

Vermont's Standard Offer

Providing clean energy and rebuilding Vermont's economy



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The Vermont Public Interest Research and Education Fund (VPIREF) is Vermont's leading policy research and public education group. VPIREF's mission is to research and disseminate policy options, administrative strategies, and business practices that promote and protect the health of Vermont's environment, people, and locally-based economy. VPIREF was founded in 1975 as the research and educational outreach arm of the Vermont Public Interest Research Group (VPIRG). With cutting edge research and broad educational outreach, VPIREF brings to the public real solutions to Vermont's problems and teaches citizens to find their voice in public policy debates that shape the future of the green mountain state.



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Vermont's Standard Offer

The Standard Offer, passed by the Vermont legislature in 2009, was the nation's first statewide, guaranteed price for renewable energy projects. Vermont's Standard Offer program is designed to encourage the development of clean, locally based energy using a variety of different renewable technologies.

The 50 MW pilot round was wildly successful and was oversubscribed by 150 MW within three hours of its launch. This booklet profiles six of 51 projects that will provide clean energy to Vermont homes and rebuild local economies.

Of those 51, nineteen will be farm methane projects. These projects will make the farms more commercially viable, help to reduce waste, and provide a clean, odorless source of bedding for the cows. Twelve solar projects will be coming online, and Vermont will be home to the single largest photovoltaic array in the Northeast. Bolton Valley Ski Resort will add its second and third wind turbine under the Standard Offer, and seven other wind projects are underway across the state.

Vermont based resources will power the remaining eleven projects: six small-scale hydro projects will utilize Vermont's water resources, three biomass projects will rely on Vermont's forest resources, and two landfill methane projects will turn methane gas into usable forms of energy.

NUMBERS FOR

SIX PROJECTS

total installation capacity

3,166 kW

benefit at least

95

Vermont businesses

will provide power for

1,875

homes annually

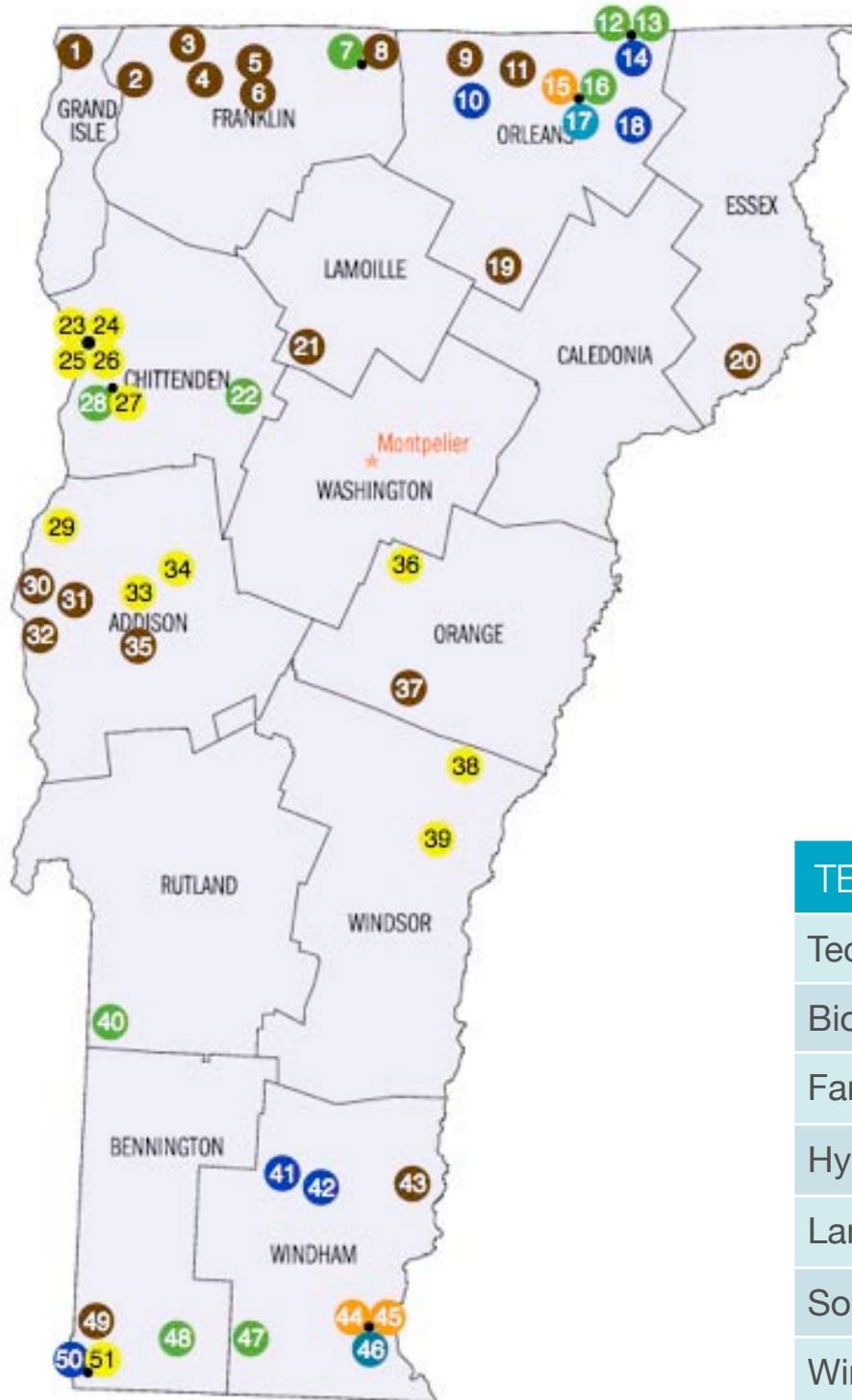
All across the state, Vermonters are taking advantage of the Standard Offer to help build Vermont's clean energy future.

