
ENGROSSED SECOND SUBSTITUTE HOUSE BILL 1287

State of Washington

67th Legislature

2021 Regular Session

By House Transportation (originally sponsored by Representatives Ramel, Hackney, Bateman, Fitzgibbon, Berry, Goodman, Santos, Kloba, Macri, Bergquist, Ormsby, and Pollet)

READ FIRST TIME 02/22/21.

1 AN ACT Relating to preparedness for a zero emissions
2 transportation future; amending RCW 19.280.030, 19.27.540, and
3 82.44.200; adding a new section to chapter 47.01 RCW; and creating a
4 new section.

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

6 NEW SECTION. **Sec. 1.** (1) Motor vehicles are a significant
7 source of air pollution, including greenhouse gas emissions, in
8 Washington. The transportation sector accounts for nearly one-half of
9 greenhouse gas emissions in Washington, and on-road vehicle emissions
10 are responsible for the vast majority of the transportation sector
11 emissions.

12 (2) The widespread adoption of zero emissions vehicles is
13 essential to the achievement of the state emissions limits
14 established in RCW 70A.45.020, which, by 2050, requires a reduction
15 of greenhouse gas emissions to 5,000,000 metric tons and the
16 achievement of net zero greenhouse gas emissions. The rapid uptake of
17 zero emissions vehicles is also an essential component of the state
18 energy strategy, which calls for the phase out of vehicles powered by
19 gasoline or diesel by mid-century. To ensure that the necessary
20 infrastructure is in place to facilitate zero emissions vehicle
21 adoption, the state energy strategy calls for the establishment of

1 building codes that require installation of the conduit, wiring, and
2 panel capacity necessary to support electric vehicle charging in new
3 and retrofitted buildings.

4 (3) In 2005, Washington first took action to adopt some of the
5 motor vehicle emissions standards of the state of California, which
6 are more protective of human health and the environment than federal
7 motor vehicle emissions standards. In 2020, the legislature directed
8 the department of ecology to adopt all of California's motor vehicle
9 emissions standards, including California's zero emissions vehicles
10 program.

11 (4) A Washington state transition to a zero emissions
12 transportation future requires accurate forecasting of zero emissions
13 vehicle adoption rates, comprehensive planning for the necessary
14 electric vehicle charging and green hydrogen production
15 infrastructure, including the siting of infrastructure in desirable
16 locations with amenities, such as near convenience stores, gas
17 stations, and other small retailers, and managing the load of
18 charging and green hydrogen production and refueling infrastructure
19 as a dynamic energy service to the electric grid.

20 (5) To ensure that the transition to a zero emissions
21 transportation future proceeds efficiently and conveniently for users
22 and operators of the multimodal transportation system, it is the
23 intent of the legislature to:

24 (a) Require state government to provide resources that facilitate
25 the planning and deployment of electric vehicle charging and
26 refueling infrastructure in a transparent, effective, and equitable
27 manner across the state;

28 (b) Ensure utility resource planning analyzes the impacts on
29 electricity generation and delivery from growing adoption and usage
30 of electric vehicles; and

31 (c) Require state building codes that support the anticipated
32 levels of zero emissions vehicle use that result from the program
33 requirements in chapter 70A.30 RCW and that achieve emissions
34 reductions consistent with RCW 70A.45.020.

35 NEW SECTION. **Sec. 2.** A new section is added to chapter 47.01
36 RCW to read as follows:

37 (1) The department, through the department's public-private
38 partnership office and in consultation with the department of
39 ecology, the department of commerce, and the office of equity, must

1 develop and maintain a publicly available mapping and forecasting
2 tool that provides locations and essential information of charging
3 and refueling infrastructure to support forecasted levels of electric
4 vehicle adoption, travel, and usage across Washington state.

5 (2) (a) The publicly available mapping and forecasting tool must
6 be designed to enable coordinated, effective, efficient, and timely
7 deployment of charging and refueling infrastructure necessary to
8 support statewide and local transportation electrification efforts
9 that result in emissions reductions consistent with RCW 70A.45.020.

10 (b) The tool must:

11 (i) Initially prioritize on-road transportation;

12 (ii) To the greatest extent possible, maintain the latest data;

13 (iii) Model charging and refueling infrastructure that may be
14 used by owners and operators of light, medium, and heavy-duty
15 vehicles; and

16 (iv) Incorporate the department's traffic data for passenger and
17 freight vehicles.

