



**KAMLOOPS**  
**EXPLORATION** GROUP

**Thank you to our 2024  
KEG Lecture Series Sponsor**



## The Truth About Geothermal Energy: There is Plenty of Hot Water Beneath Our Feet

---

Geothermal energy has become a buzz word in the renewable energy space, but still has not gotten traction in Canada. There are five electrical project, whereas their should be dozens; there are a few thermal projects, whereas there should be hundreds. Why is Canada so far behind other countries in terms of supporting geothermal projects? An example is the City of Regina. Regina was the site of one of the first drilled geothermal projects in Canada. Back in the winter of 1978-1979 a 2 km deep exploration well was drilled in a parking lot at the University of Regina (U of R). The well successfully proved significant porosity in the Deadwood Formation at the base of the sedimentary sequence. The well was plugged and abandoned several years later, but not before a number of high-quality temperature logs were taken proving a bottom hole temperature of 60°C. Funding for the original well (and several other geothermal projects nation wide) came from the Government of Canada and was sparked by the hydrocarbon “scare” of the 1970’s – which later proved unfounded. Low cost and abundant Natural Gas (NG) soon flooded the market quenching any chance for geothermal projects. Now, some 40 years later the value of the thermal energy beneath our feet is finally being recognized as something that can support Saskatchewan’s progress to a low-carbon economy and energy diversification. But it is not just Regina that could benefit – it is many prairie cities. The City of Regina had to show the value of the geothermal energy over the 70 year lifespan of the aquatic center, so it undertook a pre-feasibility study to investigate supplying green energy for the large aquatic centre in the design phase. A desk-top study was carried out using data from the original U of R well (as well as other wells drilled in the area), and development costing to provide the aquatic center with the 22.7 Million BTUs per hour required for the complex. The cost of sourcing the heat energy from below the Aquatic Center was compared to other “green” energy sources as well as the cost of supplying the required heat using NG for a 70-year period (financial modeling was done for a 50 year period). The geothermal project showed significant cost and decarbonization advantages over its 50 to 70-year lifespan prompting the City to apply for funding to build the complex. The proponents are awaiting notification of funding.