
HOUSE BILL 1114

State of Washington

67th Legislature

2021 Regular Session

By Representatives Dye and Ramel

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1 AN ACT Relating to encouraging utility mitigation of urban heat
2 island effects; amending RCW 35.92.355, 35.92.390, 54.16.400,
3 80.28.260, and 80.28.300; adding a new section to chapter 54.16 RCW;
4 and creating a new section.

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

6 NEW SECTION. **Sec. 1.** (1) The legislature acknowledges the
7 scientific consensus that there is a well-documented problem of urban
8 heat islands. The buildings, roads, and infrastructure that comprise
9 urban environments make cities hotter than surrounding rural areas.
10 Concrete, asphalt, and shingled roofs can get much hotter than
11 vegetated areas, causing surface temperatures in cities to be several
12 degrees hotter in the midday than in rural areas. At night, these
13 same materials release heat more slowly, keeping urban air
14 temperatures higher than overnight temperatures in most rural areas.
15 Cities tend to have fewer trees and less vegetation, resulting in a
16 deficit of shade to keep areas cool. Cities also have more industrial
17 heat sources, including cars and air conditioners.

18 (2) Cities tend to have many more extremely hot days each year,
19 on average, than nearby rural areas. According to one recent study,
20 over the past 10 years, cities had an average of at least eight more
21 days over 90 degrees Fahrenheit each summer, compared to nearby rural

1 areas. The difference between urban and surrounding rural
2 temperatures is also widening; temperatures have been rising in urban
3 areas faster than in the surrounding rural areas since 1970.

4 (3) The legislature finds that the phenomenon of urban heat
5 island impact is detrimental to several significant and long-standing
6 state policy goals, including the promotion of human health, energy
7 conservation, and preserving the water quality that sustains salmon.
8 It is well understood that higher urban summer temperatures pose
9 serious human health risks and that these health risks are
10 inequitably distributed. Hotter urban summers can lead to increased
11 energy demands to cool buildings, which runs counter to long-standing
12 state policy of promoting energy conservation. Studies have also
13 documented the impact of urban heat islands on the temperature of
14 streams. Streams draining through urban heat islands tend to be
15 hotter than rural and forested streams because of warmer urban air
16 and ground temperatures, paved surfaces, and decreased riparian
17 canopy. Urban infrastructure routes runoff over hot impervious
18 surfaces and through storm drains directly into streams and can lead
19 to rapid, dramatic increases in temperature, which can be lethal for
20 aquatic life.

21 (4) The legislature recognizes that this problem is a clear and
22 present danger that impacts the environment of our state. The Pacific
23 Northwest, with its reputation for rain and temperate weather, is not
24 immune to urban heat islands. Seattle is among the top 10 cities for
25 most intense urban heat island effect, with greater than four degrees
26 Fahrenheit difference between the city and nearby rural areas.
27 Portland, Oregon was among the top 10 cities with the most intense
28 summer nighttime heat island over the past 10 years.

29 (5) The legislature finds that organized shade tree and cool roof
30 programs offered by utilities can reduce the amount of energy
31 required to cool buildings. Energy conservation results in carbon
32 dioxide reduction in areas where fossil fuels are part of the fuel
33 mix that supplies the electricity. Secondary benefits of shade tree
34 and cool roof programs are the mitigation of the urban heat island
35 effect. Other nonenergy benefits include improvement in local and
36 regional air quality, enhanced neighborhood aesthetics, and improved
37 property values for program participants.

38 (6) From the utility perspective, incentives to implement tree
39 planting programs represents a type of demand side management program
40 that has a tangible economic value to the utility. This value can be

1 quantified based on avoided supply costs of energy and capacity
2 during high cost of summer peak load periods, or the decrease in
3 supply costs to the utility due to reduced electrical loads.

4 (7) From the customers' perspective, these programs save money by
5 reducing average summertime electricity bills. In 2008, researchers
6 showed that the Sacramento municipal utility district tree program
7 reduced summertime electricity bills by an average of \$25.16.
8 Additionally, the utility's commercial cool roof program provided
9 average energy cooling load savings of 20 percent.

10 (8) In consideration of the environmental, public, and customer
11 benefits, the legislature intends to encourage policies for the
12 state's utilities that will promote shade tree and cool roof programs
13 to facilitate energy conservation and mitigate urban heat island
14 impacts.

15 **Sec. 2.** RCW 35.92.355 and 1993 c 204 s 5 are each amended to
16 read as follows:

17 The conservation of energy in all forms and by every possible
18 means is found and declared to be a public purpose of highest
19 priority. The legislature further finds and declares that all
20 municipal corporations, quasi municipal corporations, and other
21 political subdivisions of the state which are engaged in the
22 generation, sale, or distribution of energy should be granted the
23 authority to develop and carry out programs which will conserve
24 resources, reduce waste, and encourage more efficient use of energy
25 by consumers.

