

**CHAPTER 103: RENEWABLE RESOURCES FUND REGULATIONS: SELECTION CRITERIA FOR DEMONSTRATION PROJECTS, COST-EFFECTIVENESS REQUIREMENTS FOR RENEWABLE ENERGY REBATES AND QUALITY ASSURANCE SYSTEM**

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**SUMMARY:** The basis of this rule is to establish rules to implement objectives for the Renewable Resource Fund as specified in Title 35-A M.R.S.A. §10121.

The rules include selection criteria for the competitive bid process for renewable energy research and development projects by Maine educational institutions; selection criteria for the bid process for community demonstration projects is also included in this rule requiring use of cost-effectiveness and other factors in selecting projects to fund. Additionally this rule designates qualification criteria for rebates of renewable energy technologies including means of determining cost-effectiveness and meeting quality assurance requirements.

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**SECTION 1. SCOPE**

This Chapter applies to utilization of all Renewable Resource Funds for research and development projects, community demonstration projects using renewable energy technologies, and rebates for cost-effective renewable energy technologies.

**SECTION 2. DEFINITIONS**

1. **Board.** “Board” shall mean the Efficiency Maine Trust Board established under 35-A M.R.S.A. § 10103 and 5 M.R.S.A. § 12004-G(10-c).
2. **Cost-Effective Renewable Energy Technologies.** “Cost-Effective Renewable Energy Technologies” means a Renewable Energy Installation where the Net Present Cost over the Estimated Useful Life of the installation is exceeded by the expected annual savings to the owner providing Simple Payback. For the purposes of evaluating the program, the cost of the incentives plus program delivery shall not exceed the Net Present Benefits.
3. **Director.** “Director” means the Executive Director of Efficiency Maine Trust, appointed pursuant to 35-A M.R.S.A. § 10103.
4. **Energy Audit.** “Energy Audit” means an analysis conducted by a Participating Energy Advisor, using such procedures and standards, including any software program for this purpose, approved by the Director, of energy loss in a Qualifying Property to determine the savings to investment ratio and Estimated Useful Life of proposed Energy Savings Improvements.
5. **Energy Savings Improvement.** “Energy Savings Improvement” means an improvement to Qualifying Property that is new and permanently affixed to Qualifying Property and that:

- A. Will result in increased energy efficiency and reduced energy use and:
- (1) Meets or exceeds applicable United States Environmental Protection Agency and United States Department of Energy Star program or similar energy efficiency standards established or approved by the Trust; or
  - (2) Involves weatherization, including but not limited to, an energy audit, air sealing, insulating, and other energy efficiency improvements and test out, for residential property in a manner approved by the Trust; or
- B. Involves a Renewable Energy Installation system that meets or exceeds standards established or approved by the Trust.
- 6. Estimated Useful Life.** “Estimated Useful Life” means longest useful life of any Energy Savings Improvement as provided by DOE National Renewable Energy Laboratory (NREL) or stated in the International Association of Certified Home Inspectors, Inc. (InterNACHI) “Estimated Life Expectancy Chart” **attached hereto as Appendix A.**
  - 7. Participating Energy Advisor.** “Participating Energy Advisor” means a person or entity who provides Energy Audits and is qualified to do so as evidenced by having a current certification by BPI.
  - 8. Net Present Benefit.** “Net Present Benefit” means the present value of all avoided costs over the Estimated Useful Life of a project.
  - 9. Net Present Cost.** “Net Present Cost” means the present value of all project costs inclusive of any rebate or tax incentives due to the owner.
  - 10. Qualifying Property.** “Qualifying Property” means real property as defined in Maine Law.
  - 11. Registered Vendor.** “Registered Vendor” means a contractor or installer of Energy Saving Improvements who (i) has registered with the Trust, (ii) has provided the Trust with its name, contact information and location, (iii) has provided the Trust with a copy of a certificate of insurance showing that it has at least \$500,000 in commercial general liability coverage and workers’ compensation liability insurance as required by Maine law; and (iv) meets any certification or similar requirements of the Trust from time to time.
  - 12. Renewable Energy Installer.** “Renewable Energy Installer” means a Registered Vendor who meets any certification or similar requirements as specified by the Trust from time to time for specified Renewable Energy Installations.
  - 13. Renewable Energy Installation.** “Renewable Energy Installation” means a fixture, product, system, device or interacting group of devices installed behind the meter at a

Qualifying Property, or on contiguous property under common ownership, that produces energy or heat from renewable sources, including, but not limited to, photovoltaic systems, solar thermal systems, biomass systems, landfill gas to energy systems, geothermal systems, wind systems, wood pellet systems and any other systems eligible for funding under federal Qualified Energy Conservation Bonds or federal Clean Renewable Energy Bonds.

