

Geothermal energy development

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Geothermal energy is an important component of Canada's transition to a low-carbon energy future. It offers numerous advantages as a renewable energy source, including an ability to provide constant, predictable baseload power year-round, with little fluctuation of power output. Additionally, geothermal power facilities typically possess a small land footprint and a low-carbon footprint and consume less water than conventional power plants. There is also potential in Western Canada for its development in utilizing the skillsets and experience of an existing oil and gas workforce and associated technologies, as well as the possibility of repurposing some oil and gas infrastructures.

In this resource created in conjunction with environmental specialists at Matrix Solutions Inc., we outline environmental considerations for geothermal energy development in Western Canada, which are expected to be managed consistently within the existing frameworks that regulate the environmental aspects of oil and gas drilling within Alberta, British Columbia and Saskatchewan. We also discuss how geothermal resource is defined in each of these provinces, as the definitions have an impact on the applicability of each province's legislation.

We also summarize regulatory considerations as they apply within Western Canada, looking at British Columbia's longstanding dedicated regulatory regime for geothermal energy development; Alberta's recently passed legislation to create a dedicated regime that addresses issues of ownership and access, licensing and liability; and the existing oil and gas and mineral resource regulatory regimes that may be used to regulate aspects of the geothermal industry in Saskatchewan, which does not have a dedicated geothermal regulatory regime.

[Download *Emerging technologies in energy: Geothermal* \[PDF\]](#)

Download the full guide relating to geothermal, lithium and blue hydrogen development: [Emerging technologies in energy: Environmental and regulatory considerations for Western Canada](#).