

Vermont Legislative Council

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MEMORANDUM

To: Representative Tony Klein
From: Catherine Craig, Law Clerk
Date: December 28, 2015
Subject: DR 16-327; Financial Incentives for Solar Power

This memo surveys financial incentives available for solar in New England. For each state, the number of incentives available is listed, followed by bullet points describing the state programs. However, the bullet points do not include grant and loan programs.

Solar Incentives New England

Vermont offers nine financial incentives for solar, including rebates, sales exemptions, and tax credits.

- Income tax credit equal to 24% of the federal investment tax credit for the Vermont portion of renewable energy investments.
- Solar hot water rebates (through the Small-scale Renewable Energy Incentive Program):
 - Residential: \$0.40/kWh of annual capacity, up to \$3,000.
 - Commercial: \$0.40/kWh of annual capacity, up to \$16,500.
 - Special Category: \$0.80/kWh of annual capacity, up to \$45,000. Special category customers include municipalities, public schools, and nonprofit housing authorities.
- Net metering adders (through credits on the electric bill):
 - For solar net metered systems of 15 kW or less, the adder is \$0.20 minus the residential rate charged by the company.
 - For systems larger than 15 kW, the adder is \$0.19 minus that rate.¹

Connecticut offers two incentives for solar: a sales and use tax exemption, and a residential solar program that offers rebates.

- Rebate program:

¹ Net metering programs are available in other states; however, only Vermont has a solar adder.

- CT Green Bank administers a solar photovoltaic residential investment program with the ultimate goal to support 300 megawatts of residential PV by 2022.
- Incentives are tiered (examples below show how the incentives are calculated).
- Customer-owned: Up to 10 kW (depending on previous 12 month utility electricity consumption): \$0.540/Watt; 10kW-20kW(or greater than 12 month utility electricity consumption): \$0.40/Watt
- Third-party-owned: Up to 10 kW: \$0.064/kWh for six years; 10 kW- 20kW: \$0.060/kWh

Maine does not offer any financial incentives for solar but does have two regulatory policies in place.

- Solar easements
- Solar rights: legal instruments may not prohibit installation of or use of a solar energy device (including a clothesline or drying rack) on residential property

Massachusetts offers 11 incentives for solar, including an excise tax exemption, rebate program, renewable energy credits, financing, and grant programs.

- Rebate programs for solar residential solar
 - Residential solar hot water:
 - Massachusetts Clean Energy Center has provided rebates for the installation of residential solar hot water systems through the Commonwealth Solar Hot Water Program.
 - Incentive rates are determined by using the following equation:

$$\$75 \times (\# \text{ of collectors}) \times (\text{Solar Rating and Certification Corporation [SRCC] rating})$$
 - Residential solar photovoltaic (PV): Chicopee Electric Light offers rebates to residential customers who install PV systems on their homes. Customer rebates are \$0.50 per watt for a maximum of \$2,500 per installation.
- Excise tax deduction: businesses may deduct from net income, for state excise tax purposes, expenditures paid or incurred from the installation of any “solar or wind powered climatic control unit and any solar or wind powered water heating unit or any other type unit or system powered thereby,” including labor expenditures.
- Excise tax exemption: exempts any “solar or wind powered climatic control unit and any solar or wind powered water heating unit or any other type unit or system powered thereby,” that qualifies for the state's excise tax deduction for these systems, from the tangible property measure of the state's corporate excise tax.

New Hampshire has four solar rebates available and has enacted a solar easement provision.

- Residential solar water-heating systems: the rebate is equal to \$1,500 for systems with an annual estimated output of 5.5 MMBTU to 19.9 MMBTU; \$1,700 for systems with an annual estimated output of 20 MMBTU to 29.9 MMBTU; and \$1,900 for systems with an annual estimated output of 30 MMBTU or more.

- PV systems: New Hampshire Electric Co-op (NHEC) offers rebates for residential and commercial, grid-tied photovoltaic (PV) systems up to one MW in capacity. The rebate is equal to \$0.25 per DC Watt. For residential systems, the maximum award is \$1,375; for commercial systems, the maximum award is the lesser of 15% of the system cost or \$10,000. Funding is available throughout 2015 on a first-come, first-served basis.
- Solar hot water: NHEC offers rebates to residential and commercial customers who install qualified solar water-heating systems.
 - Residential: rebate is equal to 20% of installed system costs, with a maximum award of \$750.
 - Commercial: rebate is equal to \$0.12/kBtu for systems with 15 or fewer collectors and \$0.07/kBtu for systems with more than 15 collectors. The maximum award for commercial customers is the lesser of 25% of the system cost or \$10,000.
- Non-residential PV systems (administered by New Hampshire Public Utilities Commission):
 - New PV systems less than or equal to 100 kW AC: \$0.75/W AC
 - New PV systems less than or equal to 500 kW AC and greater than 100 kW AC: \$0.65/W AC
 - Additions to existing PV systems less than or equal to 100 kW AC: \$0.50/W AC
 - Additions to existing systems less than or equal to 500 kW AC and greater than 100 kW AC: \$0.30/W AC
 - New Solar Thermal systems with 15 or fewer collectors: \$0.12/rated or modeled kBtu/year
 - New Solar Thermal systems with more than 15 collectors: \$0.07/rated or modeled kBtu/year
 - Additions to existing Solar Thermal systems: \$0.04/ modeled kBtu/year

Rhode Island offers a solar energy property tax exemption and no other incentives.