
HOUSE BILL 2379

State of Washington

66th Legislature

2020 Regular Session

By Representative Smith

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1 AN ACT Relating to inventorying and incentivizing the reduction
2 of the potential emissions from sulfur hexafluoride; amending RCW
3 70.235.020 and 19.405.020; and creating a new section.

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

5 NEW SECTION. **Sec. 1.** The legislature finds and declares that:

6 (1) Since the 1950s, sulfur hexafluoride has been the insulator
7 of choice for electrical equipment installed along the electric grid
8 because of its specific dielectric and arc-quenching properties.
9 However, according to the United States environmental protection
10 agency, sulfur hexafluoride is also an extremely potent, synthetic
11 greenhouse gas that is at least twenty-two thousand eight hundred
12 times more potent than carbon dioxide at trapping heat over one
13 hundred years and can remain in the atmosphere for up to three
14 thousand two hundred years.

15 (2) Chapter 288, Laws of 2019, also known as the Washington clean
16 energy transformation act, establishes that it is the policy of the
17 state to eliminate coal-fired electricity by 2025, transition the
18 state's electricity supply to one hundred percent carbon-neutral by
19 2030, and achieve one hundred percent carbon-free electricity by
20 2045. Section 25, chapter 288, Laws of 2019 establishes a legislative
21 finding that, based on current technology, there will likely need to

1 be upgrades to electricity transmission and distribution
2 infrastructure across the state to meet these specified goals. Such
3 infrastructure upgrades may include upgrades to, or increased
4 deployment of, transformers, switchgear, and other electrical
5 equipment necessary to facilitate the safe and reliable integration
6 of decentralized renewable and nonemitting resources into the
7 electric grid. This electrical equipment is most likely to be
8 insulated using sulfur hexafluoride gas.

9 (3) The department of ecology is required under RCW 70.235.020 to
10 report to the governor and the legislature on the state's greenhouse
11 gas emissions every two years, using 1990 as a baseline and
12 delineated according to major source sector. In addition to its
13 biennial report, the department of ecology maintains a regularly
14 updated greenhouse gas reporting map and database on its internet web
15 site. According to this database, in 2017, Washington's largest
16 reporting emitters of sulfur hexafluoride emitted the equivalent of
17 forty-eight thousand metric tons of carbon dioxide. However, this
18 does not account for the potential emissions represented by the
19 volume of sulfur hexafluoride currently stored in electrical
20 equipment across the state, which can occur through leaks in
21 equipment seals and during equipment manufacturing, installation,
22 servicing, and disposal.

23 (4) Today's electric power grid is a complex network of electric
24 generation facilities, transmission and distribution infrastructure,
25 end-use customers, and customer-generators. As electric utilities
26 across the state deploy more gas-insulated electrical equipment to
27 meet the requirements established by the Washington clean energy
28 transformation act, so the volume of sulfur hexafluoride stored
29 statewide will increase. It is therefore the intent of the
30 legislature to account for the full environmental cost of
31 Washington's clean energy transformation by inventorying and reducing
32 statewide sulfur hexafluoride emissions potential.

33 **Sec. 2.** RCW 70.235.020 and 2008 c 14 s 3 are each amended to
34 read as follows:

35 (1)(a) The state shall limit emissions of greenhouse gases to
36 achieve the following emission reductions for Washington state:

37 (i) By 2020, reduce overall emissions of greenhouse gases in the
38 state to 1990 levels;

1 (ii) By 2035, reduce overall emissions of greenhouse gases in the
2 state to twenty-five percent below 1990 levels;

3 (iii) By 2050, the state will do its part to reach global climate
4 stabilization levels by reducing overall emissions to fifty percent
5 below 1990 levels, or seventy percent below the state's expected
6 emissions that year.

7 (b) By December 1, 2008, the department shall submit a greenhouse
8 gas reduction plan for review and approval to the legislature,
9 describing those actions necessary to achieve the emission reductions
10 in (a) of this subsection by using existing statutory authority and
11 any additional authority granted by the legislature. Actions taken
12 using existing statutory authority may proceed prior to approval of
13 the greenhouse gas reduction plan.

14 (c) Except where explicitly stated otherwise, nothing in chapter
15 14, Laws of 2008 limits any state agency authorities as they existed
16 prior to June 12, 2008.

