Oil and Gas Research at UCalgary

UCalgary has a decades-long record of leading oil and gas research and innovation that supports the industry's growth and prosperity.

- **300+ UCalgary scholars from diverse disciplines are active in energy research and innovation,** working towards industry solutions and creating new energy tech to help pave the way for industry to **expand and develop new business opportunities, transforming the energy landscape.** Research includes:
  - A new method for seismicity risk screening via diagnostic fracture injection test analysis.
  - Advancements in petroleum microbiology to aid industry operations, including reservoir souring control, microbial conversion of oil and gas, and oil and gas exploration bioindicators.
  - Enhanced assessment of geochemical processes impacting scaling in oil sands production wells.

UCalgary is translating lab-based tech innovations into practical applications and solutions.

- In collaboration with SAIT, UCalgary **secured a $75M Canada Excellence Research Excellence Fund grant to bring lab-based tech innovations to the field,** targeting improvements in energy efficiency, economics, and environmental impact in areas like heavy oil and bitumen, tight oil and gas, and CO2 conversion.
- **Collaborating with industry leaders** on the Tight Oil Consortium, Consortium for Distributed and Passive Sensing, and Consortium for Research in Elastic Wave Exploration Seismology.

UCalgary contributes to Alberta's global leadership in hydrogen.

- Dr. Ian Gates's research team out of the Schulich School of Engineering developed a large-scale economical method to extract hydrogen from oil sands reservoirs.
- Schulich's Dr. Mayank Sabharwal spearheads research and innovation efforts in hydrogen production and separation, storage, transportation, and use.

UCalgary is the top provider of skilled energy-sector graduates in Canada.

- By way of the Schulich School of Engineering and the Faculty of Science, **UCalgary provides the largest talent pipeline of graduates.**
- The Schulich School of Engineering has been working on a **relaunch of the Oil and Gas Engineering program** which will see a revised, modernized curriculum.
- Schulich also intends to create an **energy-related professional graduate certificate,** to reskill and upskill graduates from any engineering discipline.
- Our Engineering Transfer Program allows SAIT & NAIT graduates to combine an energy-related engineering technology diploma with a UCalgary engineering degree in **as little as two years.**

UCalgary's innovation ecosystem has supported the creation of spin-off companies that are making significant strides in both traditional and next-generation energy needs. Examples:

- PoMELO, a methane emissions management system for the upstream oil and gas sector, and Geogenomics, a provider of microbial surveillance solutions for the energy industry.

UCalgary supports and advances Alberta's oil and gas sector.