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SENATE BILL 6350

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State of Washington

65th Legislature

2018 Regular Session

By Senators Brown and Honeyford

1 AN ACT Relating to promoting renewable energy by advancing the  
2 development of geothermal resources; amending RCW 78.60.180,  
3 78.60.130, 78.60.110, 43.157.010, 43.157.020, 43.157.030,  
4 28B.156.005, 28B.156.010, and 28B.156.030; reenacting and amending  
5 RCW 80.50.020; and creating a new section.

6 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

7 NEW SECTION. **Sec. 1.** The legislature finds that the development  
8 of geothermal resources in Washington should be encouraged. By this  
9 act, the legislature intends to advance the development of geothermal  
10 resources by improving policies relating to the publication of data  
11 on geothermal resources, geothermal resources exploration, permitting  
12 processes for geothermal power facilities, and research.

13 **Sec. 2.** RCW 78.60.180 and 1974 ex.s. c 43 s 18 are each amended  
14 to read as follows:

15 (1) The department shall have the authority to conduct or  
16 authorize investigations, research, experiments, and demonstrations,  
17 cooperate with other governmental and private agencies in making  
18 investigations, receive any federal funds, state funds, and other  
19 funds and expend them on research programs concerning geothermal  
20 resources and their potential development within the state, and to

1 collect and disseminate information relating to geothermal resources  
2 in the state(~~(: PROVIDED, That the department shall not construct or~~  
3 ~~operate commercial geothermal facilities))~~).

4 (2) The department shall develop, periodically revise, and  
5 publish an inventory and map of state-owned lands suspected of having  
6 great potential for geothermal resource production.

7 (3) The department may not construct or operate commercial  
8 geothermal facilities.

9 **Sec. 3.** RCW 78.60.130 and 2007 c 338 s 3 are each amended to  
10 read as follows:

11 Every operator who engages in the drilling, redrilling, or  
12 deepening of any well or core hole on state-owned land shall file  
13 with the department a reasonable bond or bonds with good and  
14 sufficient surety, or the equivalent thereof, acceptable to the  
15 department, conditioned on compliance with the provisions of this  
16 chapter and all rules and permit conditions adopted pursuant to this  
17 chapter. This performance bond shall be executed in favor of and  
18 approved by the department.

19 In lieu of a bond filed under this section, the operator may file  
20 with the department a cash deposit, negotiable securities acceptable  
21 to the department, or an assignment of a savings account in a  
22 Washington bank on an assignment form prescribed by the department.  
23 The department, in its discretion, may accept a single surety or  
24 security arrangement covering more than one well or core hole.

25 **Sec. 4.** RCW 78.60.110 and 2013 c 23 s 254 are each amended to  
26 read as follows:

27 (1) The department may authorize the operator to suspend drilling  
28 operations, shut-in a completed well, or remove equipment from a well  
29 for the period stated in the department's written authorization. The  
30 period of suspension may be extended by the department upon the  
31 operator showing good cause for the granting of such extension.

32 (2) If drilling operations are not resumed by the operator, or  
33 the well is not put into production, upon expiration of the  
34 suspension or shut-in permit, an intention to unlawfully abandon  
35 shall be presumed.

36 (3) A well shall also be deemed unlawfully abandoned if, without  
37 written approval from the department, drilling equipment is removed.

1 (4) An unlawful abandonment under this chapter shall be entered  
2 in the department records and written notice thereof shall be mailed  
3 by registered mail both to such operator at his or her last known  
4 address as disclosed by records of the department and to the  
5 operator's surety, if applicable. The department may thereafter  
6 proceed against the operator and his or her surety.

7 **Sec. 5.** RCW 43.157.010 and 2017 c 288 s 2 are each amended to  
8 read as follows:

9 The definitions in this section apply throughout this chapter and  
10 RCW 28A.525.166, 43.21A.350, and 90.58.100, unless the context  
11 requires otherwise:

12 (1) "Applicant" means a person applying to the department for  
13 designation of a development project as a project of statewide  
14 significance.