17 (d) Consistent with this directive, the department shall take the
18 following actions:

19 (i) Develop and implement a system for monitoring and reporting
20 emissions of greenhouse gases as required under RCW 70.94.151; and

21 (ii) Track progress toward meeting the emission reductions
22 established in this subsection, including the results from policies
23 currently in effect that have been previously adopted by the state
24 and policies adopted in the future, and report on that progress.

25 (2) By December 31st of each even-numbered year beginning in
26 2010, the department and the department of (~~community, trade, and~~
27 ~~economic development~~) commerce shall report to the governor and the
28 appropriate committees of the senate and house of representatives the
29 total emissions of greenhouse gases for the preceding two years, and
30 totals in each major source sector. The department shall ensure the
31 reporting rules adopted under RCW 70.94.151 allow it to develop a
32 comprehensive inventory of emissions of greenhouse gases from all
33 significant sectors of the Washington economy.

34 (3) Except for purposes of reporting, emissions of carbon dioxide
35 from industrial combustion of biomass in the form of fuel wood, wood
36 waste, wood by-products, and wood residuals shall not be considered a
37 greenhouse gas as long as the region's silvicultural sequestration
38 capacity is maintained or increased.

39 (4) (a) The report required under subsection (2) of this section
40 must include an assessment of the total volume of sulfur hexafluoride

1 stored in gas-insulated electrical equipment in the state. The report
2 must delineate the total volume of sulfur hexafluoride stored in gas-
3 insulated electrical equipment used for electricity generation,
4 transmission, and distribution. The report must also provide the
5 amount, in metric tons, of potential carbon dioxide equivalent
6 emissions represented by the total volume of sulfur hexafluoride
7 stored in gas-insulated electrical equipment in the state.

8 (b) For the purposes of this subsection, "gas-insulated
9 electrical equipment" means all electrical power system equipment
10 insulated with sulfur hexafluoride gas, including but not limited to
11 switches, stand-alone gas-insulated equipment, and any combination of
12 electrical disconnects, fuses, electrical transmission lines,
13 transformers, or circuit breakers used to isolate gas-insulated
14 electrical power system equipment.

15 **Sec. 3.** RCW 19.405.020 and 2019 c 288 s 2 are each amended to
16 read as follows:

17 The definitions in this section apply throughout this chapter
18 unless the context clearly requires otherwise.

19 (1) "Allocation of electricity" means, for the purposes of
20 setting electricity rates, the costs and benefits associated with the
21 resources used to provide electricity to an electric utility's retail
22 electricity consumers that are located in this state.

23 (2) "Alternative compliance payment" means the payment
24 established in RCW 19.405.090(2).

25 (3) "Attorney general" means the Washington state office of the
26 attorney general.

27 (4) "Auditor" means: (a) The Washington state auditor's office or
28 its designee for utilities under its jurisdiction under this chapter
29 that are consumer-owned utilities; or (b) an independent auditor
30 selected by a utility that is not under the jurisdiction of the state
31 auditor and is not an investor-owned utility.

32 (5) (a) "Biomass energy" includes: (i) Organic by-products of
33 pulping and the wood manufacturing process; (ii) animal manure; (iii)
34 solid organic fuels from wood; (iv) forest or field residues; (v)
35 untreated wooden demolition or construction debris; (vi) food waste
36 and food processing residuals; (vii) liquors derived from algae;
37 (viii) dedicated energy crops; and (ix) yard waste.

38 (b) "Biomass energy" does not include: (i) Wood pieces that have
39 been treated with chemical preservatives such as creosote,

1 pentachlorophenol, or copper-chrome-arsenic; (ii) wood from old
2 growth forests; or (iii) municipal solid waste.

3 (6) "Carbon dioxide equivalent" has the same meaning as defined
4 in RCW 70.235.010.

5 (7) (a) "Coal-fired resource" means a facility that uses coal-
6 fired generating units, or that uses units fired in whole or in part
7 by coal as feedstock, to generate electricity.

8 (b) (i) "Coal-fired resource" does not include an electric
9 generating facility that is included as part of a limited duration
10 wholesale power purchase, not to exceed one month, made by an
11 electric utility for delivery to retail electric customers that are
12 located in this state for which the source of the power is not known
13 at the time of entry into the transaction to procure the electricity.

