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S T A T E O F R H O D E I S L A N D

IN GENERAL ASSEMBLY

JANUARY SESSION, A.D. 2010

A N A C T

RELATING TO HEALTH AND SAFETY -- CLIMATE RISK REDUCTION ACT

Introduced By: Senator Joshua Miller

Date Introduced: February 11, 2010

Referred To: Senate Environment & Agriculture

It is enacted by the General Assembly as follows:

SECTION 1. Title 23 of the General Laws entitled "HEALTH AND SAFETY" is hereby amended by adding thereto the following chapter:

CHAPTER 84

THE RHODE ISLAND CLIMATE RISK REDUCTION ACT OF 2010

23-84-1. Short title. – This chapter shall be known and may be cited as “The Rhode Island Climate Risk Reduction Act of 2010.”

23-84-2. Legislative findings. -- It is hereby found and declared by the general assembly as follows:

(1) Climate change impact are already arriving in Rhode Island: Average temperatures in the state have increased by one point five degrees (1.5?F) since 1970, and mean winter temperatures in the state are up by four degrees (4?F). Droughts are becoming longer and more frequent, storms cause worse flooding, and sea level is measurably rising. Gases released by fossil fuel use explain most of these trends very well; since these gases stay in the atmosphere and trap heat for decades, Rhode Island is locked into serious disruptions in our way of life.

(2) If emissions continue at the current high rate, the annual number of days over ninety degrees (90?F) is expected to grow sharply from about five (5) per year today to about fifty to sixty (50-60) per year at the end of the century. Rhode Island is expected to experience roughly twenty five (25) days over one hundred (100?F) degrees every summer if we continue on a high emissions pathway. Under these scenarios, Rhode Island’s summer heat index in 2100 will

resemble Georgia's current summers.

(3) Rhode Island's residents and the ecosystems that sustain us face increasing risks of three (3) main sorts: rising temperatures (Which put stress on human health and ecosystems), more extreme weather (bringing heavy thunderstorms and flooding, heat waves and more intense hurricanes), and the pounding of the state's over four hundred (400) miles of coastline by storm surges and rising waters.

(4) Communities around the United States and the world are beginning to address these increased risks by adjusting their building codes, improving and updating their emergency plans, identifying their greatest vulnerabilities and prioritizing actions to address them, and incorporating climate change projections in planning for long-term infrastructure investments. Rhode Island can learn from and build upon these efforts. Some communities are even discovering opportunities in this crisis to address longstanding vulnerabilities, and the potential to develop new industries to supply adaptation technology and advice to communities coming after us.

(5) Potential federal climate change legislation, which passed the House of Representatives in June 2009 as the Waxman-Markey Bill, is likely to provide significant federal funding and other resources to help states and localities begin planning and taking adaption actions. To receive these funds, state governments must complete climate change response plans; this report seeks to assist the state in beginning the process of preparing such a plan.

(6) This act seeks to protect the historic culture, heritage, current and future well-being of the population of the State of Rhode Island while helping move the state to an active response to climate change impacts, by identifying some of the most critical issues that will have to be addressed, any by investigating and implementing cost-effective solutions for the state and its localities.

(7) Tree canopy cover is a very useful and cost-effective adaptation to climate change, particularly in the urban environment. In particular, increasing urban tree canopy cover has been found to reduce summer high temperatures and increase winter low temperatures, reduce energy consumption, have a positive impact on storm-water management, improve ground-water quality and have a positive impact on air quality.

(8) Increasing tree canopy cover will also help the state achieve its goal of mitigating carbon dioxide emissions by enhancing biotic sequestration and reducing energy consumption.

(9) Increasing tree canopy cover could create new green economy jobs because of labor required for raising, planting, and maintaining the (urban) forest.

(10) Trees deliver three million three hundred thousand dollars ($3.33) in benefits each

year for every one dollar ($1.00) spent according to a 2008 study conducted by the city of Providence.

(11) An October 2008 study by the National Research Council found that some of the benefits of green infrastructure include a reduction of storm water runoff, surface water discharge, storm water pollution, and storm water flows.

