

Proposed Substitute House Bill 1287

By Representative Ramel

Original Bill: Concerning preparedness for a zero emissions transportation future.

Proposed Substitute (H-0785.1) compared to the House Bill 1287 (H-0411.1):

- Requires the Department of Commerce infrastructure forecasting tool to provide data at a scale that supports electric utility planning for both system-wide impacts and impacts on specific distribution system components.
- Specifies that the Department of Commerce infrastructure forecasting tool must incorporate Department of Transportation passenger and freight vehicle data.
- Establishes a definition of "green hydrogen" that derives from Clean Energy Transformation Act-compliant electricity, and directs the Department of Commerce tool to distinguish Green Hydrogen infrastructure from other hydrogen fueling infrastructure, if possible.
- Requires the Department of Commerce's stakeholder process to involve stakeholders, including electric utilities, early in the development of the infrastructure tool.
- Requires electric utilities in their resource plans and integrated resource plans to support and account for load forecast scenarios that consider anticipated levels of zero-emission vehicle use in a utility's service area.
- Clarifies that utility resource plans must support and account for assumed use case forecasts and associated energy impacts, rather than 'relevant infrastructure.'
- Clarifies that utility resource plans filed after September 1, 2023, may, but are not required to, use the forecasts generated by the Department of Commerce's infrastructure tool.
- Clarifies that the State Building Code Council rules that must be implemented by July 1, 2024, may also be periodically updated after 2024.
- Amends the intent section to reference a goal of siting electric vehicle supply infrastructure in desirable locations with amenities, such as near small retailers.

Committee: House Environment & Energy Committee
Staff: Jacob Lipson (786-7196), Office of Program Research
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BILL REQUEST - CODE REVISER'S OFFICE

BILL REQ. #: H-0785.1/21

ATTY/TYPIST: ML:jlb

BRIEF DESCRIPTION: Concerning preparedness for a zero emissions transportation future.

1 AN ACT Relating to preparedness for a zero emissions
2 transportation future; amending RCW 19.280.030 and 19.27.540; adding
3 a new section to chapter 43.330 RCW; and creating a new section.

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

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

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

1 panel capacity necessary to support electric vehicle charging in new
2 and retrofitted buildings.

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

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

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

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

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

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

34 NEW SECTION. **Sec. 2.** A new section is added to chapter 43.330
35 RCW to read as follows:

36 (1) The department, in consultation with the department of
37 ecology, the department of transportation, and the office of equity
38 must develop and maintain a publicly available mapping and
39 forecasting tool that provides locations and essential information of

1 charging and refueling infrastructure to support forecasted levels of
2 electric vehicle adoption, travel, and usage across Washington state.

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

8 (b) The tool must:

9 (i) Initially prioritize on-road transportation;

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

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

14 (iv) Incorporate department of transportation traffic data for
15 passenger and freight vehicles.

16 (c) The tool must, if feasible:

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

20 (ii) Evolve over time to support future transportation
21 electrification programs; and

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

25 (3) The department, in consultation with the department of
26 transportation, the department of ecology, and the office of equity,
27 may elect to include other transportation charging and refueling
28 infrastructure, such as maritime, public transportation, and aviation
29 in the mapping and forecasting tool.

30 (4) The tool must include, to the extent feasible, the following
31 elements:

32 (a) The amount, type, location, and year of installation for
33 electric vehicle supply equipment that is expected to be necessary to
34 support forecasted electric vehicle penetration and usage within the
35 state;

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

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

3 (d) Boundaries of political subdivisions including, but not
4 limited to:

5 (i) Retail electricity suppliers;
6 (ii) Public transportation agency boundaries;
7 (iii) Municipalities;
8 (iv) Counties; and
9 (v) Federally recognized tribal governments;

10 (e) Existing and known publicly or privately owned level 2,
11 direct current fast charge, and refueling infrastructure. The
12 identification of refueling infrastructure must, if possible,
13 distinguish refueling infrastructure that supplies green hydrogen
14 from other hydrogen refueling infrastructure;

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

19 (g) The ability for all data tracked within the tool to be
20 downloadable or usable within a separate mapping and forecasting
21 tool.

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

23 (a) Varying levels of public transportation utilization;
24 (b) Varying levels of active transportation usage, such as biking
25 or walking;
26 (c) Vehicle miles traveled amounts above and below the baseline;
27 and
28 (d) Adoption of autonomous and shared mobility services.

