RCW 35.92.355 Energy conservation—Legislative findings—Tree plantings. The conservation of energy in all forms and by every possible means is found and declared to be a public purpose of highest priority. The legislature further finds and declares that all municipal corporations, quasi municipal corporations, and other political subdivisions of the state which are engaged in the generation, sale, or distribution of energy should be granted the authority to develop and carry out programs which will conserve resources, reduce waste, and encourage more efficient use of energy by consumers.

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

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

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

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

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

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

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

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

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

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

(10) Give special consideration to achieving environmental justice in goals and policies, avoid creating or worsening environmental health disparities, and make use of the department of

health's environmental health disparities map to help guide engagement and actions; and

(11) Coordinate with the department of natural resources urban and community forestry program's efforts to identify areas of need related to urban tree canopy and to provide technical assistance and capacity building to encourage urban tree canopy. [2021 c 11 s 2; 1993 c 204 s 5; 1979 ex.s. c 239 s 1.]

Findings—Intent—2021 c 11: "(1) The legislature acknowledges the scientific consensus that there is a well-documented problem of urban heat islands. The buildings, roads, and infrastructure that comprise urban environments make cities hotter than surrounding rural areas. Concrete, asphalt, and shingled roofs can get much hotter than vegetated areas, causing surface temperatures in cities to be several degrees hotter in the midday than in rural areas. At night, these same materials release heat more slowly, keeping urban air temperatures higher than overnight temperatures in most rural areas. Cities tend to have fewer trees and less vegetation, resulting in a deficit of shade to keep areas cool. Cities also have more industrial heat sources, including cars and air conditioners.

(2) Cities tend to have many more extremely hot days each year, on average, than nearby rural areas. According to one recent study, over the past 10 years, cities had an average of at least eight more days over 90 degrees Fahrenheit each summer, compared to nearby rural areas. The difference between urban and surrounding rural temperatures is also widening; temperatures have been rising in urban areas faster than in the surrounding rural areas since 1970. Studies also conclude that areas historically redlined as a result of housing policy experience higher air temperatures than urban areas outside of redlined areas.

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

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

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

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

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

(8) In consideration of the environmental, public, and customer benefits, the legislature intends to encourage policies for the state's utilities that will promote shade tree and cool roof programs to facilitate energy conservation and mitigate urban heat island impacts." [2021 c 11 s 1.]

Findings—1993 c 204: See note following RCW 35.92.390.

Effective date—Contingency—1979 ex.s. c 239: See note following RCW 35.92.360.