(12) While increasing the urban tree canopy is critical to reducing the urban heat island effect, strategies incorporating other forms of green infrastructure, including green roofs and walls, hold significant cooling potential; a 2007 study in Bioscience revealed that if the city of Toronto greened fifty percent (50%) of its roof space, the temperature of the entire city would drop by two degrees (2?), and because there is even more wall space than roof space, green facades and living walls are ideal supplements.

(13) Besides lowering costs and creating green jobs, green infrastructure adds to the economic value and sales appeal of commercial real estate and increases office occupancy rates; it can also change people's perceptions of their neighborhoods, reduce violence and crime, and increase neighborhood stability.

23-84-3. Definitions. – As used in this chapter:

(1) "Tree canopy cover" shall mean the percentage cover of the layer of tree mass that covers the ground when viewed from above.

(2) "Tree" means single trunk with diameter at breast height (DBH) greater than ten (10) centimeters.

(3) "Urban forest" means trees on public or private land within any municipality containing a population of one hundred thousand (100,000) or more residents.

(4) "Designated municipal authorities" means the municipal agency deemed the most appropriate recipient of funds by the Rhode Island department of environmental management.

(5) "Available roof space" means the total area of a building or building addition excluding:

(i) Areas designated for renewable energy devices;

(ii) Private terraces no greater in area than the floor of the abutting residential unit at the roof level; and

(iii) In the case of a residential building or a building addition to a residential building, outdoor amenity space up to a maximum of two (2) square meters per dwelling unit contained in the residential building or building addition to the residential building.

(6) "Bioretention area" means:

(i) Systems and practices that use or mimic natural processes to infiltrate, evapotranspire,

or reuse storm water on the site where it occurs rather than transporting the water to a stream or treatment facility; including plants native to the state, and

(ii) Includes rain gardens, or small bioretention areas, which can be built into the space between streets and sidewalks in the form of low-lying, vegetated depressions (generally three (3) to six (6) inches deep) which have absorbent soils that temporarily collect storm water runoff from impervious surfaces and allow the runoff to slowly percolate into the "soil," as defined by the rainscaping campaign.

(7) "Disincentive" means and includes regulations, financial constraints or other yet-unnamed barriers impeding the implementation of green infrastructure.

(8) "Eligible entity" means and includes homeowners, non-profit organizations and small businesses, K-12 educational institutions and municipalities.

(9) "Green façade" means specified plants growing from the ground up a wall using a frame or cables.

(10) "Green infrastructure" means any storm water management technique that preserves, restores, enhances, or mimics natural hydrology; includes methods that promote absorption, uptake, percolation, evapotranspiration, and filtration by soil and plant life; or includes the preservation or restoration of:

(i) Natural topography, including hills, plains, ravines, and shorelines;

(ii) Ecology, including forests, grasslands, and deserts;

(iii) Bodies of water, including lakes, flood plains, and wetlands; and

(iv) Native soil characteristics of composition, structure, and transmissivity.

(11) "Gross floor area" means the total area of each floor level of a building, above and below average grade, measured from the exterior of the main wall of each floor level, including voids at the level of each floor, such as an atrium, mezzanine, stairwell, escalator, elevator, ventilation duct or utility shaft, but excluding areas used for the purpose of parking or loading.

(12) "Incentives" means financial support in the form of grants to eligible entities for the realization of green infrastructure plans.

(13) "Living wall" means an arrangement of planters, filled with specified vegetation, installed to face outwards from the side of a wall; living walls require an irrigation system because of the growth of plant roots is inhibited.

(14) "State" means the State of Rhode Island; specifically

(i) The Department of Environmental Management; and

(ii) The Building Code Commission

(15) "Urban heat island means a metropolitan area that is significantly warmer than its

surrounding rural areas.

23-84-4. Extreme weather alert systems. -- (1) The emergency management agency shall, pursuant to the provisions of section 30-15-43, develop and utilize an automated alert system for hurricanes and periods of extreme weather and/or other climate related threats to health and safety.