29 (6) To support highly impacted communities and vulnerable
30 populations disproportionately burdened by transportation-related
31 emissions and to ensure economic and mobility benefits flow to
32 communities that have historically received less investment in
33 infrastructure, the mapping and forecasting tool must integrate
34 population, health, environmental, and socioeconomic data on a census
35 tract basis. The department may use existing data used by other state
36 or federal agencies. The department must consult with the department
37 of health, the office of equity, the department of ecology, and other
38 agencies as necessary in order to ensure the tool properly integrates
39 cumulative impact analyses best practices and to ensure that the tool
40 is developed in coordination with other state government

1 administrative efforts to identify disproportionately impacted
2 communities.

3 (7) The mapping and forecasting tool must, to the extent
4 appropriate, integrate related analyses, such as the department's
5 state energy strategy, the joint transportation committee's public
6 fleet electrification study, the west coast collaborative's
7 alternative fuel infrastructure corridor coalition report, and other
8 related electric vehicle supply equipment assessments as deemed
9 appropriate.

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

13 (9) In designing the mapping and forecasting tool, the department
14 must coordinate with the department of transportation, the department
15 of ecology, the utilities and transportation commission, and other
16 state agencies as needed in order to ensure the mapping and
17 forecasting tool is able to successfully facilitate other state
18 agency programs that involve deployment of electric vehicle supply
19 equipment.

20 (10) The department must conduct a stakeholder process in
21 developing the mapping and forecasting tool to ensure the tool
22 supports the needs of communities, public agencies, and relevant
23 private organizations. The stakeholder process must involve
24 stakeholders, including but not limited to electric utilities, early
25 in the development of the tool.

26 (11) The department may contract with consultants to develop and
27 implement all or portions of the mapping and forecasting tool. The
28 department may rely on or, to the extent necessary, contract for
29 privately-maintained data sufficient to develop the elements
30 specified in subsection (4) of this section.

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

33 (a) "Charging infrastructure" means a unit of fueling
34 infrastructure that supplies electric energy for the recharging of
35 battery electric vehicles.

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

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

6 (d) "Electric vehicle supply equipment" means charging
7 infrastructure and hydrogen refueling infrastructure.

8 (e)(i) "Green hydrogen" means hydrogen produced using: (A)
9 Electricity that meets the carbon neutrality standard of RCW
10 19.405.040 by 2030 and carbon-free standard of RCW 19.405.040 by 2045
11 for the energy input into the production process; and (B) renewable
12 resources for the source of the hydrogen.

13 (ii) "Green hydrogen" includes renewable hydrogen as defined in
14 RCW 19.405.020.

15 (f) "Level 2 charger" means infrastructure that supplies
16 electricity to battery electric vehicles at 240 volts and equal to or
17 less than 80 amps.

18 (g) "Refueling infrastructure" means a unit of fueling
19 infrastructure that supplies hydrogen for the resupply of hydrogen
20 fuel cell electric vehicles.

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

23 Each electric utility must develop a plan consistent with this
24 section.

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

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

36 (b) An assessment of commercially available conservation and
37 efficiency resources, as informed, as applicable, by the assessment
38 for conservation potential under RCW 19.285.040 for the planning
39 horizon consistent with (a) of this subsection. Such assessment may

1 include, as appropriate, opportunities for development of combined
2 heat and power as an energy and capacity resource, demand response
3 and load management programs, and currently employed and new policies
4 and programs needed to obtain the conservation and efficiency
5 resources;

6 (c) An assessment of commercially available, utility scale
7 renewable and nonrenewable generating technologies including a
8 comparison of the benefits and risks of purchasing power or building
9 new resources;

10 (d) A comparative evaluation of renewable and nonrenewable
11 generating resources, including transmission and distribution
12 delivery costs, and conservation and efficiency resources using
13 "lowest reasonable cost" as a criterion;

14 (e) An assessment of methods, commercially available
15 technologies, or facilities for integrating renewable resources,
16 including but not limited to battery storage and pumped storage, and
17 addressing overgeneration events, if applicable to the utility's
18 resource portfolio;

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

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

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

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

30 (j) The integration of the demand forecasts, resource
31 evaluations, and resource adequacy requirement into a long-range
32 assessment describing the mix of supply side generating resources and
33 conservation and efficiency resources that will meet current and
34 projected needs, including mitigating overgeneration events and
35 implementing RCW 19.405.030 through 19.405.050, at the lowest
36 reasonable cost and risk to the utility and its customers, while
37 maintaining and protecting the safety, reliable operation, and
38 balancing of its electric system;

39 (k) An assessment, informed by the cumulative impact analysis
40 conducted under RCW 19.405.140, of: Energy and nonenergy benefits and

