

ALBERTA INNOVATES

CLEAN RESOURCES

CLEAN TECHNOLOGY

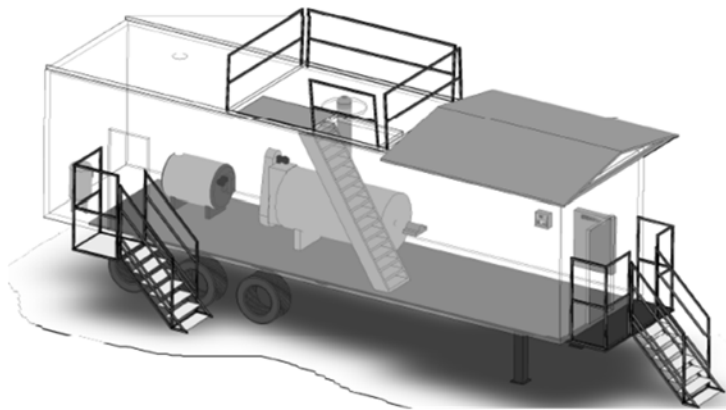
BIOENERGY – RENEWABLE FUELS

Alberta Clean Energy Technology Accelerator (ACETA)

Development of biomass and waste utilization technologies can be impeded by a lack of integration of applied research resources across service provider organizations. The Alberta Clean Energy Technology Accelerator (ACETA) is a unique partnership of academic and government research institutions that will address this need in Alberta's bioenergy innovation ecosystem by delivering a world-class renewable fuels technology virtual hub. ACETA is a cross-institutional collaboration of the City of Edmonton, InnoTech Alberta-Vegreville, the University of Alberta, and CanmetENERGY-Devon. Offerings to technology developers will include turnkey access to key accelerator infrastructure, feedstocks, fuels and waste-derived gases, along with expertise.

Thermal Hydrolysis Processing Mobile Pilot Plant

Put into service November 2020 at InnoTech Alberta - Vegreville



FUNDING DETAILS



RECIPIENT:
City of Edmonton



PARTNERS:
CanmetENERGY
Devon, InnoTech
Alberta, University
of Alberta



TOTAL BUDGET:
\$10.5 Million



AI FUNDING:
\$4 Million



PROJECT DATES:
MAR 2019 -
JAN 2023



PROJECT TRL:
N/A
Enables TRL 4-9

APPLICATION

Support technology innovators in accelerating innovation for solid waste management as well as biomass and biogas generation and conversion, from lab scale to pre-commercial demonstration, to produce value-added energy products. R&D strengths include hydrocarbon processing, upgrading and refining, experimentation and testing, and technology scale-up from the lab- to pilot- and even to demonstration- scale. ACETA supports both technology innovators as well as stakeholders such as municipalities.



PROJECT GOALS

- Enhance and consolidate R&D infrastructure and analytical capabilities at the four organizations. As applicable:
 - Complete feasibility studies, followed by detailed engineering, design and construction package for contracting infrastructure upgrades;
 - Procure or acquire available existing equipment;
 - Complete construction, installation, testing and integration into existing facilities; and
 - Complete commissioning and certification.
- Develop a business plan / value proposition to ensure benefits to technology innovators and their stakeholders, as well as long-term sustainability of ACETA.

BENEFITS TO ALBERTA

- Brings unique capabilities, expertise and experience into a virtual hub, with a collaboration model which allows lab scale research, pilots, and technology demonstrations.
- Help innovators, from academia to private sector entrepreneurs, accelerate technology development and scale-up.
- Offer innovators access to turnkey infrastructure, shared research data, easy and abundant supply of feedstocks and key waste-based gases.
- Offer resources that cover the entire value chain of waste conversion from feedstock supply to its conversion to product; from synthesis, testing and upgrading, to quality control of the final product.
- Facilitate the development of an industry-led renewable and recycled gas sector in the Greater Edmonton Region.
- Position Alberta for success in cleantech and renewable fuels innovation, and thereby contribute to the energy transition for Alberta, and Canada, while supporting achievement of international climate targets.



9 Students Trained



1 Project Jobs



10 Future Jobs



1 New Product/Service



1,500 kt/yr Future GHGs Enabled

CURRENT STATUS

JUN 2021 – In Progress

City of Edmonton: building retrofits and some equipment procurement is in progress; a Business Plan/Value Proposition document is under development.

CanmetENERGY-Devon: Equipment procurement is in progress.

InnoTech Alberta: Thermal hydrolysis unit has been commissioned; Other procurement is in progress.

University of Alberta: Equipment has been acquired and installed; testing is in progress.