23-84-5. Green roofs. -- Every building or building addition constructed in this state after January 1, 2011 with a gross floor area of two thousand (2,000) square meters or greater shall include a green roof with a coverage of available roof space in accordance with the following chart:

Gross Floor Area (Size of Building)	Coverage of Available Roof Space (Size of Green Roof)
2,000 - 4,999 m2	20%
5,000 - 9,999 m2	30%
10,000 – 14,999 m2	40%
15,000 – 19,999 m2	50%
20,000 – m2 or greater	60%

23-84-6. Tree canopy cover. -- Rhode Island municipalities containing a population of one hundred thousand (100,000) or more residents shall achieve thirty percent (30%) tree canopy cover by 2020. This target will be supported with an appropriation of five hundred thousand dollars ($500,000) in grants to be dispersed to designated municipal authorities. Municipal authorities shall be responsible for the use of these funds and the siting of new trees. At the request of municipal authorities, the Rhode Island department of environmental management shall offer the use of equipment and personnel, including foresters, under its jurisdiction.

23-84-7. Removal of disincentives. -- The department of environmental management shall review laws at the state, county, and city levels that may obstruct the implementation of above infrastructure, and hear, consider and authorize any revision of home owner association regulations or other barriers (i.e., historic preservation regulations) as encountered by parties attempting to promote or actualize green infrastructure, and as submitted by said parties in a form to the department of environmental management.

23-84-8. Reporting. -- (a) No later than December 1, 2013, and biennially thereafter, the department shall prepare and transmit, in writing, a report to the governor, to the general treasurer and to the general assembly, on the status of the climate risk reduction efforts established pursuant to this act.

(b) No later than December 1, 2013, and annually thereafter, the department shall

prepare and transmit, in writing, a report to the governor and to the general assembly on the state's progress in meeting the goals established by this chapter. Such report shall include a summary of the approved plans established under this chapter and the requirements for each state agency to adopt regulations or other programs pursuant to those plans, and shall attach a report from each such agency describing its compliance with the requirements of the plans.

23-84-9. Additional provisions - Severability. -- (a) Any regulation adopted by the department or any other state agency pursuant to this chapter shall ensure that the climate risk reductions achieved are real, permanent, quantifiable, and verifiable.

(b) Nothing in this chapter shall relieve any person, entity, or public agency of compliance with other applicable federal, state, or local laws or regulations, including state air and water quality requirements, and other requirements for protecting public health or the environment.

(c) The provisions of this chapter are severable. If any provision of this chapter or its application is held invalid, that invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.

(d) Nothing in this chapter shall limit the existing authority of a state entity to adopt and implement greenhouse gas emissions reduction measures.

SECTION 2. Sections 45-22.2-3 and 45-22.2-5 of the General Laws in Chapter 45-22.2 entitled "Rhode Island Comprehensive Planning and Land Use Act" are hereby amended to read as follows:

45-22.2-3. Legislative findings and intent -- Statement of goals. -- (a) Findings. - The general assembly recognizes these findings, each with equal priority and numbered for reference only, as representing the need to substantially revise present enabling legislation and, therefore, declares that:

(1) The absence of accurate technical information and comprehensive planning by municipal government as a rational basis for long-term physical development creates conflicting requirements and reactive land use regulations and decisions.

(2) Municipal government is responsible for land use, but lacks the technical information and financial resources to plan for orderly growth and development, and the protection and management of our land and natural resources.

(3) Land, water, and air are finite natural resources. Comprehensive planning must provide for protection, development, use, and management of our land and natural resources.

(4) Comprehensive planning and its implementation will promote the appropriate use of land. The lack of comprehensive planning and its implementation has led to the misuse, underuse,

and overuse of our land and natural resources.

(5) The coordination of growth and the intensity of development with provisions for services and facilities is a proper objective of comprehensive planning.

(6) Comprehensive planning is needed to provide a basis for municipal and state initiatives to insure all citizens have access to a range of housing choices, including the availability of affordable housing for all income levels and age groups.