**14. Residential Property.** “Residential Property” is defined to mean Qualifying Property, consisting of a residential housing structure located in the State of Maine that contains no more than 4 units, each of which is suitable for occupancy by one or more persons and no more than 15 percent of the area is used in a trade, business or other commercial venture (except rental units in 2 to 4 unit residential properties) and includes a condominium unit, and “manufactured housing” as defined in 30-A M.R.S.A. § 4358(1)(A).

**15. Simple Payback.** “Simple Payback” is that the amount of time it will take to recover the initial investment in energy savings will be less than the Expected Useful Life of the installation. Calculated by dividing the Net Present Cost by the expected annual energy cost savings and comparing to the Expected Useful Life of the installed measures.

**16. Trust.** “Trust” means the Efficiency Maine Trust established in 35-A M.R.S.A. § 10103.

### SECTION 3. SELECTION CRITERIA FOR COMPETITIVE BID PROCESSES

**1. Selection criteria of renewable resource research and development projects.** The following are selection criteria for distribution of funds through competitive bid process to the University of Maine System, the Maine Maritime Academy or the Maine Community College System:

- A. Renewable resource research and development project bids shall be selected on the basis of providing educational value and including means for recording and reporting on project results over the duration of the project to the Trust; and
- B. Renewable resource research and development project bids shall be selected on the basis of including novel use of technology, demonstration, testing or application of renewable energy technology; and
- C. Renewable resource research and development project bids shall be selected on the basis of capacity to demonstrate long-term feasibility of developed or utilized technology as a scalable and cost-effective means of generating, delivering or utilizing renewable energy.

- 2. Selection criteria of community demonstration projects using renewable energy technologies.** The following are selection criteria for distribution of funds through competitive bid process to Maine-based nonprofit organizations that qualify under the federal Internal Revenue Code, Section 501(c)(3), consumer-owned transmission and distribution utilities, community-based nonprofit organizations, community action programs, municipalities, quasi-municipal corporations or districts as defined in Title 30-A, section 2351, community-based renewable energy projects as defined in section 3602, subsection 1 and school administrative units as defined in Title 20-A, section 1 for community demonstration projects using renewable energy technologies;
- A. Community demonstration renewable energy project bids shall be selected on the basis of providing value to a community and including means for recording and reporting on project results over the duration of the project to the Trust; and
  - B. Community demonstration renewable energy project bids shall be selected on use of cost-effective renewable energy technologies; and
  - C. Community demonstration renewable energy project bids shall be selected on the basis of capacity to demonstrate broad base support of the project from the community.

#### **SECTION 4. QUALIFICATION CRITERIA FOR REBATES**

- 1. Cost-Effectiveness.** The Trust will only provide rebates to Renewable Energy Installations where the Net Present Cost of the project is exceeded by the Net Present Benefit of avoided costs over the Estimated Useful Life of the equipment to the owner.
- 2. Quality Assurance.** The Trust will only provide rebates for cost-effective renewable energy technologies that adhere to quality assurance requirements as follows:
  - (1) Configuration and capacity of system is consistent with standards specified or selected by the Trust from time to time.
  - (2) Installer provides owner and Trust an energy model using computer software approved by the Trust, demonstrating expected system output, size, configuration, and cost-effectiveness.
  - (3) Owner agrees to random inspection of the renewable energy installation and operation by the Trust or its agent upon appropriate notification.
- 3. Rebate Amounts.** Rebate amounts for all cost-effective renewable energy technologies will be a function of the avoided fuel costs displaced by the renewable energy installation over the Estimated Useful Life consistent with investment to return ratios provided by the Triennial Plan.

- 4. **Consumer privacy.** The provisions of the federal Gramm-Leach-Bliley Act, 15 United States Code, Section 6801 et seq. (1999), and the applicable implementing federal regulations regarding the privacy of consumer information, apply to all consumer financial information obtained by the Trust or their designees in implementing the Renewable Resource Fund under this chapter.