14 (ii) "Coal-fired resource" does not include an electric
15 generating facility that is subject to an obligation to meet the
16 standards contained in RCW 80.80.040(3)(c).

17 (8) "Commission" means the Washington utilities and
18 transportation commission.

19 (9) "Conservation and efficiency resources" means any reduction
20 in electric power consumption that results from increases in the
21 efficiency of energy use, production, transmission, or distribution.

22 (10) "Consumer-owned utility" means a municipal electric utility
23 formed under Title 35 RCW, a public utility district formed under
24 Title 54 RCW, an irrigation district formed under chapter 87.03 RCW,
25 a cooperative formed under chapter 23.86 RCW, or a mutual corporation
26 or association formed under chapter 24.06 RCW, that is engaged in the
27 business of distributing electricity to more than one retail electric
28 customer in the state.

29 (11) "Demand response" means changes in electric usage by demand-
30 side resources from their normal consumption patterns in response to
31 changes in the price of electricity, or to incentive payments
32 designed to induce lower electricity use, at times of high wholesale
33 market prices or when system reliability is jeopardized. "Demand
34 response" may include measures to increase or decrease electricity
35 production on the customer's side of the meter in response to
36 incentive payments.

37 (12) "Department" means the department of commerce.

38 (13) "Distributed energy resource" means a nonemitting electric
39 generation or renewable resource or program that reduces electric
40 demand, manages the level or timing of electricity consumption, or

1 provides storage, electric energy, capacity, or ancillary services to
2 an electric utility and that is located on the distribution system,
3 any subsystem of the distribution system, or behind the customer
4 meter, including conservation and energy efficiency.

5 (14) "Electric utility" or "utility" means a consumer-owned
6 utility or an investor-owned utility.

7 (15) "Energy assistance" means a program undertaken by a utility
8 to reduce the household energy burden of its customers.

9 (a) Energy assistance includes, but is not limited to,
10 weatherization, conservation and efficiency services, and monetary
11 assistance, such as a grant program or discounts for lower income
12 households, intended to lower a household's energy burden.

13 (b) Energy assistance may include direct customer ownership in
14 distributed energy resources or other strategies if such strategies
15 achieve a reduction in energy burden for the customer above other
16 available conservation and demand-side measures.

17 (16) "Energy assistance need" means the amount of assistance
18 necessary to achieve a level of household energy burden established
19 by the department or commission.

20 (17) "Energy burden" means the share of annual household income
21 used to pay annual home energy bills.

22 (18)(a) "Energy transformation project" means a project or
23 program that: Provides energy-related goods or services, other than
24 the generation of electricity; results in a reduction of fossil fuel
25 consumption and in a reduction of the emission of greenhouse gases
26 attributable to that consumption; and provides benefits to the
27 customers of an electric utility.

28 (b) "Energy transformation project" may include but is not
29 limited to:

30 (i) Home weatherization or other energy efficiency measures,
31 including market transformation for energy efficiency products, in
32 excess of: The target established under RCW 19.285.040(1), if
33 applicable; other state obligations; or other obligations in effect
34 on May 7, 2019;

35 (ii) Support for electrification of the transportation sector
36 including, but not limited to:

37 (A) Equipment on an electric utility's transmission and
38 distribution system to accommodate electric vehicle connections, as
39 well as smart grid systems that enable electronic interaction between

1 the electric utility and charging systems, and facilitate the
2 utilization of vehicle batteries for system needs;

3 (B) Incentives for the sale or purchase of electric vehicles,
4 both battery and fuel cell powered, as authorized under state or
5 federal law;

6 (C) Incentives for the installation of charging equipment for
7 electric vehicles;

8 (D) Incentives for the electrification of vehicle fleets
9 utilizing a battery or fuel cell for electric supply;

10 (E) Incentives to install and operate equipment to produce or
11 distribute renewable hydrogen; and

12 (F) Incentives for renewable hydrogen fueling stations;

13 (iii) Investment in distributed energy resources and grid
14 modernization to facilitate distributed energy resources and improved
15 grid resilience;

16 (iv) Investments in equipment for renewable natural gas
17 processing, conditioning, and production, or equipment or
18 infrastructure used solely for the purpose of delivering renewable
19 natural gas for consumption or distribution;

