

CLEAN RESOURCES

CLEAN TECHNOLOGY

HYDROGEN

FUNDING DETAILS

Feasibility Study: Heartland Ammonia and Methanol Complex

Inter Pipeline Ltd. (Inter Pipeline) is partnering with ITOCHU Corporation (ITOCHU) and Gentari Hydrogen Sdn Bhd (a clean energy solutions company founded by PETRONAS) to evaluate the development of a world-scale low-carbon ammonia production facility. Ammonia is an efficient method of transporting hydrogen, a much sought-after energy source that contains no carbon. The feasibility study for this project includes the evaluation of plans to minimize emissions and to permanently sequester CO₂ emitted during operations in underground storage. This opportunity is dependent on a thorough risk assessment to be conducted by Inter Pipeline, ITOCHU and Gentari.



RECIPIENT:
Inter Pipeline Ltd.



PARTNERS:
ITOCHU
Corporation
Gentari Hydrogen
Sdn Bhd



TOTAL BUDGET:
Confidential



AI HCOE FUNDING:
\$2,000,000



PROJECT DATES:
JAN 2023 –
JAN 2025



PROJECT TRL:
Start: 5
End: 5

APPLICATION

The feasibility study will support ammonia production for export to markets in Asia, which are evaluating opportunities to use ammonia as a hydrogen carrier and as a clean fuel for electricity generation and marine shipping. It aims to support international decarbonization and energy security.



PROJECT GOALS

This study intends to provide insights into technology solutions under consideration in the ammonia industry that aim to support international customers' goals of reaching net-zero emissions by 2050.

The goals of the study are:

- Explore the feasibility of developing a low-carbon ammonia production facility in Alberta's Industrial Heartland, near Edmonton
- Support the diversification of Canada's abundant supply of raw resources by converting them to value-added, energy transition products
- Economically reduce plant's emissions by evaluating carbon capture technologies and carbon sequestration opportunities
- Complete a Front-End Engineering and Design Study to support a potential Final Investment Decision

BENEFITS TO ALBERTA

The knowledge generated could:

- Advance the Government of Alberta's *Natural Gas Vision and Strategy* through diversity in petrochemical development
- Build Alberta's hydrogen export supply chain and delivers on key commitments in the Province's *Hydrogen Road Map*
- Position Alberta as a leading supplier of low-carbon fuel to international markets
- Offers the potential to create thousands of jobs through the construction and operation of a world-scale petrochemical facility
- Reduce barriers for energy exports from Alberta and support the expansion of an economic corridor to British Columbia
- Eventual commercial use of ammonia in multiple industries as an alternative energy source or as a hydrogen carrier



100 Future Permanent Jobs



15-20 Project Jobs



1900 kt/yr Future GHGs Reduced



8000 Future Construction Jobs

CURRENT STATUS

FEB 2023

Evaluation activities between project partners are ongoing with emphasis on technology selection, project configuration, and emissions reduction.