(7) Municipal comprehensive planning must recognize and address land uses in contiguous municipalities and encourage cooperative planning efforts by municipalities.

(8) Comprehensive planning will provide a basis for improved coordination so that local plans reflect issues of local, regional, and statewide concern. Comprehensive planning will insure that municipal government has a role in the formulation of state goals and policies.

(9) Improved coordination is necessary between state and municipal governments to promote uniform standards and review procedures as well as consistency in land use regulations.

(10) Climate change is affecting Rhode Island. Comprehensive planning will help mitigate harmful impacts upon the economy, natural, historic and cultural resources, public and private infrastructure, and public health and safety.

(b) Intent. - The general assembly declares it is the intent of this chapter to:

(1) Establish, in each municipality, a program of comprehensive planning that is implemented according to the standards and schedule contained in this chapter.

(2) Provide financial assistance for the formulation and implementation of the comprehensive plan.

(3) Provide financial assistance to establish a uniform data and technical information base to be used by state and municipal governments and their agencies.

(4) Establish standards and a uniform procedure for the review and approval of municipal comprehensive plans and state guide plans and their consistency with overall state goals, objectives, standards, applicable performance measures, and policies.

(5) Establish a procedure in comprehensive planning at state and municipal levels which will accommodate future requirements.

(c) Goals. - The general assembly hereby establishes a series of goals to provide overall direction and consistency for state and municipal agencies in the comprehensive planning process established by this chapter. The goals have equal priority and are numbered for reference only.

(1) To promote orderly growth and development that recognizes the natural characteristics of the land, its suitability for use, and the availability of existing and proposed public and/or private services and facilities.

(2) To promote an economic climate which increases quality job opportunities and overall economic well being of each municipality and the state.

(3) To promote the production and rehabilitation of year-round housing that achieves a balance of housing choices, for all income levels and age groups, which recognizes the affordability of housing as the responsibility of each municipality and the state and which facilitates economic growth in the state.

(4) To promote the protection of the natural, historic and cultural resources of each municipality and the state.

(5) To promote the preservation of the open space and recreational resources of each municipality and the state.

(6) To provide for the use of performance-based standards for development and to encourage the use of innovative development regulations and techniques that promote the development of land suitable for development while protecting our natural, cultural, historical, and recreational resources, and achieving a balanced pattern of land uses.

(7) To promote consistency of state actions and programs with municipal comprehensive plans, and provide for review procedures to ensure that state goals and policies are reflected in municipal comprehensive plans and state guide plans.

(8) To ensure that adequate and uniform data are available to municipal and state government as the basis for comprehensive planning and land use regulation.

(9) To ensure that municipal land use regulations and decisions are consistent with the comprehensive plan of the municipality, and to insure state land use regulations and decisions are consistent with state guide plans.

(10) To encourage the involvement of all citizens in the formulation, review, and adoption of the comprehensive plan.

(11) To preserve existing government subsidized housing for persons and families of low and moderate income and to increase the overall supply of year-round housing, including housing for low and moderate income persons and families.

(12) To mitigate the harmful effects of climate change, including, but not limited to, sea-level rise and coastal flooding.

45-22.2-5. Formulation of comprehensive plan by cities and towns. -- (a) There is established a program of local comprehensive planning to address the findings and intent and accomplish the goals of this chapter. Rhode Island's cities and towns, through the exercise of their power and responsibility pursuant to the general laws, applicable articles of the Rhode Island Constitution, and subject to the express limitations and requirements of this chapter, shall:

(1) Plan for future land use which relates development to land capability, mitigates dangers posed by climate change and explores adaptation options for its residents, protects our natural resources, promotes a balance of housing choices, encourages economic development, preserves and protects our open space, recreational, historic and cultural resources, and provides for orderly provision of facilities and services;

(2) Adopt, update, and amend comprehensive plans including implementation programs consistent with the provisions of this chapter;

(3) Conform its zoning ordinance and map with its comprehensive plan within eighteen (18) months of plan adoption and approval as provided for in section 45-22.2-9;

(4) Do all things necessary to carry out the purposes of this chapter.

