

PROJECT PROFILE / **COMBINED-CYCLE FACILITY ENHANCEMENTS**

EXPANDING POWER CAPABILITIES FOR SOUTHWESTERN CANADA

Kineticor Resource Corp. needed a coordinated owner's engineer team to support its development and execution of a cleaner, more efficient power generation solution. Working through winter weather constraints, the project team focused on long-term operability and market competitiveness to deliver on schedule.



CREATING RELIABLE POWER WITH EFFICIENT OPERATIONS

With a commitment to working with local Indigenous groups, an integrated team provides an innovative solution to power a region.

PROJECT STATS

CLIENT

Kineticor Resource Corp.

LOCATION

Edson, Alberta

ANTICIPATED COMPLETION

September 2023

900

MW POWER ADDED

2

SINGLE-SHAFT TRAINS

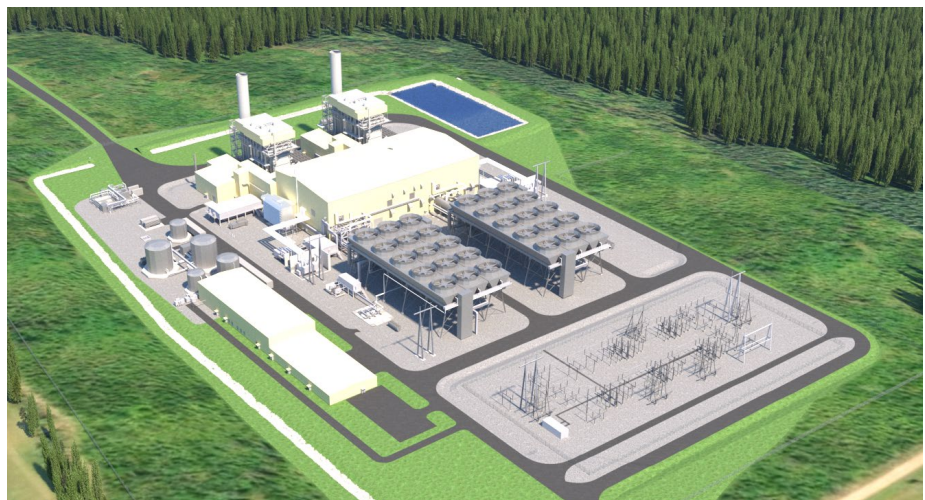
To meet growing energy efficiency demands in the region, Kineticor Resource Corp. established the Cascade Power Project to add a 900-megawatt (MW) combined-cycle facility. Facing potential schedule challenges for construction during cold weather, the client turned to our integrated owner's engineering team for assistance throughout project execution.