18 (c) The tool must, if feasible:

19 (i) Provide the data necessary to support programs by state
20 agencies that directly or indirectly support transportation
21 electrification efforts;

22 (ii) Evolve over time to support future transportation
23 electrification programs;

24 (iii) Provide data at a scale that supports electric utility
25 planning for the impacts of transportation electrification both
26 systemwide and on specific components of the distribution system; and

27 (iv) Forecast statewide zero emissions vehicle use that would
28 achieve the emissions reductions consistent with RCW 70A.45.020. The
29 department may reference existing zero emissions vehicle use
30 forecasts, such as that established in the state energy strategy.

31 (3) The department, in consultation with the department of
32 commerce, the department of ecology, and the office of equity, may
33 elect to include other transportation charging and refueling
34 infrastructure, such as maritime, public transportation, and aviation
35 in the mapping and forecasting tool.

36 (4) The tool must include, to the extent feasible, the following
37 elements:

38 (a) The amount, type, location, and year of installation for
39 electric vehicle supply equipment that is expected to be necessary to

1 support forecasted electric vehicle penetration and usage within the
2 state;

3 (b) Electric vehicle adoption, usage, technological profiles, and
4 any other characteristics necessary to model future electric vehicle
5 penetration levels and use cases that impact electric vehicle supply
6 equipment needs within the state;

7 (c) The estimated energy and capacity demand based on inputs from
8 (b) of this subsection;

9 (d) Boundaries of political subdivisions including, but not
10 limited to:

11 (i) Retail electricity suppliers;

12 (ii) Public transportation agency boundaries;

13 (iii) Municipalities;

14 (iv) Counties; and

15 (v) Federally recognized tribal governments;

16 (e) Existing and known publicly or privately owned level 2,
17 direct current fast charge, and refueling infrastructure. The
18 department must identify gas stations, convenience stores, and other
19 small retailers that are colocated with existing and known electric
20 vehicle charging infrastructure identified under this subsection;

21 (f) A public interface designed to provide any user the ability
22 to determine the forecasted charging and refueling infrastructure
23 needs within a provided geographic boundary, including those listed
24 under (d) of this subsection; and

25 (g) The ability for all data tracked within the tool to be
26 downloadable or usable within a separate mapping and forecasting
27 tool.

28 (5) The tool must, if feasible, integrate scenarios including:

29 (a) Varying levels of public transportation utilization;

30 (b) Varying levels of active transportation usage, such as biking
31 or walking;

32 (c) Vehicle miles traveled amounts above and below the baseline;

33 (d) Adoption of autonomous and shared mobility services; and

34 (e) Forecasts capturing each utility service area's relative
35 level of zero emissions vehicle use that would achieve each utility
36 service area's relative emissions reductions consistent with RCW
37 70A.45.020.

38 (6) To support highly impacted communities and vulnerable
39 populations disproportionately burdened by transportation-related
40 emissions and to ensure economic and mobility benefits flow to

1 communities that have historically received less investment in
2 infrastructure, the mapping and forecasting tool must integrate
3 population, health, environmental, and socioeconomic data on a census
4 tract basis. The department may use existing data used by other state
5 or federal agencies. The department must consult with the department
6 of health, the office of equity, the department of ecology, and other
7 agencies as necessary in order to ensure the tool properly integrates
8 cumulative impact analyses best practices and to ensure that the tool
9 is developed in coordination with other state government
10 administrative efforts to identify disproportionately impacted
11 communities.

12 (7) The mapping and forecasting tool must, to the extent
13 appropriate, integrate related analyses, such as the department of
14 commerce's state energy strategy, the joint transportation
15 committee's public fleet electrification study, the west coast
16 collaborative's alternative fuel infrastructure corridor coalition
17 report, and other related electric vehicle supply equipment
18 assessments as deemed appropriate. To the extent that the mapping and
19 forecasting tool is used by the department as the basis for the
20 identification of recommended future electric vehicle charging sites,
21 the department must consider recommending sites that are colocated
22 with small retailers, including gas stations and convenience stores,
23 and other amenities.

24 (8) Where appropriate and feasible, the mapping and forecasting
25 tool must incorporate infrastructure located at or near the border in
26 neighboring state and provincial jurisdictions.

27 (9) In designing the mapping and forecasting tool, the department
28 must coordinate with the department of commerce, the department of
29 ecology, the utilities and transportation commission, and other state
30 agencies as needed in order to ensure the mapping and forecasting
31 tool is able to successfully facilitate other state agency programs
32 that involve deployment of electric vehicle supply equipment.

33 (10) The department must conduct a stakeholder process in
34 developing the mapping and forecasting tool to ensure the tool
35 supports the needs of communities, public agencies, and relevant
36 private organizations. The stakeholder process must involve
37 stakeholders, including but not limited to electric utilities, early
38 in the development of the tool.