15 (2) "Aviation biofuels production facility" means a facility  
16 primarily for the processing of nonfossil biogenic feedstocks to  
17 produce aviation fuels that meet the fuel quality technical standards  
18 of the American society for testing materials for aviation fuels and  
19 coproducts.

20 (3) "Department" means the department of commerce.

21 (4) "Manufacturing" shall have the meaning assigned it in RCW  
22 82.62.010.

23 (5)(a) "Project of statewide significance" means:

24 (i) A border crossing project that involves both private and  
25 public investments carried out in conjunction with adjacent states or  
26 provinces;

27 (ii) A development project that will provide a net environmental  
28 benefit;

29 (iii) A development project in furtherance of the  
30 commercialization of innovations;

31 (iv) A private industrial development with private capital  
32 investment in manufacturing or research and development;

33 (v) An aviation biofuels production facility; (~~(e)~~)

34 (vi) A geothermal power facility where the primary purpose is to  
35 produce and sell electricity; or

36 (vii) A project designated by the legislature and codified under  
37 this chapter.

38 (b) To qualify for designation under RCW 43.157.030 as a project  
39 of statewide significance:

1 (i) The project must be completed after January 1, 2009;

2 (ii) The applicant must submit an application to the department  
3 for designation as a project of statewide significance (~~to the~~  
4 ~~department of commerce~~); and

5 (iii) Except for an aviation biofuels production facility or  
6 geothermal power facility, the project must have:

7 (A) In counties with a population less than or equal to twenty  
8 thousand, a capital investment of five million dollars;

9 (B) In counties with a population greater than twenty thousand  
10 but no more than fifty thousand, a capital investment of ten million  
11 dollars;

12 (C) In counties with a population greater than fifty thousand but  
13 no more than one hundred thousand, a capital investment of fifteen  
14 million dollars;

15 (D) In counties with a population greater than one hundred  
16 thousand but no more than two hundred thousand, a capital investment  
17 of twenty million dollars;

18 (E) In counties with a population greater than two hundred  
19 thousand but no more than four hundred thousand, a capital investment  
20 of thirty million dollars;

21 (F) In counties with a population greater than four hundred  
22 thousand but no more than one million, a capital investment of forty  
23 million dollars;

24 (G) In counties with a population greater than one million, a  
25 capital investment of fifty million dollars;

26 (H) In rural counties as defined by RCW 82.14.370, projected  
27 full-time employment positions after completion of construction of  
28 fifty or greater;

29 (I) In counties other than rural counties as defined by RCW  
30 82.14.370, projected full-time employment positions after completion  
31 of construction of one hundred or greater; or

32 (J) Been qualified by the director of the department as a project  
33 of statewide significance either because:

34 (I) The economic circumstances of the county merit the additional  
35 assistance such designation will bring;

36 (II) The impact on a region due to the size and complexity of the  
37 project merits such designation;

38 (III) The project resulted from or is in furtherance of  
39 innovation activities at a public research institution in the state

1 or is in or resulted from innovation activities within an innovation  
2 partnership zone; or

3 (IV) The project will provide a net environmental benefit as  
4 evidenced by plans for design and construction under green building  
5 standards or for the creation of renewable energy technology or  
6 components or under other environmental criteria established by the  
7 director in consultation with the director of the department of  
8 ecology.

9 A project may be qualified under this subsection (5)(b)(iii)(J)  
10 only after consultation on the availability of staff resources of the  
11 office of regulatory assistance.

12 (6) "Research and development" shall have the meaning assigned it  
13 in RCW 82.62.010.

14 **Sec. 6.** RCW 43.157.020 and 2009 c 421 s 3 are each amended to  
15 read as follows:

16 Counties and cities with development projects designated as  
17 projects of statewide significance within their jurisdictions shall  
18 enter into an agreement with the office of regulatory assistance and  
19 the project managers of projects of statewide significance for  
20 expediting the completion of projects of statewide significance. The  
21 agreement shall require:

22 (1) Expedited permit processing for the design and construction  
23 of the project;

24 (2) Expedited environmental review processing;

25 (3) Expedited processing of requests for street, right-of-way, or  
26 easement vacations necessary for the construction of the project;

27 (4) Participation of local officials on the team assembled under  
28 the requirements of RCW 43.157.030(~~(+2)~~)(3)(b); and

29 (5) Such other actions or items as are deemed necessary by the  
30 office of regulatory assistance for the design and construction of  
31 the project.