- The 51 clean energy projects in the Standard Offer queue will have a total capacity of over 43 MW.
- This safe, reliable power will create jobs and infuse money into local economies—the six projects profiled here will benefit nearly 100 businesses, including farmers, electricians, developers, and landscaping companies. The other projects will create hundreds of jobs at a time when Vermont's economy needs it most.
- Additionally, the six projects in this booklet will generate enough power for 1,875 homes on an annual basis and reduce the equivalent of carbon dioxide emissions from over 500,000 vehicle miles traveled.

In the following profiles, six Vermonters explain how important the Standard Offer has been to the development of their clean energy projects. A map and complete list of projects in the Standard Offer lineup can be found on pages 2 and 3.

Vermont's Standard Offer

Building clean energy across the State



TECHNOLOGY GUIDE	
Technology	Color
Biomass	Orange
Farm Methane	Brown
Hydro	Blue
Landfill Methane	Light Blue
Solar	Yellow
Wind	Green

STANDARD OFFER RECIPIENTS			
	Project Name	Location	Size (kW)
1	Agnorth	Alburgh	1173
2	Montagne Cow Power	Swanton	300
3	Riverview Farm	Franklin	100
4	Green Mountain Dairy	Sheldon	300
5	Kane's Kilowatts	Enosburg	225
6	Gervais Digester	Enosburg Falls	200
7	Mrs. Coy's Organic Juice	Richford	100
8	Berkshire Cow Power	Richford	600
9	<i>Chaput Family Farms*</i>	North Troy	300
10	<i>Troy Hydro*</i>	Troy	816
11	Neighborhood Energy	Newport	225
12	Grandview Farm Wind	Derby Line	2200
13	Smugglers Hill Wind	Derby Line	1500
14	Butterfield	Derby Line	50
15	Casella Biomass	Coventry	2200
16	Casella Wind	Coventry	2200
17	Casella Heat	Coventry	1000
18	West Charleston Hydro	West Charleston	675
19	Maplehurst Farm	Greensboro	100
20	EATON Energy	Lunenburg	100
21	Percy Farms	Stowe	100
22	<i>Catamount/Bolton Wind 2*</i>	Bolton	1800
23	Park Place Housing	Burlington	100
24	Hunt Middle School	Burlington	450
25	Burlington PV	Burlington	1005
26	Leunig's Bistro	Burlington	26

Profiled in this booklet*

STANDARD OFFER RECIPIENTS			
	Project Name	Location	Size (kW)
27	South Burlington Solar Farm	South Burlington	2200
28	Dynapower EMS	South Burlington	100
29	<i>Ferrisburgh Solar Farm*</i>	Vergennes	1000
30	Dubois Energy	Addison	450
31	Monument Farms	Weybridge	155
32	<i>Audets Cow Power*</i>	Bridport	490
33	Cross Pollination One	New Haven	2200
34	Hannaford - 121	Middlebury	150
35	Four Hills Farm	Bristol	450
36	Triland	Williamstown	2000
37	Central VT Recovered Biomass Facility	Randolph	250
38	SunGen1	Sharon	2200
39	Advance Transit Building Expansion	White River Junction	32
40	Northeast Mountain	Wells	1800
41	Ball Mountain Hydro	Jamaica	2200
42	Townshend Dam Hydro	Townshend	960
43	Westminster Energy Group	Westminster	225
44	Delta Campus Biomass	Brattleboro	840
45	Cersosimo Lumber	Brattleboro	800
46	<i>Brattleboro Carbon Harvest*</i>	Brattleboro	560
47	New Boston Wind Farm	Jacksonville	1951
48	Stamford Wind Farm	Stamford	1951
49	Fillmore Digester	Bennington	350
50	Candelora Hydro	Pownal	50
51	Green Mountain Energy Park Solar	Pownal	2200