39 (11) The department may contract with the department of commerce
40 or consultants, or both, to develop and implement all or portions of

1 the mapping and forecasting tool. The department may rely on or, to
2 the extent necessary, contract for privately maintained data
3 sufficient to develop the elements specified in subsection (4) of
4 this section.

5 (12) The definitions in this subsection apply throughout this
6 section unless the context clearly requires otherwise:

7 (a) "Charging infrastructure" means a unit of fueling
8 infrastructure that supplies electric energy for the recharging of
9 battery electric vehicles.

10 (b) "Direct current fast charger" means infrastructure that
11 supplies electricity to battery electric vehicles at capacities no
12 less than 50 kilowatts, typically using 208/408 volt three-phase
13 direct current electricity.

14 (c) "Electric vehicle" means any craft, vessel, automobile,
15 public transportation vehicle, or equipment that transports people or
16 goods and operates, either partially or exclusively, on electrical
17 energy from an off-board source that is stored onboard for motive
18 purpose.

19 (d) "Electric vehicle supply equipment" means charging
20 infrastructure and hydrogen refueling infrastructure.

21 (e) "Level 2 charger" means infrastructure that supplies
22 electricity to battery electric vehicles at 240 volts and equal to or
23 less than 80 amps.

24 (f) "Refueling infrastructure" means a unit of fueling
25 infrastructure that supplies hydrogen for the resupply of hydrogen
26 fuel cell electric vehicles.

27 **Sec. 3.** RCW 19.280.030 and 2019 c 288 s 14 are each amended to
28 read as follows:

29 Each electric utility must develop a plan consistent with this
30 section.

31 (1) Utilities with more than twenty-five thousand customers that
32 are not full requirements customers must develop or update an
33 integrated resource plan by September 1, 2008. At a minimum, progress
34 reports reflecting changing conditions and the progress of the
35 integrated resource plan must be produced every two years thereafter.
36 An updated integrated resource plan must be developed at least every
37 four years subsequent to the 2008 integrated resource plan. The
38 integrated resource plan, at a minimum, must include:

1 (a) A range of forecasts, for at least the next ten years or
2 longer, of projected customer demand which takes into account
3 econometric data and customer usage;

4 (b) An assessment of commercially available conservation and
5 efficiency resources, as informed, as applicable, by the assessment
6 for conservation potential under RCW 19.285.040 for the planning
7 horizon consistent with (a) of this subsection. Such assessment may
8 include, as appropriate, opportunities for development of combined
9 heat and power as an energy and capacity resource, demand response
10 and load management programs, and currently employed and new policies
11 and programs needed to obtain the conservation and efficiency
12 resources;

13 (c) An assessment of commercially available, utility scale
14 renewable and nonrenewable generating technologies including a
15 comparison of the benefits and risks of purchasing power or building
16 new resources;

17 (d) A comparative evaluation of renewable and nonrenewable
18 generating resources, including transmission and distribution
19 delivery costs, and conservation and efficiency resources using
20 "lowest reasonable cost" as a criterion;

21 (e) An assessment of methods, commercially available
22 technologies, or facilities for integrating renewable resources,
23 including but not limited to battery storage and pumped storage, and
24 addressing overgeneration events, if applicable to the utility's
25 resource portfolio;

26 (f) An assessment and ten-year forecast of the availability of
27 regional generation and transmission capacity on which the utility
28 may rely to provide and deliver electricity to its customers;

29 (g) A determination of resource adequacy metrics for the resource
30 plan consistent with the forecasts;

31 (h) A forecast of distributed energy resources that may be
32 installed by the utility's customers and an assessment of their
33 effect on the utility's load and operations;

34 (i) An identification of an appropriate resource adequacy
35 requirement and measurement metric consistent with prudent utility
36 practice in implementing RCW 19.405.030 through 19.405.050;

37 (j) The integration of the demand forecasts, resource
38 evaluations, and resource adequacy requirement into a long-range
39 assessment describing the mix of supply side generating resources and
40 conservation and efficiency resources that will meet current and

1 projected needs, including mitigating overgeneration events and
2 implementing RCW 19.405.030 through 19.405.050, at the lowest
3 reasonable cost and risk to the utility and its customers, while
4 maintaining and protecting the safety, reliable operation, and
5 balancing of its electric system;