32 **Sec. 7.** RCW 43.157.030 and 2017 c 288 s 3 are each amended to  
33 read as follows:

34 (1) The department (~~of commerce~~) shall:

35 (a) Develop an application for designation of development  
36 projects as projects of statewide significance. The application must  
37 be accompanied by a letter of approval from the legislative authority  
38 of any jurisdiction that will have the proposed project of statewide

1 significance within its boundaries. No designation of a project as a  
2 project of statewide significance shall be made without such letter  
3 of approval. The letter of approval must state that the jurisdiction  
4 joins in the request for the designation of the project as one of  
5 statewide significance and has or will hire the professional staff  
6 that will be required to expedite the processes necessary to the  
7 completion of a project of statewide significance. The development  
8 project proponents may provide the funding necessary for the  
9 jurisdiction to hire the professional staff that will be required to  
10 so expedite. The application shall contain information regarding the  
11 location of the project, the applicant's average employment in the  
12 state for the prior year, estimated new employment related to the  
13 project, estimated wages of employees related to the project,  
14 estimated time schedules for completion and operation, and other  
15 information required by the department; and

16 (b) Designate a development project as a project of statewide  
17 significance if the department determines:

18 (i) After review of the application under criteria adopted by  
19 rule, the development project will provide significant economic  
20 benefit to the local or state economy, or both, (~~the project is~~  
21 ~~aligned with the state's comprehensive plan for economic development~~  
22 ~~under RCW 43.162.020,~~) and, by its designation, the project will not  
23 prevent equal consideration of all categories of proposals under RCW  
24 43.157.010; and

25 (ii) The development project meets or will meet the requirements  
26 of RCW 43.157.010 regarding designation as a project of statewide  
27 significance.

28 (2) Any project designated by the legislature and codified in  
29 this chapter is not subject to the application requirements set out  
30 in subsection (1) of this section.

31 (3) The office of regulatory assistance shall assign a project  
32 facilitator or coordinator to each project of statewide significance  
33 to:

34 (a) Assist in the scoping and coordinating functions provided for  
35 in chapter 43.42 RCW;

36 (b) Assemble a team of state and local government and private  
37 officials to help meet the planning, permitting, and development  
38 needs of each project, which team shall include those responsible for  
39 planning, permitting and licensing, infrastructure development,

1 workforce development services including higher education,  
2 transportation services, and the provision of utilities; and

3 (c) Work with each team member to expedite their actions in  
4 furtherance of the project.

5 **Sec. 8.** RCW 80.50.020 and 2010 c 152 s 1 are each reenacted and  
6 amended to read as follows:

7 The definitions in this section apply throughout this chapter  
8 unless the context clearly requires otherwise.

9 (1) "Alternative energy resource" includes energy facilities of  
10 the following types: (a) Wind; (b) solar energy; (c) ~~((geothermal~~  
11 ~~energy;—(d))~~ landfill gas; ~~((+e))~~ (d) wave or tidal action; or  
12 ~~((+f))~~ (e) biomass energy based on solid organic fuels from wood,  
13 forest, or field residues, or dedicated energy crops that do not  
14 include wood pieces that have been treated with chemical  
15 preservatives such as creosote, pentachlorophenol, or copper-chrome-  
16 arsenic.

17 (2) "Applicant" means any person who makes application for a site  
18 certification pursuant to the provisions of this chapter.

19 (3) "Application" means any request for approval of a particular  
20 site or sites filed in accordance with the procedures established  
21 pursuant to this chapter, unless the context otherwise requires.