F A R M
METHANE
gas-to-energy

Addison County

Date online: 2005

Kilowatt hours produced
in one year: 1.3 million

Vermont businesses
(selected):

Cabot Cheese

Central Vermont Public
Service

Eben Punderson (attorney)

Harrison Concrete

Nortrax Equipment

Peck Electric

Rice Lumber

Windward Petroleum

University of Vermont

Vermont Economic
Development Authority

Yankee Farm Credit

Carbon offset: CO₂
reduction equals 50,477
vehicle miles traveled
(VMT)

Blue Spruce Farm

Bridport, Vermont



“Without the Standard Offer, we could not have continued the energy side of our farm operation. Having that certainty gives us the ability to reinvest in our work. Even the smallest farm could make this work with the Standard Offer.”

-Marie Audet, Blue Spruce Farm

- Blue Spruce was the first cow power site in Vermont and the first to put power on the grid in Vermont.
- Keeping their cows happy is a top priority, and having a methane digester allows the Audets to make bedding using the clean, odorless output from the digestion process.
- The heat from the digester keeps the barn warm, so the farm was able to drastically reduce its fuel bill.
- As an early adopter, Blue Spruce serves as a resource and inspiration for all other farms looking to produce methane power.

NUMBERS

total installation capacity

300 kW

benefits at least

20

Vermont businesses

provides power for

190

homes

Photo credit: Marie Audet

Ferrisburgh Solar Farm

Ferrisburgh, Vermont



SOLAR PHOTOVOLTAIC

Addison County

Date online: December 2010

Kilowatt hours produced in one year: 1.2 million

Vermont businesses (selected):

Alteris Renewables

Dennis Voigt, CPA

Draker Laboratories

Greenhaven Gardens & Nursery

Middlebury Fencing Company

Panoramic Landscaping & Excavation

Scott Michael Mapes, Esq.

SE Group

Shems, Dunkiel, Raubvogel, and Saunders

Vermont Energy Investment Corp.

Carbon offset: CO₂ reduction equals 46,800 VMT

NUMBERS

total installation capacity

1,000 kW

benefits at least

10

Vermont businesses

provides power for

175

homes

“After we heard about the Standard Offer, we just dove in. Over a thirty year timeline this makes so much sense, that is why renewable energy is so wonderful, but *you have to have a long-term perspective.* And that’s just what the Standard Offer does.”

-Brian Waxler, Pomerleau Real Estate (far right in picture)

- This is the largest solar project north of Pennsylvania (another project in Vermont to be online soon will be larger).
- After Ernie Pomerleau chaired the Governor’s Climate Change Commission, he knew that his company had to do its part to build something positive in Vermont—and residents in the area are excited about having one of the first solar orchard projects in the Northeast.
- Local schools will use the solar farm in science classes so students can learn more about renewable energy, and local officials expect a boost in tourism because of the project.

Photo credit: Brian Waxler

WIND ENERGY

Chittenden County

Date online: early 2012

Kilowatt hours produced in one year: 4.2 million

Vermont businesses (selected):

Alteris Renewables

Draker Labs

Harrison Concrete

G.W. Tatro Construction

Middlesex Electric

Northern Power Systems

Shems, Dunkel Raubvogel, & Sanders

Vermont Environmental Research Associates

Vanasse, Hanger, Brustlin, Inc. (engineering)

Carbon offset: CO₂ reduction equals 165,737 VMT

Bolton Valley Wind

Bolton, Vermont



“Being able to tell a bank that we have a 20 year revenue stream made it easier to ask them to finance us. **We would not even have bothered to go this road without the Standard Offer.**”

-Larry Williams, Bolton Valley Ski Resort

- Bolton Valley Ski Resort already has a Northwind 100 turbine (pictured above) from Barre-based Northern Power Systems.
- The resort has 100,000 skier visits each year, and many skiers choose Bolton because of the resort’s commitment to environmental sustainability.
- Larry is hopeful the new turbine will inspire even more skiers to make the switch to a mountain that can produce all of its energy.
- Like many early adopters, this site has built positive relationships with the community by being a great educational resource.

