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Putting the “geo” back in  
geothermal energy

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There has recently been a rapid increase in demand for alternative energy due to volatility in energy prices and growing concern for the environment. Low temperature geothermal energy systems, also known as earth energy or geoexchange, are being installed through Canada at an unprecedented rate as a result of this demand. However, there is little regulatory framework surrounding their installation with regard to their long-term impact on the environment. While these systems represent a financial benefit to the property owner and a reduction in greenhouse gas emissions, there are unresolved issues regarding subsurface energy rights and the effect of changes in groundwater temperatures. Monitoring of the long-term performance of these systems and their environmental impacts is rare but in several that have been examined the size of the resulting thermal anomaly has been of concern. These issues should be resolved with input from the geoscience community and present an important opportunity for us to become part of climate change mitigation.