**SECTION 6. QUALITY ASSURANCE SYSTEM**

- 1. The Trust will institute and maintain requirements for Participating Energy Advisors’, Renewable Energy Installers and Registered Vendors.
- 2. The Trust will maintain a program to inspect construction and/or installation of Energy Savings Improvements under the Renewable Resource Fund by a Renewable Energy Installer to determine that the improvements were properly constructed and/or installed and are operating properly.
- 3. All quality assurance inspections and testing shall be for the Trust’s benefit only. No Borrower, Municipality, nor any other person, may rely on such inspection or testing and such inspection or testing shall not constitute a warranty of any kind by the Trust or by any Municipality.

STATUTORY AUTHORITY: 35-A M.R.S.A. § 3210(9); 35-A M.R.S.A. § 10121(1); 35-A M.R.S.A. § 10121(2); 35-A M.R.S.A. § 10121(4).

EFFECTIVE DATE:

REPEALED AND REPLACED:

This rule, under the title “ ” was approved as to form and legality by the Attorney General on [ ]. It was filed with the Secretary of State on [ ] and became effective on [ ].

APPENDIX A

# InterNACHI's Standard Estimated Life Expectancy Chart for Homes

The following chart details the predicted life expectancy of appliances, products, materials, systems and components. (For homes located in Florida and the surrounding coastal region, please refer to [InterNACHI's Florida Estimated Life Expectancy Chart for Homes](#).)

**Consumers and inspectors and other professionals advising their clients should note that these life expectancies have been determined through research and testing based on regular recommended maintenance and conditions of normal wear and tear, and not extreme weather (or other) conditions, neglect, over-use or abuse. Therefore, they should be used as guidelines only, and not relied upon as guarantees or warranties.**

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Surface preparation and paint quality are the most important determinants of a paint's life expectancy. Ultraviolet (UV) rays via sunshine can shorten life expectancy. Additionally, conditions of high humidity indoors or outdoors can affect the lifespan of these components, which is why they should be inspected and maintained seasonally.

ADHESIVES, CAULK & PAINTS	YEARS
Caulking (interior & exterior)	5 to 10
Construction Glue	20+
Paint (exterior)	7 to 10
Paint (interior)	10 to 15
Roofing Adhesives/Cements	15+
Sealants	8
Stains	3 to 8

Appliance life expectancy depends to a great extent on the use it receives. Furthermore, consumers often replace appliances long before they become worn out due to changes in styling, technology and consumer preferences.

APPLIANCES	YEARS
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Air Conditioner (window)	5 to 7
Compactor (trash)	6
Dehumidifier	8
Dishwasher	9
Disposal (food waste)	12
Dryer Vent (plastic)	5
Dryer Vent (steel)	20
Dryer (clothes)	13
Exhaust Fans	10
Freezer	10 to 20
Gas Oven	10 to 18
Hand Dryer	10 to 12
Humidifier (portable)	8
Microwave Oven	9
Range/Oven Hood	14
Electric Range	13 to 15
Gas Range	15 to 17
Refrigerator	9 to 13
Swamp Cooler	5 to 15
Washing Machine	5 to 15
Whole-House Vacuum System	20

Modern kitchens are larger and more elaborate, and together with the family room, modern kitchens now form the “great room.”

<b>CABINETS &amp; STORAGE</b>	<b>YEARS</b>
Bathroom Cabinets	50+
Closet Shelves	100+
Entertainment Center/Home Office	10
Garage/Laundry Cabinets	70+
Kitchen Cabinets	50
Medicine Cabinet	25+
Modular (stock manufacturing-type)	50

Walls and ceilings last the full lifespan of the home.

