

CERTIFICATION OF ENROLLMENT

SUBSTITUTE HOUSE BILL 1114

Chapter 11, Laws of 2021

67th Legislature
2021 Regular Session

URBAN HEAT ISLAND EFFECTS--UTILITY MITIGATION

EFFECTIVE DATE: July 25, 2021

Passed by the House February 25, 2021
Yeas 98 Nays 0

LAURIE JINKINS

**Speaker of the House of
Representatives**

Passed by the Senate March 24, 2021
Yeas 47 Nays 0

DENNY HECK

President of the Senate

Approved April 7, 2021 3:37 PM

JAY INSLEE

Governor of the State of Washington

CERTIFICATE

I, Bernard Dean, Chief Clerk of the House of Representatives of the State of Washington, do hereby certify that the attached is **SUBSTITUTE HOUSE BILL 1114** as passed by the House of Representatives and the Senate on the dates hereon set forth.

BERNARD DEAN

Chief Clerk

FILED

April 7, 2021

**Secretary of State
State of Washington**

SUBSTITUTE HOUSE BILL 1114

Passed Legislature - 2021 Regular Session

State of Washington **67th Legislature** **2021 Regular Session**

By House Environment & Energy (originally sponsored by
Representatives Dye and Ramel)

READ FIRST TIME 02/15/21.

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. Studies
4 also conclude that areas historically redlined as a result of housing
5 policy experience higher air temperatures than urban areas outside of
6 redlined areas.

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

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

33 (5) The legislature finds that organized shade tree and cool roof
34 programs offered by utilities can reduce the amount of energy
35 required to cool buildings. Energy conservation results in carbon
36 dioxide reduction in areas where fossil fuels are part of the fuel
37 mix that supplies the electricity. Secondary benefits of shade tree
38 and cool roof programs are the mitigation of the urban heat island
39 effect. Other nonenergy benefits include improvement in local and

1 regional air quality, enhanced neighborhood aesthetics, and improved
2 property values for program participants.

3 (6) From the utility perspective, incentives to implement tree
4 planting programs represents a type of demand side management program
5 that has a tangible economic value to the utility. This value can be
6 quantified based on avoided supply costs of energy and capacity
7 during high cost of summer peak load periods, or the decrease in
8 supply costs to the utility due to reduced electrical loads.

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

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

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

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

31 In order to establish the most effective statewide program for
32 energy conservation, the legislature hereby encourages any company,
33 corporation, or association engaged in selling or furnishing utility
34 services to assist their customers in the acquisition and
35 installation of materials and equipment, for compensation or
36 otherwise, for the conservation or more efficient use of energy
37 including, but not limited to, materials and equipment installed as
38 part of a utility cool roof program. The use of appropriate tree
39 plantings for energy conservation is highly encouraged as part of

1 these programs. It is the policy of the state of Washington that any
2 tree planting program engaged in by a municipal utility where energy
3 reduction is a goal as part of a broader energy conservation program
4 under this section should accomplish the following:

5 (1) 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 (2) 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 (3) Protect public health by removing harmful pollution from the
12 air and prioritize in communities with environmental health
13 disparities;

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

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

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

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

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

28 (9) Measure program performance in terms of the estimated present
29 value benefit per tree planted and equitable and accessible community
30 engagement consistent with the department of health's environmental
31 health disparities map recommendations 12 and 13, and with the
32 community engagement plan guidance in appendix C of the final report
33 of the environmental justice task force established under chapter
34 415, Laws of 2019;

35 (10) Give special consideration to achieving environmental
36 justice in goals and policies, avoid creating or worsening
37 environmental health disparities, and make use of the department of
38 health's environmental health disparities map to help guide
39 engagement and actions; and

1 (11) Coordinate with the department of natural resources urban
2 and community forestry program's efforts to identify areas of need
3 related to urban tree canopy and to provide technical assistance and
4 capacity building to encourage urban tree canopy.

