CASCADE INSTITUTE

Executive summary

Ultradeep geothermal represents a transformative opportunity for Canada's energy system. If deployed successfully, it could expand the availability and lower the cost of clean, reliable, baseload electricity, particularly in Western Canada.

While technological advances, financing mechanisms, and policy discussions are progressing, social acceptance remains a critical condition for deployment. This report presents the first empirical assessment of public perceptions and social acceptance of ultradeep geothermal in Alberta and British Columbia, and is based on a survey of 2,603 adults conducted in May and June 2025.

The findings indicate that the public is cautiously optimistic about ultradeep geothermal: it is broadly accepted but not yet well understood. The extent of its future deployment will likely depend on demonstrated performance, perceived public value, credible communication, and trusted social endorsement.

Key findings

1. **Western Canadians prioritize affordability, safety, and reliability.** Across Alberta and British Columbia, affordability, safety for humans, and reliability emerge as the most salient attributes people expect from any energy source. Acceptance of ultradeep geothermal is therefore closely tied to whether it is perceived to perform credibly on these core dimensions. Communication strategies should therefore lead with affordability, safety, and reliability, and provide clear, concrete evidence of geothermal performance on each. Messaging can then be layered for specific audiences by emphasizing secondary considerations where relevant (e.g., low climate impact, job creation, or ecosystem safety), without displacing core benefits. For policymakers, this implies prioritizing transparent cost information, strong safety assurances, and credible reliability signals, while addressing segment-specific concerns to build confidence and accelerate acceptance.

2. **Geothermal energy, especially ultradeep geothermal energy, is not yet well-understood. Changing that requires clear information, credible evidence, and practical examples to build informed public confidence.**
   Geothermal is among the least familiar major energy technologies in both Alberta and British Columbia. One in two respondents report being only slightly or not at all familiar with it. Importantly, however, low familiarity does not translate into opposition. Public opinion remains fluid and responsive to credible information, with many evaluations being formed under conditions of limited information.

3. **Geothermal energy has moderate social acceptance and little opposition, compared with other renewable energy sources.**
   Ultradeep geothermal sits on a middle ground of public opinion, with acceptance neither strong nor weak, and perceptions still forming. Across both provinces, most respondents reported low opposition to geothermal energy relative to alternative options, with respondents in Alberta expressing slightly higher levels of support overall. Under current conditions, social acceptance does not appear to be a binding constraint for the development of ultradeep geothermal projects.

4. **Acceptance increases when people believe ultradeep geothermal can deliver meaningful advantages and when they perceive positive social endorsement from peers, communities, or trusted groups.**
   These social cues act as signals of legitimacy, reducing hesitation toward a technology that remains unfamiliar to many people. Communication should therefore emphasize affordability, safety, and reliability, supported by credible evidence delivered by trusted voices, and showcasing actual projects.

5. **This is a high-leverage moment to consolidate social acceptance.**
   Low familiarity combined with moderate acceptance and limited opposition suggests that public perceptions are still forming. When attitudes toward ultradeep geothermal are not yet anchored to negative or positive perceptions or evaluations, credible information and early engagement can have greater influence than after opinions solidify. Therefore, investing now in public awareness helps shape perceptions before they harden—in either direction.

6. **Scientists and universities are the most trusted messengers.**
   Scientists and universities receive the highest trust levels in both provinces, followed by renewable energy companies and environmental organizations. Government and oil and gas actors receive comparatively lower trust ratings.

Given the strong role of *subjective norms*—perceived social endorsement or opposition from respected voices—in shaping acceptance, trusted institutions and peers play an important role in building social acceptance for geothermal over time. Therefore, engagement approaches that foreground independent scientific expertise and transparent research may carry greater normative influence, particularly when familiarity is low.