22 (4) "Associated facilities" means storage, transmission,  
23 handling, or other related and supporting facilities connecting an  
24 energy plant with the existing energy supply, processing, or  
25 distribution system, including, but not limited to, communications,  
26 controls, mobilizing or maintenance equipment, instrumentation, and  
27 other types of ancillary transmission equipment, off-line storage or  
28 venting required for efficient operation or safety of the  
29 transmission system and overhead, and surface or subsurface lines of  
30 physical access for the inspection, maintenance, and safe operations  
31 of the transmission facility and new transmission lines constructed  
32 to operate at nominal voltages of at least 115,000 volts to connect a  
33 thermal power plant or alternative energy facilities to the northwest  
34 power grid. However, common carrier railroads or motor vehicles shall  
35 not be included.

36 (5) "Biofuel" ~~((has the same meaning as defined in RCW~~  
37 ~~43.325.010))~~ includes, but is not limited to, biodiesel, ethanol, and  
38 ethanol blend fuels and renewable liquid natural gas or liquid  
39 compressed natural gas made from biogas.

1 (6) "Certification" means a binding agreement between an  
2 applicant and the state which shall embody compliance to the siting  
3 guidelines, in effect as of the date of certification, which have  
4 been adopted pursuant to RCW 80.50.040 as now or hereafter amended as  
5 conditions to be met prior to or concurrent with the construction or  
6 operation of any energy facility.

7 (7) "Construction" means on-site improvements, excluding  
8 exploratory work, which cost in excess of two hundred fifty thousand  
9 dollars.

10 (8) "Council" means the energy facility site evaluation council  
11 created by RCW 80.50.030.

12 (9) "Counsel for the environment" means an assistant attorney  
13 general or a special assistant attorney general who shall represent  
14 the public in accordance with RCW 80.50.080.

15 (10) "Electrical transmission facilities" means electrical power  
16 lines and related equipment.

17 (11) "Energy facility" means an energy plant or transmission  
18 facilities: PROVIDED, That the following are excluded from the  
19 provisions of this chapter:

20 (a) Facilities for the extraction, conversion, transmission or  
21 storage of water, other than water specifically consumed or  
22 discharged by energy production or conversion for energy purposes;  
23 and

24 (b) Facilities operated by and for the armed services for  
25 military purposes or by other federal authority for the national  
26 defense.

27 (12) "Energy plant" means the following facilities together with  
28 their associated facilities:

29 (a) Any nuclear power facility where the primary purpose is to  
30 produce and sell electricity;

31 (b) Any nonnuclear stationary thermal power plant, other than a  
32 geothermal power plant, with generating capacity of three hundred  
33 fifty thousand kilowatts or more, measured using maximum continuous  
34 electric generating capacity, less minimum auxiliary load, at average  
35 ambient temperature and pressure, and floating thermal power plants  
36 of one hundred thousand kilowatts or more suspended on the surface of  
37 water by means of a barge, vessel, or other floating platform;

38 (c) Facilities which will have the capacity to receive liquefied  
39 natural gas in the equivalent of more than one hundred million

1 standard cubic feet of natural gas per day, which has been  
2 transported over marine waters;

3 (d) Facilities which will have the capacity to receive more than  
4 an average of fifty thousand barrels per day of crude or refined  
5 petroleum or liquefied petroleum gas which has been or will be  
6 transported over marine waters, except that the provisions of this  
7 chapter shall not apply to storage facilities unless occasioned by  
8 such new facility construction;

9 (e) Any underground reservoir for receipt and storage of natural  
10 gas as defined in RCW 80.40.010 capable of delivering an average of  
11 more than one hundred million standard cubic feet of natural gas per  
12 day; and

13 (f) Facilities capable of processing more than twenty-five  
14 thousand barrels per day of petroleum or biofuel into refined  
15 products except where such biofuel production is undertaken at  
16 existing industrial facilities.

17 (13) "Independent consultants" means those persons who have no  
18 financial interest in the applicant's proposals and who are retained  
19 by the council to evaluate the applicant's proposals, supporting  
20 studies, or to conduct additional studies.