(b) Each municipality shall prepare and adopt a comprehensive plan which is consistent with the goals, findings, intent, and other provisions of this chapter, or amend its existing comprehensive plan to conform with the requirements of this chapter.

(c) Each municipality shall submit its proposed comprehensive plan and existing land use regulation to the director.

(d) Each municipality shall submit any amended comprehensive plan to the director.

SECTION 3. Sections 44-57-2 and 44-57-4 of the General Laws in Chapter 44-57 entitled "Residential Renewable Energy System Tax Credit" are hereby amended to read as follows:

44-57-2. Definitions. – As used in this chapter unless the context otherwise requires:

(1) "Active" means a solar renewable energy system that uses mechanical parts to collect, store, and move heat;

(2) "Applicant" means a party who files a Rhode Island tax return and applies for a residential alternative energy device tax credit under this section;

(3) "Application form" means the form that goes to the state energy office that will determine if systems meet the requirements for this tax credit;

(4) "Array" means any number of photovoltaic modules connected together electrically to provide a single electrical output;

(5) "BTU" means British thermal unit;

(6) "Consumer disclosure" means a form provided by the state energy office describing the renewable energy system. The contractor shall fill this form out and give it to the buyer of a renewable energy system. It shall show estimated energy savings of the renewable energy system, required conservation items, required maintenance, and freeze protection information and other data required by the state energy office;

(7) "Consumer information" means literature that is provided by the state energy office to contractors, solar dealers, and consumers informing them about the tax credit contained in this chapter and general consumer information;

(8) "Contractor" means a person or company who sells and/or installs renewable energy systems;

(9) "Contractors' certification" means a contractor system certification issued by the state energy office to a contractor for a specific renewable energy system. The system shall allow the contractor to install that device for the tax credit without getting a separate system certification for each job;

(10) "Contractors' registration board" means the board established pursuant to the provisions of chapter 65 of title 5 responsible for issuing contractors' registration numbers and cards to contractors who are required by state law to be registered. The board is also responsible for ensuring that all registered contractors abide by the guidelines of the contractors' registration board;

(11) "Director" means the director of the Rhode Island state energy office or the director's representative;

(12) "Domestic water heating" means the heating of water used in a dwelling for bathing, clothes washing, dishwashing, and other related functions;

(13) "Dwelling" means real property inhabited as a principal or secondary residence and located within this state. "Dwelling" includes, but is not limited to, an individual unit within multiple unit residential housing. For purposes of this subdivision: (i) "Principal residence" means the dwelling owned by the applicant who on the date of the application has legal title to a dwelling, including the mortgagor under a duly recorded mortgage of real property, the trustor under a duly recorded deed of trust, or a purchaser under a duly recorded contract for the purchase of real property, and who inhabits the dwelling for no fewer than fourteen (14) days in the calendar year for which the credit is claimed;

(ii) "Secondary residence" means vacation property owned by the applicant;

(iii) Primary or secondary residences do not include motor homes or recreational vehicles;

(14) "Grid interconnect form" means the form required on "grid-connected photovoltaic systems" that is signed by the contractor, the master electrician who makes the grid interconnection, and the homeowner. This form shall be sent to both the participating utility company and the state energy office;

(15) "Hybrid" means a renewable energy system that uses some active and passive

elements as part of the system;

(16) "Installing contractor" means the contractor or subcontractor who actually installs the renewable energy system. This may or may not be the same person or company as the solar dealer;

(17) "Inverter" means the device used to convert direct current (DC) to alternating current (AC) in a photovoltaic system;

(18) "kWh" means kilowatt-hour; one kWh = 3,413 BTUs;

(19) "Module" means the smallest non-divisible self-contained physical structure housing interconnected photovoltaic cells and providing a single DC electrical output;

(20) "MM" means million;

(21) "Net cost" means what the applicant paid to purchase the renewable energy system. Net cost includes permit and inspection fees. Net costs may include the value of federal tax credits, grants, or utility incentives. Net cost shall not include service contracts, rebates, discounts, or refunds;

