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By Representatives Ramel, Hackney, Bateman, Fitzgibbon, Berry, Goodman, Santos, Kloba, Macri, Bergquist, Ormsby, and Pollet

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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 refueling infrastructure, and managing
14 the load of charging and refueling infrastructure as a dynamic energy
15 service to the electric grid.

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

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

24 (b) Ensure utility resource planning analyzes the impacts on
25 electricity generation and delivery from growing adoption and usage
26 of electric vehicles; and

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

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

33 (1) The department, in consultation with the department of
34 ecology, the department of transportation, and the office of equity
35 must develop and maintain a publicly available mapping and
36 forecasting tool that provides locations and essential information of
37 charging and refueling infrastructure to support forecasted levels of
38 electric vehicle adoption, travel, and usage across Washington state.

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

6 (b) The tool must initially prioritize on-road transportation
7 and, to the greatest extent possible, maintain the latest data and
8 model charging and refueling infrastructure that may be used by
9 owners and operators of light, medium, and heavy-duty vehicles. The
10 tool must incorporate department of transportation traffic and
11 traveler information, such as traffic volumes and travel patterns,
12 for passenger and freight vehicles.

13 (c) The tool must, if feasible:

14 (i) Provide the data necessary to support programs by state
15 agencies that directly or indirectly support transportation
16 electrification efforts; and

17 (ii) Evolve over time to support future transportation
18 electrification programs.

19 (3) The department, in consultation with the department of
20 transportation, the department of ecology, and the office of equity,
21 may elect to include other transportation charging and refueling
22 infrastructure, such as maritime, public transportation, and aviation
23 in the mapping and forecasting tool.

24 (4) The tool must include, to the extent feasible, the following
25 elements:

26 (a) The amount, type, location, and year of installation for
27 electric vehicle supply equipment that is expected to be necessary to
28 support forecasted electric vehicle penetration and usage within the
29 state;

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

34 (c) The estimated energy and capacity demand for modeled electric
35 vehicle supply equipment based on inputs from (b) of this subsection;

36 (d) Boundaries of political subdivisions including, but not
37 limited to:

38 (i) Retail electricity suppliers;

39 (ii) Public transportation agency boundaries;

40 (iii) Municipalities;

1 (iv) Counties; and
2 (v) Federally recognized tribal governments;
3 (e) Existing and known publicly or privately owned level 2,
4 direct current fast charge, and refueling infrastructure. The
5 identification of refueling infrastructure must, if possible,
6 distinguish refueling infrastructure that supplies renewable
7 hydrogen, as defined in RCW 19.405.020, from other hydrogen refueling
8 infrastructure;

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

13 (g) The ability for all data tracked within the tool to be
14 downloadable or usable within a separate mapping and forecasting
15 tool.

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

17 (a) Varying levels of public transportation utilization;

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

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

22 (d) Adoption of autonomous and shared mobility services.

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

37 (7) The mapping and forecasting tool must, to the extent
38 appropriate, integrate related analyses, such as the department's
39 state energy strategy, the joint transportation committee's public
40 fleet electrification study, the west coast collaborative's

1 alternative fuel infrastructure corridor coalition report, and other
2 related electric vehicle supply equipment assessments as deemed
3 appropriate.

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

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

14 (10) The department must conduct a stakeholder process in
15 developing the mapping and forecasting tool to ensure the tool
16 supports the needs of communities, public agencies, and relevant
17 private organizations.

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

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

25 (a) "Charging infrastructure" means a unit of fueling
26 infrastructure that supplies electric energy for the recharging of
27 battery electric vehicles.

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

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

37 (d) "Electric vehicle supply equipment" means charging
38 infrastructure and refueling infrastructure.

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

4 (f) "Refueling infrastructure" means a unit of fueling
5 infrastructure that supplies hydrogen for the resupply of hydrogen
6 fuel cell vehicles.

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

9 Each electric utility must develop a plan consistent with this
10 section.

11 (1) Utilities with more than twenty-five thousand customers that
12 are not full requirements customers must develop or update an
13 integrated resource plan by September 1, 2008. At a minimum, progress
14 reports reflecting changing conditions and the progress of the
15 integrated resource plan must be produced every two years thereafter.
16 An updated integrated resource plan must be developed at least every
17 four years subsequent to the 2008 integrated resource plan. The
18 integrated resource plan, at a minimum, must include:

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

22 (b) An assessment of commercially available conservation and
23 efficiency resources, as informed, as applicable, by the assessment
24 for conservation potential under RCW 19.285.040 for the planning
25 horizon consistent with (a) of this subsection. Such assessment may
26 include, as appropriate, opportunities for development of combined
27 heat and power as an energy and capacity resource, demand response
28 and load management programs, and currently employed and new policies
29 and programs needed to obtain the conservation and efficiency
30 resources;

31 (c) An assessment of commercially available, utility scale
32 renewable and nonrenewable generating technologies including a
33 comparison of the benefits and risks of purchasing power or building
34 new resources;

35 (d) A comparative evaluation of renewable and nonrenewable
36 generating resources, including transmission and distribution
37 delivery costs, and conservation and efficiency resources using
38 "lowest reasonable cost" as a criterion;

1 (e) An assessment of methods, commercially available
2 technologies, or facilities for integrating renewable resources,
3 including but not limited to battery storage and pumped storage, and
4 addressing overgeneration events, if applicable to the utility's
5 resource portfolio;