21 (14) "Land use plan" means a comprehensive plan or land use  
22 element thereof adopted by a unit of local government pursuant to  
23 chapter 35.63, 35A.63, 36.70, or 36.70A RCW, or as otherwise  
24 designated by chapter 325, Laws of 2007.

25 (15) "Person" means an individual, partnership, joint venture,  
26 private or public corporation, association, firm, public service  
27 company, political subdivision, municipal corporation, government  
28 agency, public utility district, or any other entity, public or  
29 private, however organized.

30 (16) "Preapplicant" means a person considering applying for a  
31 site certificate agreement for any transmission facility.

32 (17) "Preapplication process" means the process which is  
33 initiated by written correspondence from the preapplicant to the  
34 council, and includes the process adopted by the council for  
35 consulting with the preapplicant and with cities, towns, and counties  
36 prior to accepting applications for all transmission facilities.

37 (18) "Secretary" means the secretary of the United States  
38 department of energy.

1 (19) "Site" means any proposed or approved location of an energy  
2 facility, alternative energy resource, or electrical transmission  
3 facility.

4 (20) "Thermal power plant" means, for the purpose of  
5 certification, any electrical generating facility using any fuel,  
6 other than geothermal resources, for distribution of electricity by  
7 electric utilities.

8 (21) "Transmission facility" means any of the following together  
9 with their associated facilities:

10 (a) Crude or refined petroleum or liquid petroleum product  
11 transmission pipeline of the following dimensions: A pipeline larger  
12 than six inches minimum inside diameter between valves for the  
13 transmission of these products with a total length of at least  
14 fifteen miles;

15 (b) Natural gas, synthetic fuel gas, or liquefied petroleum gas  
16 transmission pipeline of the following dimensions: A pipeline larger  
17 than fourteen inches minimum inside diameter between valves, for the  
18 transmission of these products, with a total length of at least  
19 fifteen miles for the purpose of delivering gas to a distribution  
20 facility, except an interstate natural gas pipeline regulated by the  
21 United States federal power commission.

22 (22) "Zoning ordinance" means an ordinance of a unit of local  
23 government regulating the use of land and adopted pursuant to chapter  
24 35.63, 35A.63, 36.70, or 36.70A RCW or Article XI of the state  
25 Constitution, or as otherwise designated by chapter 325, Laws of  
26 2007.

27 **Sec. 9.** RCW 28B.156.005 and 2015 3rd sp.s. c 20 s 1 are each  
28 amended to read as follows:

29 The legislature finds that to reach our energy, environmental,  
30 and economic goals, it is important to accelerate the development of  
31 next generation clean energy and transportation technologies in  
32 Washington. Today, a large number of clean and renewable energy  
33 technologies are dependent on rare earth elements and other expensive  
34 and difficult-to-source earth components. These technologies are  
35 critical to reducing carbon emissions, such as wind turbines, solar  
36 panels, and electric and hybrid car batteries.

37 According to a 2012 environmental protection agency report  
38 (EPA/600/R-12/572), no rare earth element mining has been conducted  
39 in the United States since 1995, and a legacy of environmental

1 destruction has been left in countries where rare earth elements are  
2 mined. The same environmental protection agency report notes that  
3 recovering rare earth elements from state-of-the-art recycling  
4 processes is far more efficient than smelting metals from ores,  
5 generates only a fraction of the carbon emissions, and has  
6 significant benefits compared to mining in terms of land use and  
7 hazardous emissions. The environmental protection report stresses the  
8 need for additional research in alternative materials to rare earth  
9 materials as well as recycling innovation.

10 The legislature acknowledges that the people of Washington desire  
11 to leave behind a cleaner planet, and to lead the world in the  
12 research and innovations to make that possible. Setting aggressive,  
13 renewable energy and clean technology standards at home that result  
14 in exporting the environmental harms of improper mineral extraction  
15 to other nations is not an acceptable strategy. Fortunately,  
16 Washington is home to some of the world's leading researchers who  
17 have core competencies in developing material substitutes and  
18 extracting rare earth elements for recycling.

