

UNIVERSITY OF ALBERTA – FUTURE ENERGY SYSTEMS GEOTHERMAL

\$3.8M in research funding to 2023

5 active geothermal projects

9 Principal Investigators and Co-Investigators

19 students & post-doctoral fellows

UNLOCKING GEOTHERMAL ENERGY

Canada's geoscape has more potential geothermal energy than hydrocarbon energy and we are poised to join the select group of countries that produce sustainable geothermal power. The low carbon footprint and the reliability of the power source for continuous generation 24/7 represent great opportunity, but challenges must be overcome if this resource is to be effectively harnessed. Reservoirs of geothermal energy must be located, characterized, and modeled. The nature of the interaction between rock at reservoir sites and geothermal fluids must be explored, and potential costs of exploiting them must be understood. New engine technologies must be developed to enable generation of power from geothermal heat sources with ultra-low temperature differentials. The potential impacts of this new energy technology on communities and the environment must be considered.

CURRENT RESEARCH PROJECTS

Fluid/Rock Interactions in Canada's Geothermal Systems

Principal Investigator: Jonathan Banks

Imaging, Characterizing and Modelling Canada's Geothermal Resources

Principal Investigator: Martyn Unsworth

Optimizing Geothermal Energy Production and Utilization Technology

Principal Investigator: David Nobes

Socio-economic Roadmaps to Commercial Geothermal Energy Production in Western Canada

Principal Investigator: Lianne Lefsrud

Technical impact assessment of frozen soil on geothermal heat pump technology in western Canada

Principal Investigator: Lexuan Zong

RECENT PUBLICATION

Sedimentary Basin Geothermal Favourability Mapping and Power Generation Assessments

Lead Author: Jonathan Banks

RECENT NEWS STORIES

- [Knowing each other's energy](#)
- [Hybrid geothermal plant being built in Swan Hills](#)
- [Can't stop the engines](#)
- [Pilot project in geothermal energy comes to Alberta](#)
- [Geophysicists go underground to investigate the future for geothermal energy](#)

For the latest information:

futureenergysystems.ca/geothermal



V. 2021.02.08