

SENATE BILL REPORT

SB 6039

As Reported by Senate Committee On:
Environment, Energy & Technology, January 19, 2024

Title: An act relating to promoting the development of geothermal energy resources.

Brief Description: Promoting the development of geothermal energy resources.

Sponsors: Senators Lovelett, Shewmake, Dhingra, Frame, Hasegawa, Keiser, Lias, Nguyen, Nobles and Saldaña.

Brief History:

Committee Activity: Environment, Energy & Technology: 1/10/24, 1/19/24 [DPS-WM].

Brief Summary of First Substitute Bill

- Directs the Washington Geological Survey to compile and maintain a publicly available comprehensive database of state subsurface geologic information.
- Directs the Department of Natural Resources to update its geothermal resources lease rates.
- Directs the Department of Commerce to establish a competitive geothermal exploration cost-share grant program to incentivize and offset direct costs associated with deep exploratory drilling to identify locations suitable for the development of geothermal energy.
- Directs the Department of Ecology to engage in a collaborative process to identify opportunities and risks associated with the development of geothermal resources.

SENATE COMMITTEE ON ENVIRONMENT, ENERGY & TECHNOLOGY

Majority Report: That Substitute Senate Bill No. 6039 be substituted therefor, and the

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substitute bill do pass and be referred to Committee on Ways & Means.

Signed by Senators Nguyen, Chair; Lovelett, Vice Chair; MacEwen, Ranking Member; Boehnke, Lovick, Short, Trudeau and Wellman.

Staff: Kimberly Cushing (786-7421)

Background: The Department of Natural Resources (DNR), through the appointed State Geologist, is responsible for maintaining the state Geological Survey (Survey). The Survey includes examination of economic products, soils, water resources, and road building materials; and preparation of geological and economic maps. The Survey must assess and map volcanic, seismic, landslide, and tsunami hazards in Washington.

According to DNR, subsurface geology is the study of physical properties and location of rock and soil found below the ground surface.

In 2020, the Legislature updated statewide greenhouse gas (GHG) emissions reduction limits to 45 percent below 1990 levels by 2030, 70 percent below 1990 levels by 2040, and 95 percent below 1990 levels, as well as net zero emissions, by 2050.

Summary of Bill (First Substitute): Washington Geological Survey. The Survey must compile and maintain a comprehensive database of Washington State subsurface geologic information. The searchable database must be publicly available on the Survey's website. The subsurface geologic information must include, but is not limited to: temperature gradient logs, geothermal well records, high resolution surveys, geothermal play fairway studies, three-dimensional reflection seismic surveys, and rock properties databases. The Survey must also:

- coordinate with federal, state, and local agencies to combine existing information;
- acquire, process, analyze new data and update deficient data using the best practicable technology;
- characterize the hazard of induced seismicity for high-potential geothermal play areas, using available data; and
- provide technical assistance on the interpretation and application of subsurface geologic data and hazard assessments.

State-Owned Land Lease Rates. DNR must begin rulemaking to update its geothermal resources lease rates by December 30, 2024, to be competitive with geothermal lease rates adopted by the federal government and other western states. When updating lease rates, the goal is to optimize attracting geothermal exploration and development projects while balancing the state's obligation to trust beneficiaries.

Competitive Geothermal Exploration Cost-Share Grant Program. Subject to the amounts appropriated, the Department of Commerce (Commerce) must establish a competitive geothermal exploration cost-share grant program (grant program) to incentivize and offset direct costs associated with deep exploratory drilling to identify Washington locations

suitable for the development of geothermal energy.

Commerce must consult with the Survey to develop a method and criteria for allocation of grants. The criteria must require:

- proposed exploratory drilling projects to be located in areas of high geothermal potential;
- exploratory drilling projects to be in alignment with equity and statutory environmental justice principles;
- grant applicants to possess or demonstrate partnership with entities with expertise in geothermal exploration; meet high labor standards; demonstrate site control of the site to be explored through ownership interest or a lease agreement; and efforts to engage with the local community to provide information about the potential project;
- grant awards to not be more than one-half of the overall project cost for private applicants and not more than two-thirds of the overall project cost for public and tribal applicants;
- an analysis of any potential for induced seismicity, if any fluid is proposed to be injected, and a plan for managing the risk of induced seismicity; and
- grant awards to seek to broaden the state's knowledge of geothermal resources, with a preference given to high impact projects in favorable geologic settings that have been comparatively underexplored, and all results to be made publicly available and submitted to the Survey to include in its new database.