19 Leading research institutions have indicated that a program to  
20 accelerate the development of next generation clean energy and  
21 transportation technologies using earth-abundant materials would fit  
22 within their strategic vision and core mission to increase and  
23 coordinate their efforts with the private industry and implement this  
24 talent and research to work in accelerating the deployment of clean  
25 energy and cleaner transportation solutions. The goal is to develop  
26 materials to use in the manufacturing process that can be reliably  
27 accessed and acquired in environmentally responsible processes. A  
28 joint center established for this purpose can bridge the gap between  
29 institutions, encourage private-public partnerships, and increase the  
30 ability to compete for federal grants.

31 The legislature recognizes the opportunity for Washington to lead  
32 in these areas of research and innovation, fostering true  
33 sustainability environmental stewardship, and providing supply  
34 reliability and resiliency in next generation technologies. Doing so  
35 will contribute to the preservation of national security by  
36 increasing energy independence. Therefore, the legislature intends to  
37 fund research of earth-abundant materials that can substitute  
38 effectively in manufacturing for rare earth elements or other  
39 critical materials, with great potential to increase efficiency or  
40 reduce emissions in the transportation or energy sector, ((and)) to

1 fund research into the recycling of rare earth elements from existing  
2 consumer products, and to fund research of methods and technologies  
3 that will allow for the economical extraction of metals, minerals,  
4 and rare earth elements from underground fluids brought to the  
5 surface by geothermal power plants. The legislature intends to  
6 accomplish this by establishing the joint center for deployment and  
7 research in earth abundant materials, or JCDREAM, to attract academic  
8 talent and research funding to our state, and develop a workforce for  
9 manufacturing next generation earth-abundant technologies.

10 **Sec. 10.** RCW 28B.156.010 and 2015 3rd sp.s. c 20 s 2 are each  
11 amended to read as follows:

12 The joint center for deployment and research in earth-abundant  
13 materials is created to:

14 (1) Establish a transformative program in earth-abundant  
15 materials to accelerate the development of next generation clean  
16 energy and transportation technologies in Washington;

17 (2) Establish a coordinated framework and deploy resources that  
18 can facilitate and promote multi-institution collaborations to drive  
19 research, development, and deployment efforts in the use of earth-  
20 abundant materials for manufactured clean technologies or recycling  
21 of advanced materials used in clean technologies; ~~((and))~~

22 (3) Promote environmentally responsible processes in the areas of  
23 manufacturing and recycling of advanced materials used in clean  
24 technologies; and

25 (4) Promote research of methods and technologies that will allow  
26 for the economical extraction of metals, minerals, and rare earth  
27 elements from underground fluids brought to the surface by geothermal  
28 power plants.

29 **Sec. 11.** RCW 28B.156.030 and 2015 3rd sp.s. c 20 s 4 are each  
30 amended to read as follows:

31 (1)(a) The powers of the joint center for deployment and research  
32 in earth-abundant materials are vested in and shall be exercised by a  
33 board of directors consisting of ten voting members and a chair,  
34 appointed by the governor, who shall not vote, except as provided in  
35 (c) of this subsection.

36 (b) Of the ten voting members, one member must be the dean of  
37 Washington State University, one member must be the dean of the  
38 University of Washington, one member must represent Pacific Northwest

1 National Laboratory, one member must represent an energy institute at  
2 a regional university, one member must represent the community  
3 colleges engaged in training of the next generation workforce in the  
4 relevant areas, one member must represent large industry companies,  
5 one member must represent medium industry companies, one member must  
6 represent small industry companies, one member must have professional  
7 experience in the fields of national security and energy policy, and  
8 one member shall have professional experience in innovation and  
9 development of policy to address environmental challenges.

10 (c) In the event of a tie vote among the voting members, the  
11 chair may vote to break the tie.

12 (d) The terms of the initial members must be staggered.