1 reductions of burdens to vulnerable populations and highly impacted
2 communities; long-term and short-term public health and environmental
3 benefits, costs, and risks; and energy security and risk; (~~and~~)

4 (1) A ten-year clean energy action plan for implementing RCW
5 19.405.030 through 19.405.050 at the lowest reasonable cost, and at
6 an acceptable resource adequacy standard, that identifies the
7 specific actions to be taken by the utility consistent with the
8 long-range integrated resource plan; and

9 (m) An analysis of how the plan supports and accounts for:

10 (i) Load forecast scenarios that consider the anticipated levels
11 of zero emissions vehicle use in a utility's service area that result
12 from the zero emissions vehicle program requirements in chapter
13 70A.30 RCW and the levels of zero emissions vehicle use necessary to
14 achieve the emissions reductions consistent with RCW 70A.45.020;

15 (ii) Analysis, research, findings, recommendations, actions, and
16 any other relevant information found in the electrification of
17 transportation plans submitted under RCW 35.92.450, 54.16.430, and
18 80.28.365; and

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

24 (2) For an investor-owned utility, the clean energy action plan
25 must: (a) Identify and be informed by the utility's ten-year cost-
26 effective conservation potential assessment as determined under RCW
27 19.285.040, if applicable; (b) establish a resource adequacy
28 requirement; (c) identify the potential cost-effective demand
29 response and load management programs that may be acquired; (d)
30 identify renewable resources, nonemitting electric generation, and
31 distributed energy resources that may be acquired and evaluate how
32 each identified resource may be expected to contribute to meeting the
33 utility's resource adequacy requirement; (e) identify any need to
34 develop new, or expand or upgrade existing, bulk transmission and
35 distribution facilities; and (f) identify the nature and possible
36 extent to which the utility may need to rely on alternative
37 compliance options under RCW 19.405.040(1)(b), if appropriate.

38 (3)(a) An electric utility shall consider the social cost of
39 greenhouse gas emissions, as determined by the commission for
40 investor-owned utilities pursuant to RCW 80.28.405 and the department

1 for consumer-owned utilities, when developing integrated resource
2 plans and clean energy action plans. An electric utility must
3 incorporate the social cost of greenhouse gas emissions as a cost
4 adder when:

5 (i) Evaluating and selecting conservation policies, programs, and
6 targets;

7 (ii) Developing integrated resource plans and clean energy action
8 plans; and

9 (iii) Evaluating and selecting intermediate term and long-term
10 resource options.

11 (b) For the purposes of this subsection (3): (i) Gas consisting
12 largely of methane and other hydrocarbons derived from the
13 decomposition of organic material in landfills, wastewater treatment
14 facilities, and anaerobic digesters must be considered a nonemitting
15 resource; and (ii) qualified biomass energy must be considered a
16 nonemitting resource.

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

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

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

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

29 (c) Explains why the resources in (b) of this subsection were
30 chosen and, if the resources chosen are not: (i) Renewable resources;
31 (ii) methods, commercially available technologies, or facilities for
32 integrating renewable resources, including addressing any
33 overgeneration event; or (iii) conservation and efficiency resources,
34 why such a decision was made; (~~and~~)

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

38 (e) Supports and accounts for:

39 (i) Load forecast scenarios that consider the anticipated levels
40 of zero emissions vehicle use in a utility's service area that result

1 from the zero emissions vehicle program requirements in chapter
2 70A.30 RCW and the levels of zero emissions vehicle use necessary to
3 achieve the emissions reductions consistent with RCW 70A.45.020;

4 (ii) Analysis, research, findings, recommendations, actions, and
5 any other relevant information found in the electrification of
6 transportation plans submitted under RCW 35.92.450, 54.16.430, and
7 80.28.365; and

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

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

18 (7) An electric utility that is required to develop a resource
19 plan under this section must complete its initial plan by September
20 1, 2008.

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

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

26 (10)(a) To maximize transparency, the commission, for investor-
27 owned utilities, or the governing body, for consumer-owned utilities,
28 may require an electric utility to make the utility's data input
29 files available in a native format. Each electric utility shall
30 publish its final plan either as part of an annual report or as a
31 separate document available to the public. The report may be in an
32 electronic form.

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

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

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

3 (1) The building code council shall adopt rules for electric
4 vehicle infrastructure requirements. Rules adopted by the state
5 building code council must consider applicable national and
6 international standards and be consistent with rules adopted under
7 RCW 19.28.281.

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

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

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

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

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

--- **END** ---