SENATE BILL REPORT
ESSB 6039

As Amended by House, February 29, 2024

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

Brief Description: Promoting the development of geothermal energy resources.

Sponsors: Senate Committee on Environment, Energy & Technology (originally sponsored by Senators Lovelett, Shewmake, Dhingra, Frame, Hasegawa, Keiser, Liias, Nguyen, Nobles and Saldaña).

Brief History:

Committee Activity: Environment, Energy & Technology: 1/10/24, 1/19/24 [DPS-WM]. Ways & Means: 2/03/24, 2/05/24 [DPS (ENET), DNP].

Floor Activity: Passed Senate: 2/12/24, 49-0.
Passed House: 2/29/24, 96-0.

Brief Summary of Engrossed 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.

This analysis was prepared by non-partisan legislative staff for the use of legislative members in their deliberations. This analysis is not part of the legislation nor does it constitute a statement of legislative intent.

SENATE COMMITTEE ON ENVIRONMENT, ENERGY & TECHNOLOGY

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

SENATE COMMITTEE ON WAYS & MEANS

Majority Report: That Substitute Senate Bill No. 6039 as recommended by Committee on Environment, Energy & Technology be substituted therefor, and the substitute bill do pass.

Signed by Senators Robinson, Chair; Mullet, Vice Chair, Capital; Nguyen, Vice Chair, Operating; Wilson, L., Ranking Member, Operating; Gildon, Assistant Ranking Member, Operating; Rivers, Assistant Ranking Member, Capital; Warnick, Assistant Ranking Member, Capital; Billig, Boehnke, Braun, Conway, Dhingra, Hasegawa, Hunt, Keiser, Muzzall, Pedersen, Randall, Saldaña, Torres, Van De Wege, Wagoner and Wellman.

Minority Report: Do not pass.

Signed by Senator Schoesler, Ranking Member, Capital.

Staff: Jed Herman (786-7346)

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 Engrossed First Substitute Bill: 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 must be available to private, public, and federally recognized tribal applicants; awards must 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 applicants;
- grant applicants to provide an analysis of any potential for induced seismicity and a plan for managing the risk of induced seismicity, and to consult with Ecology and, if applicable, comply with underground injection control standards and groundwater antidegradation standards, if any fluid is proposed to be injected; 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, DNR, the Department of Fish and Wildlife, and the Department of Archaeology and Historic Preservation 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, other state agencies as appropriate, 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 continuity between groundwater and surface water resources; 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 an update on the status of the collaborative process by June 30, 2026, and a final report by June 30, 2027.

The Interagency Clean Energy Siting Coordinating Council (Council) must support Ecology during the collaborative process. The Council must consider the findings of the interim update and final report and make recommendations to the Legislature and Governor on potential actions regarding the development of geothermal energy. The Council must identify key factors for consideration in planning for and siting geothermal facilities, which include geologic suitability, water resource impacts, and proximity to electrical transmission and distribution infrastructure.

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 (Environment, Energy & Technology): *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 Archelogy & Historic Preservation; their expertise is important to this work. Also include unbiased scientific oversight of the work, not just industry.

Persons Testifying (Environment, Energy & Technology): 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 (Environment, Energy & Technology): No one.

Staff Summary of Public Testimony on First Substitute (Ways & Means): PRO: A map of geothermal potential has been provided to the committee. The extent of this capacity highlights an opportunity for the state. This bill would provide important tools to take steps to explore that capacity and understand the extent of our geothermal resources. It also works together with the Nooksack Tribe to explore capacity on tribal lands. High quality information is integral to be able to tap these resources. This information is expensive to collect and constitutes a barrier to entry for geothermal development. Collecting and making this information easily available will further development in this area and highlight future gaps. The changing climate impacts the Nooksack Tribe's treaty rights and tribal lands. The tribe is interested in transitioning into more clean energy sources. Tribal lands have been identified as having a high probability of being able to access geothermal resources. This bill will allow the tribe to add staff capacity to further exploration and development in this area.

OTHER: The Governor's budget did not include funding for this bill. The substitute narrows study from a statewide project to three particular areas which helps to decrease costs.

Persons Testifying (Ways & Means): PRO: Casey Hanell, Department of Natural Resources; RoseMary LaClair, Nooksack Tribe; scott hazlegrove, Whatcom PUD.

OTHER: Tim Gates, WA Dept of Ecology.

Persons Signed In To Testify But Not Testifying (Ways & Means): No one.

EFFECT OF HOUSE AMENDMENT(S):

- Adds tribal governments to the list of entities with which the survey is directed to coordinate for the purpose of compiling existing subsurface geologic information.
- Modifies the goals to be achieved through the adoption of updated geothermal resources lease rates to include not adversely impacting federally reserved tribal rights and resources including, but not limited to, those protected by treaty, executive order, or federal law.
- Modifies the criteria for the location of proposed geothermal exploratory drilling projects to include not adversely impacting the federally reserved tribal rights and resources including, but not limited to, those protected by treaty, executive order, or federal law.
- Expands the scope of grants to be awarded to federally recognized Indian tribes as part of the geothermal resources collaborative process to include grants that provide capacity, in addition to support of their evaluation of geothermal electricity development.
- Requires the geothermal resources collaborative process to identify and provide recommendations on, rather than address, certain topics regarding geothermal resources development.
- Expands the key factors to be addressed by the interagency clean energy siting

coordinating council for the planning and siting of geothermal facilities, to include impacts to the rights of federally recognized Indian tribes.