

## Vermont Small Scale Renewable Energy Incentive Program

### **DRAFT** Incentive Design – 2012 Program Year

December - 2011

Program design for the 2012 program year build on the success of the program in past years and reflect continuing market conditions. The key changes include:

- Incorporation of a “right sized” incentive adder to the incentive amount for those customers that have taken to ensure that the size of their renewable energy systems are not over sized given the potential to reduce electric load through efficiency
- PV systems cannot get an incentive for a system that is sized to produce more than 85% of the customer’s annual electric consumption, unless an audit and efficiency measures have been completed. Customers that have completed recommended efficiency measures can obtain incentives for systems sized up to 110% of their annual electric consumption.
- Encouraging well-sited wind projects through the return to an incentive that depends partially on actual production.
- Limitation of higher special customer incentives to low-income housing non-profits, municipalities, and public schools.

New proposed incentive levels and structure are provided below, followed by discussion of these and other program elements.

#### 2012 Incentive Levels – Solar

The following table lists proposed incentive levels, along with project size limits, and customer caps for PV and solar hot water projects.

| Recommended 2012 Solar Incentive Levels |                   |                             |   |   |
|---|-------------------|-----------------------------|---|---|
| Project Type                            | NEW Incentive:    | Right Sized Adder Incentive | Most Recent Incentive (for comparison)                | Other Requirements  |
| <b>Residential</b>                      |                   |                             |   |   |
| PV ≤ 10 kW                              | \$0.70/W          | \$0.10/W                    | \$0.75/W  | Customer cap = \$10,500 across both every 2 years. Adder capped at \$350. System size restrictions for PV |
| SHW ≤ 200 kBtu/d                        | \$1.50/ 100 Btu/d | \$0.50/100 Btu/d            | \$1.50/ 100 Btu/d                                     |   |
| <b>Commercial &amp; Industrial</b>      |                   |                             |   |   |
| PV ≤ 60 kW                              | \$0.60/W          | \$0.10/W                    | \$0.75/W to 10kW;<br>\$0.60/add'l W from 10kW to 60kW | Customer cap = \$37,000 every 2 years. Adder capped at \$450 System size restrictions.                    |
| SHW ≤ 1,100 kBtu/d                      | \$1.50/ 100 Btu/d | \$0.50/100 Btu/d            | \$1.50/ 100 Btu/d                                     | Customer cap = \$16,500 every 2 years. Adder capped   |

| Recommended 2012 Solar Incentive Levels |  |                             |  |   |
|---|--|-----------------------------|--|---|
| Project Type                            | NEW Incentive:                                       | Right Sized Adder Incentive | Most Recent Incentive (for comparison)               | Other Requirements  |
|   |  |                             |  | at \$350. No swimming pool heating systems allowed  |
| Special Customers                       |  |                             |  |   |
| PV $\leq$ 60 kW                         | \$2.25/W to 10kW;<br>\$1.50/add'l W from 10kW – 60kW | \$0.10/W                    | \$2.50/W to 10kW;<br>\$1.50/add'l W from 10kW – 60kW | Incentive amounts limited to 50% of project cost. Adder capped at \$450, No leasing. System size restrictions |
| SHW $\leq$ 1,500 kBtu/d                 | \$3.00/ 100 Btu/d                                    | \$0.50/ 100 Btu/d           | \$3.00/ 100 Btu/d                                    | Incentive amounts limited to 50% of project cost. Adder capped at \$450, No leasing                           |

Given the continued very strong demand for solar projects (PV and solar hot water), ongoing reductions in installed cost, and the availability of the new solar adder, the lower incentive is not expected to result in reduced demand for solar installations.

### Recommended 2012 Production-based Incentives for Wind Projects

In order to encourage well-sited wind projects, the recommended new wind incentive is based on actual site production during the first year of operation. The incentive program had a similar performance based incentive in 2010 that was dropped due to ARRA's tight time frame.

The need to calculate a production-based value to use for reserving an incentive, combined with a desire for administrative simplicity, resulted in the proposal for the two-step calculation methodology outlined below. In order to provide early support for the projects, a portion of the calculated target incentive will be paid at the time of successful installation, with the remainder available at the end of the first year of production.