6 (k) An assessment, informed by the cumulative impact analysis
7 conducted under RCW 19.405.140, of: Energy and nonenergy benefits and
8 reductions of burdens to vulnerable populations and highly impacted
9 communities; long-term and short-term public health and environmental
10 benefits, costs, and risks; and energy security and risk; ~~((and))~~

11 (l) A ten-year clean energy action plan for implementing RCW
12 19.405.030 through 19.405.050 at the lowest reasonable cost, and at
13 an acceptable resource adequacy standard, that identifies the
14 specific actions to be taken by the utility consistent with the
15 long-range integrated resource plan; and

16 (m) An analysis of how the plan accounts for:

17 (i) Modeled load forecast scenarios that consider the anticipated
18 levels of zero emissions vehicle use in a utility's service area,
19 including anticipated levels of zero emissions vehicle use in the
20 utility's service area provided in section 2 of this act, if
21 feasible;

22 (ii) Analysis, research, findings, recommendations, actions, and
23 any other relevant information found in the electrification of
24 transportation plans submitted under RCW 35.92.450, 54.16.430, and
25 80.28.365; and

26 (iii) Assumed use case forecasts and the associated energy
27 impacts. Electric utilities may, but are not required to, use the
28 forecasts generated by the mapping and forecasting tool created in
29 section 2 of this act. This subsection (l)(m)(iii) applies only to
30 plans due to be filed after September 1, 2023.

31 (2) For an investor-owned utility, the clean energy action plan
32 must: (a) Identify and be informed by the utility's ten-year cost-
33 effective conservation potential assessment as determined under RCW
34 19.285.040, if applicable; (b) establish a resource adequacy
35 requirement; (c) identify the potential cost-effective demand
36 response and load management programs that may be acquired; (d)
37 identify renewable resources, nonemitting electric generation, and
38 distributed energy resources that may be acquired and evaluate how
39 each identified resource may be expected to contribute to meeting the
40 utility's resource adequacy requirement; (e) identify any need to

1 develop new, or expand or upgrade existing, bulk transmission and
2 distribution facilities; and (f) identify the nature and possible
3 extent to which the utility may need to rely on alternative
4 compliance options under RCW 19.405.040(1)(b), if appropriate.

5 (3)(a) An electric utility shall consider the social cost of
6 greenhouse gas emissions, as determined by the commission for
7 investor-owned utilities pursuant to RCW 80.28.405 and the department
8 for consumer-owned utilities, when developing integrated resource
9 plans and clean energy action plans. An electric utility must
10 incorporate the social cost of greenhouse gas emissions as a cost
11 adder when:

12 (i) Evaluating and selecting conservation policies, programs, and
13 targets;

14 (ii) Developing integrated resource plans and clean energy action
15 plans; and

16 (iii) Evaluating and selecting intermediate term and long-term
17 resource options.

18 (b) For the purposes of this subsection (3): (i) Gas consisting
19 largely of methane and other hydrocarbons derived from the
20 decomposition of organic material in landfills, wastewater treatment
21 facilities, and anaerobic digesters must be considered a nonemitting
22 resource; and (ii) qualified biomass energy must be considered a
23 nonemitting resource.

24 (4) To facilitate broad, equitable, and efficient implementation
25 of chapter 288, Laws of 2019, a consumer-owned energy utility may
26 enter into an agreement with a joint operating agency organized under
27 chapter 43.52 RCW or other nonprofit organization to develop and
28 implement a joint clean energy action plan in collaboration with
29 other utilities.

30 (5) All other utilities may elect to develop a full integrated
31 resource plan as set forth in subsection (1) of this section or, at a
32 minimum, shall develop a resource plan that:

33 (a) Estimates loads for the next five and ten years;

34 (b) Enumerates the resources that will be maintained and/or
35 acquired to serve those loads;

36 (c) Explains why the resources in (b) of this subsection were
37 chosen and, if the resources chosen are not: (i) Renewable resources;
38 (ii) methods, commercially available technologies, or facilities for
39 integrating renewable resources, including addressing any

1 overgeneration event; or (iii) conservation and efficiency resources,
2 why such a decision was made; (~~and~~)

3 (d) By December 31, 2020, and in every resource plan thereafter,
4 identifies how the utility plans over a ten-year period to implement
5 RCW 19.405.040 and 19.405.050; and

6 (e) Accounts for:

7 (i) Modeled load forecast scenarios that consider the anticipated
8 levels of zero emissions vehicle use in a utility's service area,
9 including anticipated levels of zero emissions vehicle use in the
10 utility's service area provided in section 2 of this act, if
11 feasible;

12 (ii) Analysis, research, findings, recommendations, actions, and
13 any other relevant information found in the electrification of
14 transportation plans submitted under RCW 35.92.450, 54.16.430, and
15 80.28.365; and

16 (iii) Assumed use case forecasts and the associated energy
17 impacts. Electric utilities may, but are not required to, use the
18 forecasts generated by the mapping and forecasting tool created in
19 section 2 of this act. This subsection (5)(e)(iii) applies only to
20 plans due to be filed after September 1, 2023.

