

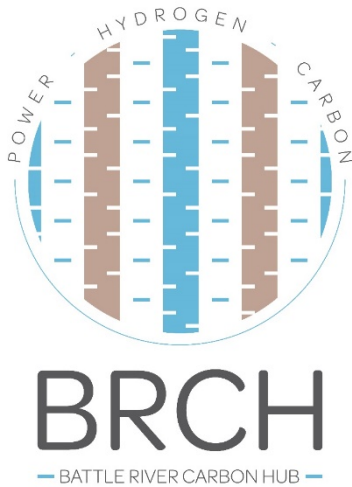
CLEAN RESOURCES

CLEAN TECHNOLOGY

HYDROGEN

FUNDING DETAILS

Battle River Carbon Hub (BRCH) - Hydrogen Burner Test Program



The objective of this project is to de-risk the use of hydrogen as a fuel in former coal-fired boilers by conducting field tests at the Alberta Power (2000) Ltd. (Heartland Generation) Battle River Generating Station (BRGS), located near Forestburg, Alberta.

The Hydrogen Burner Test Program is a critical part of Heartland's Battle River Carbon Hub (BRCH) project that includes a new hydrogen production facility, development of a CCUS hub, and the conversion of Battle River Generating Station to hydrogen fired carbon-free power generation.



RECIPIENT:
Alberta Power
(2000) Ltd.



PARTNERS:
N/A



TOTAL BUDGET:
\$6.19 million



AI HCOE FUNDING:
\$2 million



PROJECT DATES:
MAR 2023 –
NOV 2024



PROJECT TRL:
Start: 6
End: 8

APPLICATION

The project will enable large-scale use of hydrogen as a fuel for electricity generation in Alberta and potentially other areas.



CLEAN RESOURCES

CLEAN TECHNOLOGY

HYDROGEN

PROJECT GOALS

- The proposed test program is the first-of-its-kind and will assess the characteristics of burning 100% hydrogen in a former tangentially fired coal boiler.
- Two phases of small-scale tests will be conducted on the existing boiler (which currently operates using natural gas) to determine the optimal design and operating conditions to ensure safe, reliable and effective operation of the boiler with hydrogen fuel.

BENEFITS TO ALBERTA

- The success of the burner test program will be a major technical advancement in the end use of hydrogen within Alberta's electricity industry and will provide a new pathway to transition from fuel sources such as coal and natural gas.
- Project learnings will be shared and potentially applied in other applications across Canada and the U.S.
- This technical development offers a significant opportunity to extend the operational life of existing electricity generation assets and support rural communities while reducing carbon emissions and promoting the growth of the hydrogen economy.



30 Project Jobs



100 Future Jobs



1 New
Product/Service



2.3 Mt/yr Future
GHGs Reduced

CURRENT STATUS

MAR 2023

The project team is preparing for the first phase of testing burner operation with hydrogen at the Battle River Generating Station.