The calculation methodology first applies a conversion factor to the turbine's rated capacity to establish a production "target". This factor was developed to give a kWh/year value that is closely equivalent to annual production assuming a 6m/s (13 mph) site. The final potential incentive amount is then based on this Target Annual Production and calculated in two size tiers. The calculations are made as shown in the table below.

| Recommended 2012 Wind Incentive Levels                                      |
|---|
| <b>Step 1: Calculate Target Annual Production (for all projects):</b>       |
| Target Annual Production (TAP) = Rated capacity of turbine (at 11m/s) * 2.5 |
| <b>Step 2: Calculate Total Potential Incentive Amount:</b>                  |

| Total Potential Incentive Amt. = Target Annual Production (TAP) * Incentive level as defined below |   |                                      |
|--|---|--------------------------------------|
| Incentive: Efficiency First  | Most Recent Incentive (for comparison)            | Other Requirements                   |
| <b>Residential</b>   |   |                                      |
| \$2.00/kWh/yr to 5,000 TAP;<br>\$1.20/kWh/yr for each add'l kWh/yr<br>from 5,000 – 25,000 kWh/yr   | \$2.50/W  | Capped at 10kW                       |
| <b>Commercial &amp; Industrial</b>   |   |                                      |
| \$2.00/kWh/yr to 5,000 TAP;<br>\$1.20/kWh/yr for each add'l kWh/yr<br>from 5,000 – 200,000 kWh/yr  | \$2.50/W to 10kW; \$2.00/W after<br>10kW to 100kW | Customer's limited to one<br>turbine |

The calculated total potential incentive amount is designed to represent the incentive expected to be paid for a well-sited wind project. This value will be used as the amount of incentive reserved for the approved project.

In order to provide early support for the projects, 60% of the calculated total potential incentive will be paid at the time of successful installation. The remainder of the reserved amount is available to be paid at the end of one year of production. The customer will submit measured kWh produced over the year, and the incentive will be recalculated according to the calculation above to determine the final total incentive. The final payment will be the difference between this final incentive calculation and the amount paid at the time of system installation. The maximum guaranteed incentive is the amount reserved. If the system produces more than the Target Annual Production during the first year of operation, additional incentive shall be paid on a case-by-case basis if funds are available.

Residential wind systems are limited to one turbine equal or less than 10 kW rated capacity; C&I projects are limited to one turbine up to 100 kW rated capacity.

### Right Sized Solar Incentives

The new incentive structure provides an additional incentive to solar projects (PV and thermal) if the customer has had a professional level energy audit completed on their home or building. This additional incentive can be applied for up-front as part of the incentive reservation. Proof of the audit is required with the final project documentation. Audits performed prior to the reservation application can be used to show compliance as long as the audit was performed in the past two years. The added incentive for those that have at least had an energy audit sends a message and sets the expectation that energy efficiency activities should be an integral part of any state supported energy-related project and provides additional incentive for those who take steps to improve their energy efficiency.

Furthermore, for PV, systems will be limited to an incentive for a system sized to produce no more than 80% of the customer's annual electrical consumption – unless the customer can provide evidence of completing recommended energy efficiency measures. If evidence is provided with the incentive reservation application than the incentive can be for a system sized up to 110% of the annual consumption.

### Special Customer Category

This special category was designed to provide increased incentive support to the class of customers that cannot take advantage of other additional financial support for their projects (tax credits in particular) and who often require more attention because of complex procurement procedures, etc. Increased incentives for Special Customers will be continued, but only low-income housing non-profits, municipalities, and public schools will now be eligible. Other non-profit entities that were previously eligible will be encouraged to explore available third-party ownership models (leasing, power purchase agreements, etc..) designed to leverage such financial benefits. The program should provide additional information to these customers and references to developers who can assist in these types of projects.

### **Leased Systems**

Leased systems receive the same incentives as the applicable customer classes above; any systems leased to non-profit or governmental customers, including housing authorities, are treated as C&I projects and will not be eligible for the increased Special Customer incentive. Leasing entities do not have a customer cap, but must comply with installer caps (see below). End-use leasing customers may not install systems that result in an incentive of more than:

- Residential customer: \$25,000 customer cap over 2 years
- Special Customer: maximum incentive as calculated above OR 50% of the total installed cost, whichever is less

### **Customer Limits, Installer Caps, and Reservation Time Limits**

Limits to the total incentive amounts that a single customer may receive have not been changed materially (see information on caps in table above). We also do not recommend changes to the total amount of reservations that any installer may hold at one time. The program has not experienced any need to increase these limits in the past as installers have rarely reached them. In addition, because the program budget will be greatly reduced, it would not make sense to allow any one installer to claim even more of the limited support. For clarity, installer caps should be established at \$150,000 each for PV and solar hot water (with solar thermal installers also limited to no more than 100 reservations at any one time), \$275,000 for Special Customer incentives, and \$450,000 for wind incentives.

We recommend continuing to hold reservations to a non-extendable six-month installation period for solar thermal and PV and nine-months for wind. These limits should not cause undue strain for the large majority of the market. Customers in the Special Customer category are the most likely to have more complicated and extensive procurement and administrative issues – these participants currently receive leeway as needed on a case-by-case basis and will continue to do so.

This proposal also recommends a change to the types of customers eligible for larger incentives through the Special Customer category, all non-profits are no longer covered.

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