

Publication of the Yukon Geothermal Opportunities and Applications Report

CanGEA recognizes the immense benefits that geothermal energy could provide for northern and remote communities, which suffer socio-economic hardships. Geothermal heat and power projects could also experience superior resource efficiency due to a favourable temperature difference between the reservoir temperature and ambient temperature (which defines the “useable” energy) as a result of the arctic climate.

At present there is no geothermal power production in Canada and the direct use applications are limited to swimming and balneological applications. We are choosing to conduct outreach (such as the Yukon geothermal maps and report) in our country’s northern territories for two reasons. The first is that the lack of affordable heat and power sources has significantly impacted the region’s socio-economic conditions and current sources of energy have already impacted the vulnerable environmental balance. The second is that the extreme temperature difference will increase the output of geothermal projects in the north.

Geothermal energy is able to provide northern communities with a clean and renewable energy source for the foreseeable future. In addition, geothermal micropower can deliver Canada’s northern communities with a dependable and economical baseload energy capacity. Geothermal energy can replace inefficient and green house gas (GHG) emitting diesel-powered generators that are currently used by many off-grid communities. This allows for a much more cost-effective and sustainable means of energy production, which translates into greater economic viability for northern communities. It will also produce regional employment and contribute to food security as the heat generated from such projects can be used for various direct use applications, such as heating greenhouses in order to produce fruit and vegetables. Heat produced from geothermal projects can be used for a variety of other agriculture and aquaculture purposes.

The primary objective of this outreach is to build capacity among northern Canadian residents so that they can initiate their own geothermal projects contributing to local economies and food security. The larger goal is to develop the knowledge and skills necessary to harness northern Canada’s geothermal resources, which will significantly enhance the economic, environmental and social viability of many remote, northern and aboriginal communities. Notably, this effort will also result in an improvement in such communities’ **“triple bottom line”**. **That is, not only does the use of geothermal energy carry economic benefits, but it also advances the communities’ social and environmental interests.**

The Canadian Geothermal Energy Association (CanGEA) is the collective voice of Canada's geothermal energy industry. As a non-profit industry association, we represent the interests of our member companies with the primary goal of unlocking the country's tremendous geothermal energy potential. Geothermal energy can provide competitively priced, renewable, round-the-clock energy to the Canadian and U.S. markets.