<b>CEILING &amp; WALLS</b>	<b>YEARS</b>
Acoustical Tile Ceiling	40+ (older than 25 years may contain asbestos)
Ceramic Tile	70+
Concrete	75+
Gypsum	75
Wood Paneling	20 to 50
Suspended Ceiling	25+

<b>ELECTRICAL</b>	<b>YEARS</b>
Accessories	10+
Arc-Fault Circuit Interrupters (AFCIs)	30
Bare Copper	100+
Bulbs (compact fluorescent)	8,000 to 10,000+ hours
Bulbs (halogen)	4,000 to 8,000+ hours
Bulbs (incandescent)	1,000 to 2,000+ hours
Bulbs (LED)	30,000 to 50,000+ hours
Copper-Clad Aluminum	100+
Copper-Plated	100+
Fixtures	40
Ground-Fault Circuit Interrupters (GFCIs)	up to 30
Lighting Controls	30+
Residential Propane Backup Generators	12
Service Panel	60
<b>Solar Panels</b>	<b>20 to 30</b>
Solar System Batteries	3 to 12
<b>Wind Turbine Generators</b>	<b>20</b>

Thermostats may last 35 years but they are usually replaced before they fail due to technological improvements.

<b>HVAC</b>	<b>YEARS</b>
Air Conditioner (central)	7 to 15
Air Exchanger	15
Attic Fan	15 to 25
Boiler	40
Burner	10+
Ceiling Fan	5 to 10
Condenser	8 to 20
Dampers	20+
Dehumidifier	8
Diffusers, Grilles and Registers	25
Ducting	60 to 100
Electric Radiant Heater	40
Evaporator Cooler	15 to 25
Furnace	15 to 25
Gas Fireplace	15 to 25
<b>Heat Exchanger</b>	<b>10 to 15</b>
<b>Heat Pump</b>	<b>10 to 15</b>
Heat-Recovery Ventilator	20
Hot-Water and Steam-Radiant Boiler	40
Humidifier	12
Induction and Fan-Coil Units	10 to 15
Chimney Cap (concrete)	100+
Chimney Cap (metal)	10 to 20
Chimney Cap (mortar)	15
Chimney Flue Tile	40 to 120
Thermostats	35
Ventilator	7

The quality of plumbing fixtures varies dramatically. The mineral content of water can shorten the life expectancy of water heaters and clog showerheads. Also, some finishes may require

special maintenance with approved cleaning agents per the manufacturers in order to last their expected service lives.

<b>PLUMBING, FIXTURES &amp; FAUCETS</b>	<b>YEARS</b>
ABS and PVC Waste Pipe	50 to 80
Accessible/ADA Handles	100+
Acrylic Kitchen Sink	50
Cast-Iron Bathtub	100
Cast-Iron Waste Pipe (above ground)	60
Cast-Iron Waste Pipe (below ground)	50 to 60
Concrete Waste Pipe	100+
Copper Water Lines	70
Enameled Steel Kitchen Sink	5 to 10+
Faucets and Spray Hose	15 to 20
Fiberglass Bathtub and Shower	20
Gas Lines (black steel)	75
Gas Lines (flex)	30
Hose Bibs	20 to 30
Instant (on-demand) Water Heater	10
PEX	40
Plastic Water Lines	75
Saunas/Steam Room	15 to 20
Sewer Grinder Pump	10
Shower Enclosure/Module	50
Shower Doors	20
Showerheads	100+ (if not clogged by mineral/other deposits)
Soapstone Kitchen Sink	100+
Sump Pump	7
Toilet Tank Components	5
Toilets, Bidets and Urinals	100+
Vent Fan (ceiling)	5 to 10
Vessel Sink (stone, glass, porcelain, copper)	5 to 20+
Water Heater (conventional)	6 to 12
Water Line (copper)	50

Water Line (plastic)	50
Well Pump	15
Water Softener	20
Whirlpool Tub	20 to 50

The life of a roof depends on local weather conditions, building and design, material quality, and adequate maintenance. Hot climates drastically reduce asphalt shingle life. Roofs in areas that experience severe weather, such as hail, tornadoes and/or hurricanes may also experience a shorter-than-normal lifespan overall or may incur isolated damage that requires repair in order to ensure the service life of the surrounding roofing materials.

<b>ROOFING</b>	<b>YEARS</b>
Aluminum Coating	3 to 7
Asphalt Shingles (3-tab)	20
Asphalt (architectural)	30
BUR (built-up roofing)	30
Cellulose Fiber	20
Clay/Concrete	100+
Coal and Tar	30
Copper	70+
EPDM (ethylene propylene diene monomer) Rubber	15 to 25
Fiber Cement	25
Green (vegetation-covered)	5 to 40
Metal	40 to 80
Modified Bitumen	20
Simulated Slate	10 to 35
Slate	60 to 150
TPO	7 to 20
Wood	30