20 (v) Contributions to self-directed investments in the following
21 measures to serve the sites of large industrial gas and electrical
22 customers: (A) Conservation; (B) new renewable resources; (C) behind-
23 the-meter technology that facilitates demand response cooperation to
24 reduce peak loads; (D) infrastructure to support electrification of
25 transportation needs, including battery and fuel cell
26 electrification; or (E) renewable natural gas processing,
27 conditioning, or production; (~~and~~)

28 (vi) Projects and programs that achieve energy efficiency and
29 emission reductions in the agricultural sector, including bioenergy
30 and renewable natural gas projects; and

31 (vii) Investments in leak detection and repair, equipment
32 refurbishment, new equipment, gas recycling, improved gas handling,
33 and other projects and programs that reduce emissions of sulfur
34 hexafluoride from gas-insulated electrical equipment during the
35 equipment's useful life and when retired from service.

36 (19) "Fossil fuel" means natural gas, petroleum, coal, or any
37 form of solid, liquid, or gaseous fuel derived from such a material.

38 (20) "Governing body" means: The council of a city or town; the
39 commissioners of an irrigation district, municipal electric utility,
40 or public utility district; or the board of directors of an electric

1 cooperative or mutual association that has the authority to set and
2 approve rates.

3 (21) "Greenhouse gas" includes carbon dioxide, methane, nitrous
4 oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and
5 any other gas or gases designated by the department of ecology by
6 rule under RCW 70.235.010.

7 (22) "Greenhouse gas content calculation" means a calculation
8 expressed in carbon dioxide equivalent and made by the department of
9 ecology, in consultation with the department, for the purposes of
10 determining the emissions from the complete combustion or oxidation
11 of fossil fuels and the greenhouse gas emissions in electricity for
12 use in calculating the greenhouse gas emissions content in
13 electricity.

14 (23) "Highly impacted community" means a community designated by
15 the department of health based on cumulative impact analyses in RCW
16 19.405.140 or a community located in census tracts that are fully or
17 partially on "Indian country" as defined in 18 U.S.C. Sec. 1151.

18 (24) "Investor-owned utility" means a company owned by investors
19 that meets the definition of "corporation" in RCW 80.04.010 and is
20 engaged in distributing electricity to more than one retail electric
21 customer in the state.

22 (25) "Low-income" means household incomes as defined by the
23 department or commission, provided that the definition may not exceed
24 the higher of eighty percent of area median household income or two
25 hundred percent of the federal poverty level, adjusted for household
26 size.

27 (26) (a) "Market customer" means a nonresidential retail electric
28 customer of an electric utility that: (i) Purchases electricity from
29 an entity or entities other than the utility with which it is
30 directly interconnected; or (ii) generates electricity to meet one
31 hundred percent of its own needs.

32 (b) An "affected market customer" is a customer of an investor-
33 owned utility who becomes a market customer after May 7, 2019.

34 (27) (a) "Natural gas" means naturally occurring mixtures of
35 hydrocarbon gases and vapors consisting principally of methane,
36 whether in gaseous or liquid form, including methane clathrate.

37 (b) "Natural gas" does not include renewable natural gas or the
38 portion of renewable natural gas when blended into other fuels.

39 (28) (a) "Nonemitting electric generation" means electricity from
40 a generating facility or a resource that provides electric energy,

1 capacity, or ancillary services to an electric utility and that does
2 not emit greenhouse gases as a by-product of energy generation.

3 (b) "Nonemitting electric generation" does not include renewable
4 resources.

5 (29)(a) "Nonpower attributes" means all environmentally related
6 characteristics, exclusive of energy, capacity reliability, and other
7 electrical power service attributes, that are associated with the
8 generation of electricity, including but not limited to the
9 facility's fuel type, geographic location, vintage, qualification as
10 a renewable resource, and avoided emissions of pollutants to the air,
11 soil, or water, and avoided emissions of carbon dioxide and other
12 greenhouse gases.

13 (b) "Nonpower attributes" does not include any aspects, claims,
14 characteristics, and benefits associated with the on-site capture and
15 destruction of methane or other greenhouse gases at a facility
16 through a digester system, landfill gas collection system, or other
17 mechanism, which may be separately marketable as greenhouse gas
18 emission reduction credits, offsets, or similar tradable commodities.
19 However, these separate avoided emissions may not result in or
20 otherwise have the effect of attributing greenhouse gas emissions to
21 the electricity.