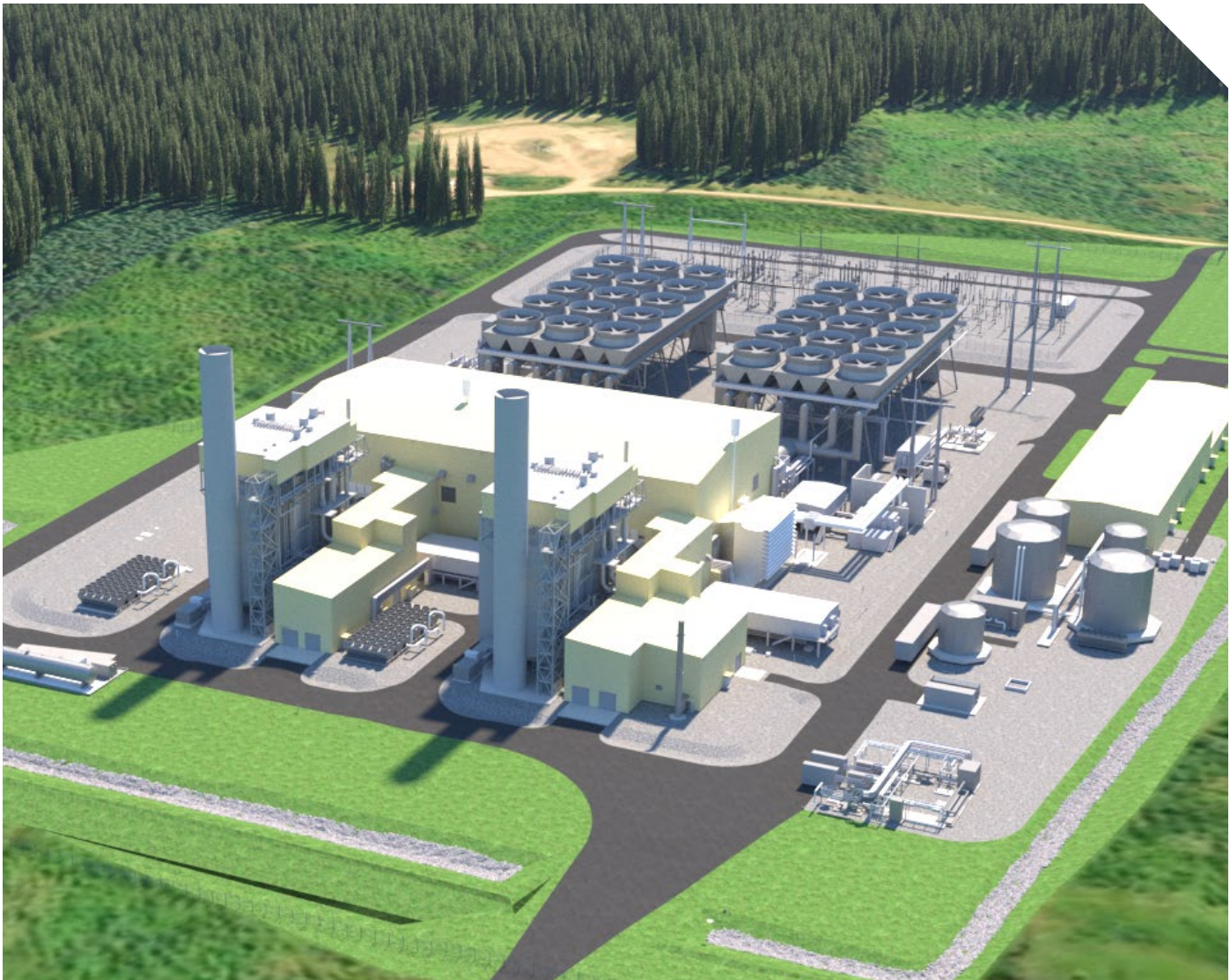
To minimize water usage, the facility is being built using two 1 x 1 single-shaft trains with supplemental duct firing and air-cooled condensers. The facility also includes additional process water recycling and discharge water treatment to reduce the water demand on the region. Power island equipment — including gas turbines, steam turbines, heat recovery steam generators, boiler feedwater pumps,

condensate pumps and a distributed control system — is being supplied by Siemens Energy. Also notable, the facility will utilize SGT6-8000H gas turbines.

Located on Crown land, also known as royal domain, the project faced additional permitting requirements compared to other similar projects. Our firm provided development assistance, permitting assistance, preliminary engineering and owner's engineering services throughout every phase of the combined-cycle generating facility project.

During project development, we helped Kineticor define the project scope, identifying key characteristics. This included the development of conceptual project design documents, such as general arrangement drawings,





electrical one-lines, control system architecture drawings and process flow diagrams. Our team also developed project schedules and assisted Kineticator with natural gas pipeline procurement and the electrical transmission system interconnect. Further, we leveraged our extensive engineer-procure-construct (EPC) experience to develop estimated capital and operational costs to deliver cost-effective options.

After conceptual development and scoping activities were completed, our team prepared the power island equipment specifications and assisted Kineticator with procurement, including bid administration and evaluation.

Kineticator also hired our team to help oversee the execution phase of the project. We developed the technical specifications that formed the EPC proposal package. Additionally, the team assisted in the technical and commercial evaluation of proposals from EPC contractors to help move the project forward financially and into the construction phase.

Our team is making the effort to employ diverse Indigenous firms whenever possible to maintain positive relations with the community and incorporate local knowledge for successful project outcomes. The team has already extensively worked to maintain a close relationship with local Indigenous

groups by hiring various firms to complete project work and participated in a blessing ceremony prior to the start of the project.

The Cascade Power Project reached full notice to proceed in September 2020. Our team continues to provide multidisciplinary, full service owner's engineering support for Kineticator through design and submittal reviews, along with assistance in monitoring the power island and EPC execution through engineering, construction, and startup and commissioning of the facility. The plant is scheduled to achieve commercial operation in September 2023.



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