Commerce must make a reasonable effort to utilize the U.S. Department of Energy's recommendations and guidelines for geothermal demonstration projects in the western states when administering the grant program.

Geothermal Resources Collaborative Process. The Department of Ecology (Ecology), in consultation with Commerce and DNR, must engage in a collaborative process to identify opportunities and risks associated with the development of geothermal resources in the three highest priority locations in the state, beginning November 30, 2024. The locations must be identified by DNR.

As part of the collaborative process, Ecology must engage in meaningful government-to-government consultation with potentially affected federally recognized Indian tribes and seek participation from the Department of Archaeology and Historic Preservation, local governments; state research institutions; the electrical generation, transmission, and distribution sector; and environmental organizations. At the request of tribes, Ecology may include additional participation with independent subject matter expertise. Subject to the amounts appropriated, Ecology must provide grants to these Indian tribes to support their evaluation of the impacts of geothermal electricity development and participation in the collaborative process.

At a minimum, the collaborative process must address the following topics:

- the potential impacts of geothermal resources development on the rights, interests,

- and resources of federally recognized Indian tribes, endangered species in Washington, and overburdened communities;
- the development of factors to identify preferable sites for development of geothermal resources, including proximity to electrical transmission and distribution infrastructure; and
 - the capacity for geothermal resources to help Washington meet its clean energy generation requirements and GHG emissions limits.

Ecology must provide to the Legislature interim reports on the status of the collaborative process by June 30, 2025, and November 30, 2025, and a final report by June 30, 2026.

EFFECT OF CHANGES MADE BY ENVIRONMENT, ENERGY & TECHNOLOGY COMMITTEE (First Substitute):

- Limits the geothermal resources collaborative process to three locations with the highest geothermal potential in Washington, to be identified by DNR.
- Specifies that Ecology must engage in meaningful government-to-government consultation with the tribes by learning from each participating tribe about their communication protocols for consultation.
- Adds the Department of Archaeology and Historic Preservation to the list of groups Ecology must seek participation from in the government-to-government consultation.
- Authorizes Ecology to include additional participation with independent subject matter expertise, at the request of potentially affected federally recognized Indian tribes.

Appropriation: None.

Fiscal Note: Available.

Creates Committee/Commission/Task Force that includes Legislative members: No.

Effective Date: Ninety days after adjournment of session in which bill is passed.

Staff Summary of Public Testimony on Original Bill: *The committee recommended a different version of the bill than what was heard.* PRO: Geothermal energy leads to a sustainable economy, economic development, and energy independence. Geothermal is a proven technology with low to no carbon emissions that has been deployed on a large scale around the world. There is great potential for geothermal energy near Mt. Baker. Funding is critical to provide help for small utilities that want to develop geothermal energy. The bill requires applicant to have control of site prior to receiving grant, but may need to move forward while federal government is considering request for lease of the land. This bill would have benefited Central Washington University decades ago.

It is important to update DNR's mapping; start a conversation about the benefits and

externalities of geothermal energy, build relationships with the tribes, and think about how geothermal could provide baseload energy in various communities. The Survey has conducted periodic surveys funded with one-time federal money. From these studies several areas in Washington with high favorability have been identified and limited subsurface exploration has been conducted. High quality information about subsurface is fundamental to geothermal resource identification and characterization. This information can be expensive to collect and is typically a barrier to geothermal development. Gathering all existing information in a single public location can expand returns on explorations and investments and reduce entry costs.

OTHER: We support clean energy development and consideration of new technology, and appreciate the direction to engage overburdened communities early. The timeline requires collaboration with tribes to identify risks before adequate data is available. Instead of expanding these timelines, the bill could narrow sites for potential government collaboration. Significant quantities of new clean energy generation will be required to meet the state's future energy requirements. Geothermal is currently projected to play limited role in Washington's future resource mix, but if these costs decline more rapidly it could be important compliment to intermittent resources like wind and solar. Consultation has to be defined by the tribe. Include the Department of Archeology & Historic Preservation; their expertise is important to this work. Also include unbiased scientific oversight of the work, not just industry.

Persons Testifying: PRO: Senator Liz Lovelett, Prime Sponsor; Christine Grant, Whatcom PUD; Steve DuPont, Central Washington University; Andrew Villeneuve, Northwest Progressive Institute; Nicolas Garcia, WPUDA.

OTHER: Diane Butorac, WA Dept of Ecology; Casey Hanell, WA Dept of Natural Resources; Nora Hawkins, WA Dept of Commerce; Dawn Vyvyan, Yakama Nation.

Persons Signed In To Testify But Not Testifying: No one.