21 (6) Assessments for demand side resources included in an
22 integrated resource plan may include combined heat and power systems
23 as one of the measures in a conservation supply curve. The value of
24 recoverable waste heat resulting from combined heat and power must be
25 reflected in analyses of cost-effectiveness under this subsection.

26 (7) An electric utility that is required to develop a resource
27 plan under this section must complete its initial plan by September
28 1, 2008.

29 (8) Plans developed under this section must be updated on a
30 regular basis, on intervals approved by the commission or the
31 department, or at a minimum on intervals of two years.

32 (9) Plans shall not be a basis to bring legal action against
33 electric utilities.

34 (10)(a) To maximize transparency, the commission, for investor-
35 owned utilities, or the governing body, for consumer-owned utilities,
36 may require an electric utility to make the utility's data input
37 files available in a native format. Each electric utility shall
38 publish its final plan either as part of an annual report or as a
39 separate document available to the public. The report may be in an
40 electronic form.

1 (b) Nothing in this subsection limits the protection of records
2 containing commercial information under RCW 80.04.095.

3 (11) By December 31, 2021, the department and the commission must
4 adopt rules establishing the requirements for incorporating the
5 cumulative impact analysis developed under RCW 19.405.140 into the
6 criteria for developing clean energy action plans under this section.

7 **Sec. 4.** RCW 19.27.540 and 2019 c 285 s 18 are each amended to
8 read as follows:

9 (1) The building code council shall adopt rules for electric
10 vehicle infrastructure requirements. Rules adopted by the state
11 building code council must consider applicable national and
12 international standards and be consistent with rules adopted under
13 RCW 19.28.281.

14 (2)(a) Except as provided in (b) of this subsection, the rules
15 adopted under this section must require electric vehicle charging
16 capability at all new buildings that provide on-site parking. Where
17 parking is provided, the greater of one parking space or ten percent
18 of parking spaces, rounded to the next whole number, must be provided
19 with wiring or raceway sized to accommodate 208/240 V 40-amp or
20 equivalent electric vehicle charging. Electrical rooms serving
21 buildings with on-site parking must be sized to accommodate the
22 potential for electrical equipment and distribution required to serve
23 a minimum of twenty percent of the total parking spaces with 208/240
24 V 40-amp or equivalent electric vehicle charging. Load management
25 infrastructure may be used to adjust the size and capacity of the
26 required building electric service equipment and circuits on the
27 customer facilities, as well as electric utility-owned
28 infrastructure, as allowed by applicable local and national
29 electrical code. For accessible parking spaces, the greater of one
30 parking space or ten percent of accessible parking spaces, rounded to
31 the next whole number, must be provided with electric vehicle
32 charging infrastructure that may also serve adjacent parking spaces
33 not designated as accessible parking.

34 (b) For occupancies classified as assembly, education, or
35 mercantile, the requirements of this section apply only to employee
36 parking spaces. The requirements of this section do not apply to
37 occupancies classified as residential R-3, utility, or miscellaneous.

38 (c) The required rules required under this subsection must be
39 implemented by July 1, 2021.

1 (3) (a) The rules adopted under this section must exceed the
2 specific minimum requirements established under subsection (2) of
3 this section for all types of residential and commercial buildings to
4 the extent necessary to support the anticipated levels of zero
5 emissions vehicle use that result from the zero emissions vehicle
6 program requirements in chapter 70A.30 RCW and that result in
7 emissions reductions consistent with RCW 70A.45.020.

8 (b) The rules required under this subsection must be implemented
9 by July 1, 2024, and may be periodically updated thereafter.

10 **Sec. 5.** RCW 82.44.200 and 2019 c 287 s 15 are each amended to
11 read as follows:

12 The electric vehicle account is created in the transportation
13 infrastructure account. Proceeds from the principal and interest
14 payments made on loans from the account must be deposited into the
15 account. Expenditures from the account may be used only for the
16 purposes specified in RCW 47.04.350, 82.08.9999, and 82.12.9999, and
17 the support of other transportation electrification and alternative
18 fuel related purposes, including section 2 of this act. Moneys in the
19 account may be spent only after appropriation.

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