26 In order to establish the most effective statewide program for
27 energy conservation, the legislature hereby encourages any company,
28 corporation, or association engaged in selling or furnishing utility
29 services to assist their customers in the acquisition and
30 installation of materials and equipment, for compensation or
31 otherwise, for the conservation or more efficient use of energy
32 including, but not limited to, materials and equipment installed as
33 part of a utility cool roof program. The use of appropriate tree
34 plantings for energy conservation is highly encouraged as part of
35 these programs. It is the policy of the state of Washington that any
36 tree planting program engaged in by a municipal utility as part of a
37 broader energy conservation program under this section should
38 accomplish the following:

1 (1) Reduce the peak-load demand for electricity in residential
2 and commercial business areas during the summer months through direct
3 shading of buildings provided by strategically planted trees;

4 (2) Reduce wintertime demand for energy in residential areas by
5 blocking cold winds from reaching homes, which lowers interior
6 temperatures and drives heating demand;

7 (3) Protect public health by removing harmful pollution from the
8 air;

9 (4) Utilize the natural photosynthetic and transpiration process
10 of trees to lower ambient temperatures and absorb carbon dioxide;

11 (5) Lower electric bills for residential and commercial business
12 ratepayers by limiting electricity consumption without reducing
13 benefits;

14 (6) Relieve financial and demand pressure on the utility that
15 stems from large peak-load electricity demand;

16 (7) Protect water quality and public health by reducing and
17 cooling stormwater runoff and keeping harmful pollutants from
18 entering waterways, with special attention given to waterways vital
19 for the preservation of threatened and endangered salmon;

20 (8) Ensure that trees are planted in locations that limit the
21 amount of public funding needed to maintain public and electric
22 infrastructure; and

23 (9) Measure program performance in terms of the estimated present
24 value benefit per tree planted.

25 **Sec. 3.** RCW 35.92.390 and 2008 c 299 s 19 are each amended to
26 read as follows:

27 (1) Municipal utilities under this chapter are highly encouraged
28 to provide information to their customers regarding landscaping that
29 includes tree planting for energy conservation.

30 (2)(a) Municipal utilities under this chapter are highly
31 encouraged to request voluntary donations from their customers for
32 the purposes of urban forestry. The request may be in the form of a
33 check-off on the billing statement or other form of request for a
34 voluntary donation.

35 (b) Voluntary donations collected by municipal utilities under
36 this section may be used by the municipal utility to:

37 (i) Support the development and implementation of evergreen
38 community ordinances, as that term is defined in RCW 35.105.010, for
39 cities, towns, or counties within their service areas; ((~~or~~))

1 (ii) Complete projects consistent with the model evergreen
2 community management plans and ordinances developed under RCW
3 35.105.050; or

4 (iii) Fund a tree planting program for energy conservation that
5 accomplishes the goals established under RCW 35.92.355.

6 (c) Donations received under this section do not contribute to
7 the gross income of a light and power business or gas distribution
8 business under chapter 82.16 RCW.

9 NEW SECTION. Sec. 4. A new section is added to chapter 54.16
10 RCW to read as follows:

11 The legislature encourages any public utility district to assist
12 their customers in the acquisition and installation of materials and
13 equipment, for compensation or otherwise, for the conservation or
14 more efficient use of energy including, but not limited to, materials
15 and equipment installed as part of a utility cool roof program. The
16 use of appropriate tree plantings for energy conservation is highly
17 encouraged as part of these programs. It is the policy of the state
18 of Washington that any tree planting program engaged in by a public
19 utility district as part of a broader energy conservation program
20 under this chapter should accomplish the following:

21 (1) Reduce the peak-load demand for electricity in residential
22 and commercial business areas during the summer months through direct
23 shading of buildings provided by strategically planted trees;

24 (2) Reduce wintertime demand for energy in residential areas by
25 blocking cold winds from reaching homes, which lowers interior
26 temperatures and drives heating demand;

27 (3) Protect public health by removing harmful pollution from the
28 air;

29 (4) Utilize the natural photosynthetic and transpiration process
30 of trees to lower ambient temperatures and absorb carbon dioxide;

31 (5) Lower electric bills for residential and commercial business
32 ratepayers by limiting electricity consumption without reducing
33 benefits;

34 (6) Relieve financial and demand pressure on the utility that
35 stems from large peak-load electricity demand;

36 (7) Protect water quality and public health by reducing and
37 cooling stormwater runoff and keeping harmful pollutants from
38 entering waterways, with special attention given to waterways vital
39 for the preservation of threatened and endangered salmon;

1 (8) Ensure that trees are planted in locations that limit the
2 amount of public funding needed to maintain public and electric
3 infrastructure; and

4 (9) Measure program performance in terms of the estimated present
5 value benefit per tree planted.