(22) "Owner-built" means a renewable energy system that is assembled and installed on an owner's property and with an owner's labor only;

(23) "Passive" means a renewable energy system that relies on heated liquid or air rising to collect, store, and move heat without mechanical devices;

(24) "Placed in service" means the date when a renewable energy system is ready and available to produce useable energy;

(25) "Solar dealer" means the person or company who signs a contract or proposal with a customer to provide and/or install solar equipment;

(26) "Solar domestic hot water system" means a configuration of solar collectors, pump, heat exchanger, and storage tank designed to heat water. System types include forced circulation, integral collector storage, thermosyphon, and self-pumping. For the purpose of determining system yields, a configuration of components is considered a new system if changes occur in any of the following: type or size of collectors; heat exchanger type or effectiveness; size of storage tank; or system type;

(27) "State energy office" means the Rhode Island state energy office, also known as the governor's office of energy assistance, within the department of administration;

(28) "System approval" means an approval given to renewable energy systems that meet all of the requirements of the state energy office;

(29) "System certification" means certification that a renewable energy system as described in the application meets criteria for the tax credit;

(30) "Used equipment" means any solar tank or collector which previously has been installed or any piece of equipment not under current manufacturers' warranty;

(31) "Verification form" means a form filed with the division of taxation (upon request) by an applicant claiming eligibility for the tax credit. A contractor shall submit a copy of the form to the state energy office;

(32) "Watt" means the electrical unit of power or rate of doing work. The rate of energy transfer equivalent to one ampere of electrical current at one-volt potential;

(33) "Wh" means watt hours-power consumed by a load over a specified time. As used herein, 1,000 Wh = one kilowatt-hour (kWh);

(34) "Wind energy system" means a system that produces electricity through the use of wind generators or wind turbines. The electricity shall be used directly, as in water pumping applications, or shall be stored in batteries for household usage. Wind energy systems shall be used alone, or they shall be used as part of a hybrid system, in which their output is combined with photovoltaics and/or a fossil fuel generator;

(35) "Wind energy system dealer" means the person or company who signs a contract or proposal with a customer to provide and/or install wind energy equipment;

(36) "Wp" means Watts peak, or the rated maximum power output of a photovoltaic device measured under standard conditions of twenty-eight degrees Celcius (28 degrees C) cell temperature and 1000 W/m2 incident sunlight; and

(37) "Geothermal system" means a system that produces and stores energy to heat buildings, cool buildings or produces hot water.

(38) “Green roof” means an addition to a roof of an eligible building that covers at least fifty percent (50%) of such building’s eligible rooftop space and includes: (i) A weatherproof and waterproof roofing membrane layer that complies with local construction and fire codes; (ii) A root barrier layer; (iii) An insulation layer that complies with state and local construction and fire codes; (iv) A drainage layer that complies with local construction and fire codes and is designed so the drains can be inspected and cleaned; (v) A growth medium, including natural or simulated soil, with a depth of at least two inches; (vi) If the depth of the growth medium is less than three inches, an independent water holding layer that is designed to prevent the rapid drying of the growth medium, such as a non-woven fabric, pad or foam mat, unless the green roof is certified not to need regular irrigation to maintain live plants; and (vii) A vegetation layer, at least eighty percent (80%) of which must be covered by live plants such as sedum or equally drought resistant and hardy plant species.

44-57-4. Eligible devices. -- (a) To earn a tax credit pursuant to the provisions of this

chapter, the renewable energy system shall be either a photovoltaic system, a solar domestic hot water system, an active solar space heating system, a green roof, a geothermal system or a wind-generating system:

(1) For photovoltaic systems, the system must be able to generate electricity directly from sunlight and be able to have it provide electricity for the home. These systems can either be "stand alone" systems that use batteries for storage of electricity or "grid interconnected" systems that allow the electric meter to spin backwards during periods where the photovoltaic system is generating more electricity than the load of the house. These systems must have an electrical permit that has had a final inspection done by the electrical inspector for the city or town of the installation.