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

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

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

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

17 (j) The integration of the demand forecasts, resource
18 evaluations, and resource adequacy requirement into a long-range
19 assessment describing the mix of supply side generating resources and
20 conservation and efficiency resources that will meet current and
21 projected needs, including mitigating overgeneration events and
22 implementing RCW 19.405.030 through 19.405.050, at the lowest
23 reasonable cost and risk to the utility and its customers, while
24 maintaining and protecting the safety, reliable operation, and
25 balancing of its electric system;

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

31 (l) A ten-year clean energy action plan for implementing RCW
32 19.405.030 through 19.405.050 at the lowest reasonable cost, and at
33 an acceptable resource adequacy standard, that identifies the
34 specific actions to be taken by the utility consistent with the
35 long-range integrated resource plan; and

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

37 (i) The anticipated levels of zero emissions vehicle use that
38 result from the zero emissions vehicle program requirements in
39 chapter 70A.30 RCW and that result in emissions reductions consistent
40 with RCW 70A.45.020;

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

5 (iii) For plans due to be filed after September 1, 2023, relevant
6 infrastructure forecasts and the associated energy impacts, which may
7 include those generated by the mapping and forecasting tool created
8 in section 2 of this act.

9 (2) For an investor-owned utility, the clean energy action plan
10 must: (a) Identify and be informed by the utility's ten-year cost-
11 effective conservation potential assessment as determined under RCW
12 19.285.040, if applicable; (b) establish a resource adequacy
13 requirement; (c) identify the potential cost-effective demand
14 response and load management programs that may be acquired; (d)
15 identify renewable resources, nonemitting electric generation, and
16 distributed energy resources that may be acquired and evaluate how
17 each identified resource may be expected to contribute to meeting the
18 utility's resource adequacy requirement; (e) identify any need to
19 develop new, or expand or upgrade existing, bulk transmission and
20 distribution facilities; and (f) identify the nature and possible
21 extent to which the utility may need to rely on alternative
22 compliance options under RCW 19.405.040(1)(b), if appropriate.

23 (3)(a) An electric utility shall consider the social cost of
24 greenhouse gas emissions, as determined by the commission for
25 investor-owned utilities pursuant to RCW 80.28.405 and the department
26 for consumer-owned utilities, when developing integrated resource
27 plans and clean energy action plans. An electric utility must
28 incorporate the social cost of greenhouse gas emissions as a cost
29 adder when:

30 (i) Evaluating and selecting conservation policies, programs, and
31 targets;

32 (ii) Developing integrated resource plans and clean energy action
33 plans; and

34 (iii) Evaluating and selecting intermediate term and long-term
35 resource options.

36 (b) For the purposes of this subsection (3): (i) Gas consisting
37 largely of methane and other hydrocarbons derived from the
38 decomposition of organic material in landfills, wastewater treatment
39 facilities, and anaerobic digesters must be considered a nonemitting

1 resource; and (ii) qualified biomass energy must be considered a
2 nonemitting resource.

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

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

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

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

15 (c) Explains why the resources in (b) of this subsection were
16 chosen and, if the resources chosen are not: (i) Renewable resources;
17 (ii) methods, commercially available technologies, or facilities for
18 integrating renewable resources, including addressing any
19 overgeneration event; or (iii) conservation and efficiency resources,
20 why such a decision was made; (~~and~~)

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

24 (e) Supports and accounts for:

25 (i) The anticipated levels of zero emissions vehicle use that
26 result from the zero emissions vehicle program requirements in
27 chapter 70A.30 RCW and that result in emissions reductions consistent
28 with RCW 70A.45.020;

29 (ii) Analysis, research, findings, recommendations, actions, and
30 any other relevant information found in the electrification of
31 transportation plans submitted under RCW 35.92.450 or 54.16.430; and

32 (iii) For plans due to be filed after September 1, 2023, relevant
33 infrastructure forecasts and the associated energy impacts generated,
34 which may include those generated by the mapping and forecasting tool
35 created in section 2 of this act.

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

1 (7) An electric utility that is required to develop a resource
2 plan under this section must complete its initial plan by September
3 1, 2008.

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

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

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

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

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

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

24 (1) The building code council shall adopt rules for electric
25 vehicle infrastructure requirements. Rules adopted by the state
26 building code council must consider applicable national and
27 international standards and be consistent with rules adopted under
28 RCW 19.28.281.

29 (2)(a) Except as provided in (b) of this subsection, the rules
30 adopted under this section must require electric vehicle charging
31 capability at all new buildings that provide on-site parking. Where
32 parking is provided, the greater of one parking space or ten percent
33 of parking spaces, rounded to the next whole number, must be provided
34 with wiring or raceway sized to accommodate 208/240 V 40-amp or
35 equivalent electric vehicle charging. Electrical rooms serving
36 buildings with on-site parking must be sized to accommodate the
37 potential for electrical equipment and distribution required to serve
38 a minimum of twenty percent of the total parking spaces with 208/240
39 V 40-amp or equivalent electric vehicle charging. Load management

1 infrastructure may be used to adjust the size and capacity of the
2 required building electric service equipment and circuits on the
3 customer facilities, as well as electric utility-owned
4 infrastructure, as allowed by applicable local and national
5 electrical code. For accessible parking spaces, the greater of one
6 parking space or ten percent of accessible parking spaces, rounded to
7 the next whole number, must be provided with electric vehicle
8 charging infrastructure that may also serve adjacent parking spaces
9 not designated as accessible parking.

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

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

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

23 (b) The rules required under this subsection must be implemented
24 by July 1, 2024.

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