22 (30) "Qualified transmission line" means an overhead transmission
23 line that is: (a) Designed to carry a voltage in excess of one
24 hundred thousand volts; (b) owned in whole or in part by an investor-
25 owned utility; and (c) primarily or exclusively used by such an
26 investor-owned utility as of May 7, 2019, to transmit electricity
27 generated by a coal-fired resource.

28 (31) "Renewable energy credit" means a tradable certificate of
29 proof of one megawatt-hour of a renewable resource. The certificate
30 includes all of the nonpower attributes associated with that one
31 megawatt-hour of electricity and the certificate is verified by a
32 renewable energy credit tracking system selected by the department.

33 (32) "Renewable hydrogen" means hydrogen produced using renewable
34 resources both as the source for the hydrogen and the source for the
35 energy input into the production process.

36 (33) "Renewable natural gas" means a gas consisting largely of
37 methane and other hydrocarbons derived from the decomposition of
38 organic material in landfills, wastewater treatment facilities, and
39 anaerobic digesters.

1 (34) "Renewable resource" means: (a) Water; (b) wind; (c) solar
2 energy; (d) geothermal energy; (e) renewable natural gas; (f)
3 renewable hydrogen; (g) wave, ocean, or tidal power; (h) biodiesel
4 fuel that is not derived from crops raised on land cleared from old
5 growth or first growth forests; or (i) biomass energy.

6 (35)(a) "Retail electric customer" means a person or entity that
7 purchases electricity from any electric utility for ultimate
8 consumption and not for resale.

9 (b) "Retail electric customer" does not include, in the case of
10 any electric utility, any person or entity that purchases electricity
11 exclusively from carbon-free and eligible renewable resources, as
12 defined in RCW 19.285.030 as of January 1, 2019, pursuant to a
13 special contract with an investor-owned utility approved by an order
14 of the commission prior to May 7, 2019.

15 (36) "Retail electric load" means the amount of megawatt-hours of
16 electricity delivered in a given calendar year by an electric utility
17 to its Washington retail electric customers. "Retail electric load"
18 does not include:

19 (a) Megawatt-hours delivered from qualifying facilities under the
20 federal public utility regulatory policies act of 1978, P.L. 95-617,
21 in operation prior to May 7, 2019, provided that no entity other than
22 the electric utility can make a claim on delivery of the megawatt-
23 hours from those resources; or

24 (b) Megawatt-hours delivered to an electric utility's system from
25 a renewable resource through a voluntary renewable energy purchase by
26 a retail electric customer of the utility in which the renewable
27 energy credits associated with the megawatt-hours delivered are
28 retired on behalf of the retail electric customer.

29 (37) "Thermal renewable energy credit" means, with respect to a
30 facility that generates electricity using biomass energy that also
31 generates thermal energy for a secondary purpose, a renewable energy
32 credit that is equivalent to three million four hundred twelve
33 thousand British thermal units of energy used for such secondary
34 purpose.

35 (38) "Unbundled renewable energy credit" means a renewable energy
36 credit that is sold, delivered, or purchased separately from
37 electricity. All thermal renewable energy credits are considered
38 unbundled renewable energy credits.

1 (39) "Unspecified electricity" means an electricity source for
2 which the fuel attribute is unknown or has been separated from the
3 energy delivered to retail electric customers.

4 (40) "Vulnerable populations" means communities that experience a
5 disproportionate cumulative risk from environmental burdens due to:

6 (a) Adverse socioeconomic factors, including unemployment, high
7 housing and transportation costs relative to income, access to food
8 and health care, and linguistic isolation; and

9 (b) Sensitivity factors, such as low birth weight and higher
10 rates of hospitalization.

11 (41) "Gas-insulated electrical equipment" means all electrical
12 power system equipment insulated with sulfur hexafluoride gas
13 including, but not limited to, switches, stand-alone gas-insulated
14 equipment, and any combination of electrical disconnects, fuses,
15 electrical transmission lines, transformers, or circuit breakers used
16 to isolate gas-insulated electrical power system equipment.

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