(2) For solar domestic hot water systems, the system must consist of solar collectors, pump, heat exchanger, and storage tank designed to heat water. These systems must have a plumbing permit that has had a final inspection done by the plumbing inspector for the city or town of the installation.

(3) For solar space heating systems, the system must consist of solar collectors, pump, heat exchanger, storage tank(s), and a method of distributing the heat to areas of the house that need heat. These systems must have a mechanical or plumbing permit and a final inspection done by the mechanical or plumbing inspector for the city or town of the installation.

(4) (a) For wind energy systems, the energy produced by wind generation can be used directly, as in water pumping applications, or it can be stored in batteries for household usage. Wind generators can be used alone, or they can be used as part of a hybrid system, in which their output is combined with photovoltaics, and/or a fossil fuel generator, and shall:

(i) Be a system that is built, installed, and operated in accord with the manufacturer's specifications;

(ii) Be a system with manufacturers' warranties against defects in products and materials;

(iii) Be a system that complies with general and specific standards set forth in this chapter as they apply to renewable energy systems. These shall include:

(A) A photovoltaic system;

(B) A solar domestic hot water system;

(C) An active solar space heating system;

(D) A wind energy system; and

(E) A geothermal system.

(5) For geothermal systems, the system shall use conventional vapor compression heat pumps to extract low-grade solar energy from the earth. The system shall be used to heat

buildings, cool buildings and/or provide hot water. The system shall include all geothermal energy collectors, pumps, including both water to water and water to air type pumps, heat exchangers, storage tanks and heat distribution equipment. Such systems shall have a mechanical permit that has had a final inspection done by the mechanical/plumbing inspector for the city or town of the installation.

(6) For green roofs, the roof shall be an addition to a roof of an eligible building that covers at least fifty percent (50%) of such building's eligible rooftop space and includes; (i) A weatherproof and waterproof roofing membrane layer that complies with local construction and fire codes; (ii) A root barrier layer; (iii) An insulation layer that complies with state and local construction and fire codes; (iv) a drainage layer that complies with local construction and fire codes and is designed so the drains can be inspected and cleaned; (v) A growth medium, including natural or simulated soil, with a depth of at least two inches (2"); (vi) If the depth of the growth medium is less than three inches, an independent water holder layer that is designed to prevent the rapid drying of the growth medium, such as a non-woven fabric, pad or foam mat, unless the green roof is certified not to need regular irrigation to maintain live plants; and (g) A vegetation layer, at least eighty percent (80%) of which must be covered by live plants such as sedum or equally drought resistant and hardy plant species.

~~(6)~~(7) Notwithstanding any other provisions of the general laws, for purposes of local municipal property tax assessment, qualifying renewable energy systems shall not be assessed at more than the value of a conventional heating, conventional hot domestic hot water systems, or energy production capacity that otherwise could be necessary to install in the building. Qualifying systems shall include photovoltaic systems (renewable energy systems), solar domestic hot water systems, and active solar space heating systems.

(b) The following systems and/or devices shall not be used to qualify for a solar tax credit:

(1) A passive solar space heating system;

(2) Passive solar hot water system;

(3) A sunspace or solar greenhouse;

(4) Photovoltaic systems installed on boats or recreational vehicles;

(5) Solar pool collectors;

(6) Existing renewable energy systems;

(7) Used equipment;

(8) Repairs and replacements of existing renewable energy systems; and

(9) Wind systems installed on boats or installed vehicles.