NUMBERS

total installation capacity

1,800 kW

benefits at least

15

Vermont businesses

will provide power for

600

homes

Photo credit: Larry Williams

Troy Hydro

Troy, Vermont



HYDRO ENERGY

Orleans County

Date online: expected 2012

Kilowatt hours produced in one year: 2.86 million

Vermont businesses (selected):

Desrochers Construction and Excavating

Fairbanks Mill, Inc.

Gates Electric

The H.L. Turner Group (engineering)

R.G. Gosselin Concrete

Carbon offset: CO₂ reduction equals 111,050 VMT

NUMBERS

total installation capacity

816 kW

benefits at least

10

Vermont businesses

will provide power for

410

homes

“The Standard Offer is a wonderful program. It helps because it’s a fixed price contract that is long-term and at a premium rate—it makes the income part of the calculation much better.”

-Jonathan Chase, Troy Hydro

- This site was a hydro energy source for many years before a flood wrecked the entire system. Luckily, the project will still be able to use most of the grid interconnections.
- Jonathan, an organic dairy farmer, has supported renewable energy for many years, and rebuilding the dam in Troy will be a great way to diversify his farm operation.
- Since the dam at the site has been around for so long, the habitat has already adapted to new water flow. This means the site will not negatively affect the local habitat.

Photo credit: Erin LaVoie

LANDFILL METHANE gas-to-energy

Windham County

Date online: August 2010

**Kilowatt hours produced
in one year:** 1.9 million

**Vermont businesses
(selected):**

Brattleboro Small Business
Assistance Program

Central Vermont Public
Service

Gallgher, Flynn & Company
(accounting)

Marlboro College

Meritt & Merritt & Moulton

Marsh Engineering

Pearson & Associates
(engineering)

Renewable Energy
Vermont

Sanborn, Head, and
Associates (engineering)

Shems, Dunkiel,
Raubvogel, and Saunders

University of Vermont

Vermont Food Bank

Windham Solid Waste
Management District

Carbon offset: CO₂
reduction equals 73,774
VMT

Carbon Harvest Energy

Brattleboro, Vermont



“Without a combined will of policy, state, and community, *these first projects would have been too expensive.* In the beginning, it is worth everyone’s while to invest in these resources and build the infrastructure. **[The Standard Offer] made all the difference—we would not have been able to do the Brattleboro project without the feed-in tariff.** I’m proud of Vermont, and I’m glad to be a business launching out from the Standard Offer.”
-Don McCormick, Carbon Harvest Energy

- Providing local, renewable energy and a source of sustainable agriculture is something all Vermonters can appreciate: when fully operational, this project will use its excess heat to run a greenhouse.
- Specifically built to be a research and educational outreach facility, this plant is the first of its kind in the country.
- Carbon Harvest is dedicated to matching local resources to local needs, so the waste from the community will eventually power the greenhouse.

NUMBERS

total installation capacity

250 kW

benefits at least

20

Vermont businesses

provides power for

270
homes

Photo credit: Carbon Harvest Energy

Chaput Family Farms

North Troy, Vermont



F A R M METHANE

gas-to-energy

Orleans County

Date online: August 2010

Kilowatt hours produced in one year: 1.6 million

Vermont businesses (selected):

All in One Electric

Bilodeau, Wells, & Company P.C. (accounting)

Central Vermont Public Service

Dan Lantagne Construction

Desrochers Construction, Farm Equipment, and Excavating

Deppman & Foley, P.C. (attorney)

Gravel & Shea (attorney)

Pick and Shovel

R.G. Gosselin Concrete

Tracy Degree Concrete

Vermont Electric Co-Op

Wright's Plumbing and Heating

Carbon offset: CO₂ reduction equals 62,125 VMT

NUMBERS

total installation capacity

300 kW

benefits at least

20

Vermont businesses

provides power for

230

homes

“When the [Standard Offer] came into play, it was like breathing life back into our project. It made everything possible again and allowed us to move forward.”

-Reg Chaput, Chaput Family Farms

- Reg and his brother Michael had considered starting the project before, but the financing without the Standard Offer just didn't make sense.
- Chaput Family Farms—in business since 1991—was able to make their dairy farm profitable by taking advantage of the standard offer.
- Other projects across the state (like Blue Spruce Farm) served as an inspiration and gave Reg and Michael the practical knowledge they needed to move forward.
- Having a digester onsite will also decrease the farm's environmental impact by reducing run-off.

Photo credit: Central Vermont Public Service



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