsubishi Hitachi Power Systems for the supply and maintenance of the world’s most advanced J-series natural gas turbine technology commercially available. The facility will have a nominal generation capacity of 1,060 MW consisting of two 530 MW units. The facility will consist of two one-on-one, single shaft power islands, each incorporating a 501 J-class natural gas turbine, steam turbine, generator and heat recovery steam generator. This technology has a lower heat rate than previous technology resulting in higher efficiency and about a four per cent reduction in CO₂ and NOx emissions compared to the previous generation’s technology. The J-class technology also provides superior flexibility to respond to sudden fluctuations in supply and demand and is the cleanest and most efficient thermal power generating system that complements renewable energy sources, making it well suited for the Alberta power market.

The proposed construction of Genesee 4 and 5 supports Capital Power’s growth, and sustainability initiatives in many ways. The project will be one of Alberta’s most advanced generation facilities and will feature a number of environmental attributes, designed to meet the province’s air emission standards and performance expectations.

Consultation and Engagement
We value and consider local community interests and priorities. We engage government, employees, local communities, investors, shareholders, and Indigenous communities. Our goal for every project, every facility and every initiative, internal and external, is to build, operate, and align with the interests and priorities of those closest to, and most impacted by, our operations.