6 **Sec. 5.** RCW 54.16.400 and 2008 c 299 s 22 are each amended to
7 read as follows:

8 (1) Public utility districts may request voluntary donations from
9 their customers for the purposes of urban forestry. The request may
10 be in the form of a check-off on the billing statement or other form
11 of a request for a voluntary donation.

12 (2) Voluntary donations collected by public utility districts
13 under this section may be used by the public utility district to:

14 (a) Support the development and implementation of evergreen
15 community ordinances, as that term is defined in RCW 35.105.010, for
16 cities, towns, or counties within their service areas; (~~(e)~~)

17 (b) Complete projects consistent with the model evergreen
18 community management plans and ordinances developed under RCW
19 35.105.050; or

20 (c) Fund a tree planting program for energy conservation that
21 accomplishes the goals established under section 4 of this act.

22 (3) Donations received under this section do not contribute to
23 the gross income of a light and power business or gas distribution
24 business under chapter 82.16 RCW.

25 **Sec. 6.** RCW 80.28.260 and 1996 c 186 s 520 are each amended to
26 read as follows:

27 (1) The commission shall adopt a policy allowing an incentive
28 rate of return on investment (~~((a) for payments made under RCW~~
29 ~~19.27A.035 and (b))~~) for programs that improve the efficiency of
30 energy end use if priority is given to senior citizens and low-income
31 citizens in the course of carrying out such programs. The incentive
32 rate of return on investments set forth in this subsection is
33 established by adding an increment of two percent to the rate of
34 return on common equity permitted on the company's other investments.

35 (2) The commission shall consider and may adopt a policy allowing
36 an incentive rate of return on investment in additional programs to
37 improve the efficiency of energy end use including, but not limited
38 to, tree planting programs and cool roof programs, or other incentive

1 policies to encourage utility investment in such programs. Any tree
2 planting program for which an electrical company seeks an incentive
3 rate of return on investment under this subsection (2) should
4 accomplish the following:

5 (a) Reduce the peak-load demand for electricity in residential
6 and commercial business areas during the summer months through direct
7 shading of buildings provided by strategically planted trees;

8 (b) Reduce wintertime demand for energy in residential areas by
9 blocking cold winds from reaching homes, which lowers interior
10 temperatures and drives heating demand;

11 (c) Protect public health by removing harmful pollution from the
12 air;

13 (d) Utilize the natural photosynthetic and transpiration process
14 of trees to lower ambient temperatures and absorb carbon dioxide;

15 (e) Lower electric bills for residential and commercial business
16 ratepayers by limiting electricity consumption without reducing
17 benefits;

18 (f) Relieve financial and demand pressure on the utility that
19 stems from large peak-load electricity demand;

20 (g) Protect water quality and public health by reducing and
21 cooling stormwater runoff and keeping harmful pollutants from
22 entering waterways, with special attention given to waterways vital
23 for the preservation of threatened and endangered salmon;

24 (h) Ensure that trees are planted in locations that limit the
25 amount of public funding needed to maintain public and electric
26 infrastructure; and

27 (i) Measure program performance in terms of the estimated present
28 value benefit per tree planted.

29 (3) The commission shall consider and may adopt other policies to
30 protect a company from a reduction of short-term earnings that may be
31 a direct result of utility programs to increase the efficiency of
32 energy use. These policies may include allowing a periodic rate
33 adjustment for investments in end use efficiency or allowing changes
34 in price structure designed to produce additional new revenue.

35 **Sec. 7.** RCW 80.28.300 and 2008 c 299 s 21 are each amended to
36 read as follows:

37 (1) Gas companies and electrical companies under this chapter are
38 highly encouraged to provide information to their customers regarding
39 landscaping that includes tree planting for energy conservation.

1 (2) (a) Gas companies and electrical companies under this chapter
2 may request voluntary donations from their customers for the purposes
3 of urban forestry. The request may be in the form of a check-off on
4 the billing statement or other form of a request for a voluntary
5 donation.

6 (b) Voluntary donations collected by gas companies and electrical
7 companies under this section may be used by the gas companies and
8 electrical companies to:

9 (i) Support the development and implementation of evergreen
10 community ordinances, as that term is defined in RCW 35.105.010, for
11 cities, towns, or counties within their service areas; (~~or~~)

12 (ii) Complete projects consistent with the model evergreen
13 community management plans and ordinances developed under RCW
14 35.105.050; or

15 (iii) Fund a tree planting program for energy conservation that
16 accomplishes the goals established under RCW 80.28.260(2) (a) through
17 (i).

18 (c) Donations received under this section do not contribute to
19 the gross income of a light and power business or gas distribution
20 business under chapter 82.16 RCW.

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