

Geothermal Energy in Iceland, New Zealand, United States, and Canada; Production, Laws and Regulations

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Abstract

Preserving our planet is a priority for future generations. This requires our generation to examine the potential for all alternative energy resources as one significant strategy for slowing global warming. Canada currently produces no electricity from geothermal energy (GE); while the United States, New Zealand and Iceland are world leaders in geothermal electricity production (GEP). In Canada, GEP has the potential to create new jobs combined with working towards meeting our commitments for the Paris Climate Agreement. GEP has a high capacity and a small footprint, making it an attractive renewable alternative energy source. While the potential for GEP in Canada is at least one million times the current energy consumption in Canada, only a fraction of this is accessible. With recent innovations and technological advancements, GEP in Canada is becoming achievable. However, because there is no GEP in Canada, there are no laws or regulations in place to govern GEP. Countries such as the United States, New Zealand and Iceland have well developed laws and regulations for GEP; which could be used by Canadian policy-makers as templates for our future laws and regulations. Lessons learned from these other countries are critical for ensuring that the future fledgling GEP is well regulated. The GSC is actively working towards reopening Canada's Geothermal Energy Program while exploring different options for future pilot projects under the guidance of Steve Grasby. GEP would be particularly beneficial for isolated northern communities to reduce their dependence on imported diesel. This presentation will outline the current policies and regulations in Iceland, New Zealand and the United States and then examine the potential for using these in the Canadian setting.