13 (2) The board shall hire an executive director. The executive  
14 director shall hire such staff as the board deems necessary to  
15 operate the joint center for deployment and research in earth-  
16 abundant materials. Staff support may be provided from among the  
17 cooperating institutions through cooperative agreements to the extent  
18 funds are available. The executive director may enter into  
19 cooperative agreements for programs and research with public and  
20 private organizations including state and nonstate agencies  
21 consistent with policies of the participating institutions.

22 (3) The board shall:

23 (a) Work with the clean technology and transportation industry  
24 associations and firms of all sizes to identify the research areas  
25 that will benefit the intermediate and long-term economic vitality of  
26 Washington's clean technology and transportation industries;

27 (b) Identify entrepreneurial researchers to join or lead research  
28 teams in the research areas specified in (a) of this subsection and  
29 the steps the University of Washington and Washington State  
30 University will take to recruit and retain such researchers;

31 (c) Assist firms to integrate existing technologies into their  
32 operations and align the activities of the joint center for  
33 deployment and research in earth-abundant materials with those of  
34 impact Washington to enhance services available to clean technology  
35 and transportation firms;

36 (d) Develop internships, on-the-job training, research, and other  
37 opportunities and ensure that all undergraduate and graduate students  
38 enrolled in programs for clean technology and earth-abundant research  
39 and deployment-related curriculum have direct experience with the  
40 industry;

1 (e) Assist researchers and firms in safeguarding intellectual  
2 property while advancing industry innovation;

3 (f) Develop and strengthen university-industry relationships  
4 through promotion of faculty collaboration with industry and sponsor  
5 at least one annual symposium focusing on clean energy earth-abundant  
6 research and deployment in the state of Washington;

7 (g) Encourage a full range of projects from small research  
8 projects that meet the specific needs of a smaller company to large  
9 scale, multipartner projects;

10 (h) Develop nonstate support of the center's research activities  
11 through leveraging dollars from federal and private for-profit and  
12 nonprofit sources;

13 (i) Leverage its financial impact through joint support  
14 arrangements on a project-by-project basis as appropriate;

15 (j) Establish mechanisms for soliciting and evaluating proposals  
16 and for making awards and reporting on technological progress,  
17 financial leverage, and other measures of impact;

18 (k) Allocate appropriated seed funds for at least one of the  
19 following purposes:

20 (i) Collaboration on research and product development that would  
21 further the commercialization of renewable energy and battery storage  
22 technologies that use earth-abundant materials in place of critical  
23 materials or rare earth elements;

24 (ii) Collaboration on research for joining dissimilar materials  
25 in a way that minimizes titanium content by employing earth-abundant  
26 materials for advanced manufacturing commercialization;

27 (iii) Collaboration on research and deployment of technologies  
28 and processes that facilitate reclamation and recycling of rare-earth  
29 elements from existing products; ~~((and))~~

30 (iv) Providing assistance to community colleges and trade schools  
31 in program development and equipment for training the skilled  
32 workforce necessary for the successful commercialization and  
33 integration of earth-abundant technologies, as the workforce training  
34 needs are defined by forthcoming deployment opportunities; and

35 (v) Collaboration on research of methods and technologies that  
36 will allow for the economical extraction of metals, minerals, and  
37 rare earth elements from underground fluids brought to the surface by  
38 geothermal power plants;

39 (l)(i) By December 1, 2015, develop an operating plan that  
40 includes the specific processes, methods, or mechanisms the center

1 will use to accomplish each of its duties as set out in this  
2 subsection (3);

3 (ii) The operating plan must also include appropriate performance  
4 metrics to measure total research dollars leveraged, total  
5 researchers involved, total workforce trained, and total number of  
6 products or processes that have progressed to commercialization and  
7 private sector deployment; and

8 (m)(i) Report biennially to the legislature and the governor  
9 about the impact of the center's work on the state's economy and the  
10 development of next generation clean energy and transportation  
11 technologies in Washington using earth-abundant materials. The report  
12 must include performance metrics results, projections of future  
13 impact, indicators of its current impact, and ideas for enhancing  
14 benefits to the state.

15 (ii) The report must be coordinated with the governor's office  
16 and the department of commerce.

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