NRCan CanmetENERGY Devon

CanmetENERGY Devon is at the forefront of technology innovation to develop energy resources, reduce the carbon intensity of hydrocarbon products, and mitigate impacts on land, water, and the atmosphere. Focus areas include novel technologies for bitumen extraction, upgrading, refining, bioenergy/biofuels, oil spill science, tailings management, and CCUS.

AVAILABLE RESOURCES

Equipment

Analytical capabilities include a comprehensive suite of standard tests and procedures. Examples include:

- Gas chromatography (GC)-based methods:
  - GC with mass spectrometric detection: EIMS and FIMS
  - GC with element-selective detection: AED, SCD, NCD
  - GCxGC with FID, SCD, NCD, and ToFMS detection
- Liquid chromatography
- Vibrational spectroscopy: FTIR, Raman, photoacoustic
- Nuclear magnetic resonance spectroscopy
- Advanced data analysis and chemometrics
- On-site analytical capabilities for oil, gas, water, solids
- Bench- and pilot-scale testing
- Numerical simulation, artificial intelligence, and machine learning capacity for applied projects

COST OF SERVICES

Service costs are evaluated on a project basis and are either fee-for-service or collaborative agreements.

CONTACT INFORMATION

Location: Devon, Alberta
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Website: https://canada.ca/canmetenergydevon

Canada

Natural Resources Canada,
CanmetENERGY - Devon

SERVICES

Revenue generation through internal channels, collaborations with industry, provincial/territorial governments, academic institutions, and international organizations to develop and demonstrate new technologies.

EXPERTISE

Capture

Support the development and testing of carbon capture technologies.

Conversion

Support technology development by understanding the chemistry and properties of biofuel products and biomass intermediates from diverse biogenic sources and conversion technologies.

Utilization

Carbon material characterization for physical and chemical properties.

Storage

Quantify subsurface gas migration associated with CO_2 injection through field-based R&D.

Large technical staff

100 staff including PhD level scientists, applied research technologists and administrative support. Technical and scientific expertise in carbon conversion, CCUS, GHG quantification, materials analysis and numerical simulation.

TRL

Technology development from TRL 2-7.