SECTION 4. Creation of study commission.- There is hereby created an independent Blue Ribbon Commission consisting of 21 members:

One of whom shall be a member of the Senate appointed by the Senate President;

One of whom shall be members of the House of Representatives, appointed by the Speaker of the House;

One of whom shall be the Director of the Department of Environmental Management or his designee;

One of whom shall be the Director of Coastal Resources Management Center or his designee;

One of whom shall be the Chair of the Rhode Island Bays, Rivers, and Watersheds Coordination Team;

One of whom shall be the Director of the Rhode Island Department of Health or his designee;

One of whom shall be the Chief of Staff of the Water Resources Board or his designee;

One of whom shall be the Director of the Division of Planning or his designee;

One of whom shall be the Director of the Division of Planning or his designee;

One of whom shall be the Director of the Rhode Island Emergency Management Agency or his designee;

One of whom shall be the Mayor of the city of Providence or his designee;

One of whom shall be the Mayor of the city of Warwick or his designee;

One of whom shall be the Mayor of the city of Cranston or his designee;

Two (2) of whom shall be representatives of environmental non-profit organizations, selected by the Environment Council of Rhode Island;

Two (2) of whom shall be representatives of business, selected by the Apeiron Institute for Sustainable Living;

Two (2) of whom shall be representatives of urban low-income community-based non-profit organizations, selected by the Environmental Justice League of Rhode Island;

Two (2) of whom shall be representatives of higher education institutions, appointed by the governor;

One of whom shall be a representative of a health care workers' union, selected by RI Jobs with Justice.

The purpose of said commission shall be to study the projected impacts of climate change on Rhode Island, especially on its most vulnerable propositions, and to indentify and report methods of adapting to these climate change impacts in order to reduce possible harm and

increase sustainability. Said report shall include, but not be limited to, findings and recommendations that address the following:

(1) Conduct a comprehensive overview of the risks Rhode Island may face as a result of rising temperatures and sea level, and more intense droughts and rainfall events.

(2) Investigate the vulnerability of critical public facilities, such as hospitals, schools, sewage treatment plants, etc., to sea level rise and extended extreme summer heat.

(3) Research tree species that will be most resilient to climate change expected in Rhode Island, as well as ways to secure additional funding to support the expansion of urban tree canopy to thirty percent (30%).

(4) Identify ways to increase Rhode Islanders' access to critical community health services that are expected to become even more important as a result of projected climate impacts.

(5) Investigate storm water runoff options for Phase 2 Narragansett Bay Commission's Combined Sewer Overflow project, including small-scale projects such as increasing impervious surfaces in residential areas (such as yards and garden).

(6) Explore ways to notify of home owners and renters of not only a property's flooding history but also its expected risk under projected levels of sea level rise.

(7) Explore possibilities to make funds available for government entities and non-profits to implement green infrastructure projects on their properties, including green roofs, walls, and bioretention areas.

(8) Investigate possibilities to expand energy efficiency and weatherization programs as an adaptation option.

(9) Review possibilities to amend regulations to allow street parking to reduce impervious surfaces in urban areas and runoff.

(9) Investigate how to support local agriculture, including urban community gardens, including on the relocated I-195, and encourage municipalities to foster neighborhood gardens in empty lots and parks.

(10) Develop a plan to expand access to cooling and relief centers, by extending hours at libraries, community centers and opening pools to the public.

Forthwith the members of the commission shall meet at the call of the President of the Senate and organize. The President of the Senate shall appoint a chairperson from among the legislators. Vacancies in said commission shall be filled in like manner as the original appointment. The membership of said commission shall receive no compensation for their services. All departments and agencies of the state, shall furnish such advice ad information,

documentary and otherwise, to said commission and its agents as is deemed necessary or desirable by the commission to facilitate the purposes of this resolution.

The Joint Committee on Legislative Services is hereby authorized and directed to provide suitable quarters for said commission.

The commission shall report its findings and recommendations to the Governor and the General Assembly no later than February 2, 2011 and said commission shall expire on July 1, 2011.

SECTION 5. This act shall take effect upon passage.

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EXPLANATION

BY THE LEGISLATIVE COUNCIL

OF

A N A C T

RELATING TO HEALTH AND SAFETY -- CLIMATE RISK REDUCTION ACT

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This act would provide for measures to protect and move the state to an active response to climate change impacts, by identifying some of the most critical issues that will have to be addressed, and by investigating and implementing cost-effective solutions for the state and its localities.

This act would take effect upon passage.

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