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

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

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

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

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

20 (ii) Complete projects consistent with the model evergreen
21 community management plans and ordinances developed under RCW
22 35.105.050; or

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

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

28 NEW SECTION. **Sec. 4.** A new section is added to chapter 54.16
29 RCW to read as follows:

30 The legislature encourages any public utility district to assist
31 their customers in the acquisition and installation of materials and
32 equipment, for compensation or otherwise, for the conservation or
33 more efficient use of energy including, but not limited to, materials
34 and equipment installed as part of a utility cool roof program. The
35 use of appropriate tree plantings for energy conservation is highly
36 encouraged as part of these programs. It is the policy of the state
37 of Washington that any tree planting program engaged in by a public
38 utility district where energy reduction is a goal as part of a

1 broader energy conservation program under this chapter should
2 accomplish the following:

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

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

9 (3) Protect public health by removing harmful pollution from the
10 air and prioritize in communities with environmental health
11 disparities;

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

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

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

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

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

26 (9) Measure program performance in terms of the estimated present
27 value benefit per tree planted and equitable and accessible community
28 engagement consistent with the department of health's environmental
29 health disparities map recommendations 12 and 13, and with the
30 community engagement plan guidance appendix C of the final report of
31 the environmental justice task force established under chapter 415,
32 Laws of 2019;

33 (10) Give special consideration to achieving environmental
34 justice in goals and policies, avoid creating or worsening
35 environmental health disparities, and make use of the department of
36 health's environmental health disparities map to help guide
37 engagement and actions; and

38 (11) Coordinate with the department of natural resources urban
39 and community forestry program's efforts to identify areas of need

1 related to urban tree canopy and to provide technical assistance and
2 capacity building to encourage urban tree canopy.

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

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

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

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

14 (b) Complete projects consistent with the model evergreen
15 community management plans and ordinances developed under RCW
16 35.105.050; or

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

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

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

24 (1) The commission shall adopt a policy allowing an incentive
25 rate of return on investment ~~((a) for payments made under RCW~~
26 ~~19.27A.035 and (b))~~ for programs that improve the efficiency of
27 energy end use if priority is given to senior citizens and low-income
28 citizens in the course of carrying out such programs. The incentive
29 rate of return on investments set forth in this subsection is
30 established by adding an increment of two percent to the rate of
31 return on common equity permitted on the company's other investments.

32 (2) The commission shall consider and may adopt a policy allowing
33 an incentive rate of return on investment in additional programs to
34 improve the efficiency of energy end use including, but not limited
35 to, tree planting programs and cool roof programs, or other incentive
36 policies to encourage utility investment in such programs. Any tree
37 planting program where energy reduction is a goal for which an

1 electrical company seeks an incentive rate of return on investment
2 under this subsection (2) should accomplish the following:

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

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

9 (c) Protect public health by removing harmful pollution from the
10 air and prioritize in communities with environmental health
11 disparities;

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

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

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

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

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

26 (i) Measure program performance in terms of the estimated present
27 value benefit per tree planted and equitable and accessible community
28 engagement consistent with the department of health's environmental
29 health disparities map recommendations 12 and 13, and with the
30 community engagement plan guidance appendix C of the final report of
31 the environmental justice task force established under chapter 415,
32 Laws of 2019;

33 (j) Give special consideration to achieving environmental justice
34 in goals and policies, avoid creating or worsening environmental
35 health disparities, and make use of the department of health's
36 environmental health disparities map to help guide engagement and
37 actions; and

38 (k) Coordinate with the department of natural resources urban and
39 community forestry program's efforts to identify areas of need

1 related to urban tree canopy and to provide technical assistance and
2 capacity building to encourage urban tree canopy.

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

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

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

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

19 (b) Voluntary donations collected by gas companies and electrical
20 companies under this section may be used by the gas companies and
21 electrical companies to:

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

25 (ii) Complete projects consistent with the model evergreen
26 community management plans and ordinances developed under RCW
27 35.105.050; or

28 (iii) Fund a tree planting program for energy conservation that
29 accomplishes the goals established under RCW 80.28.260(2) (a) through
30 (k).

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

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