



## CONNECTICUT CLEAN ENERGY FUND

### **Annual Report of Activities of the Connecticut Clean Energy Fund During Calendar Year 2008**

Calendar Year 2008 was an active year for the Connecticut Clean Energy Fund. Not only did the Fund experience significant growth in the number of projects approved and funded, but the Fund initiated several new programs. It was also subject to significant governance changes that impacted many aspects of its business.

#### **Governance Changes**

##### **Public Act 07-152 An Act Concerning the Renewable Energy Investment Fund**

P.A. 07-152 brought about several changes to the CCEF. Effective October 1, 2007 the bill:

- Replaced the Clean Energy Advisory Committee with a 15-member Clean Energy Fund Board;
- Placed the CCEF at Connecticut Innovations for administrative purposes only;
- Requires the Clean Energy Fund Board to submit a comprehensive plan to the Department of Public Utility Control for approval, modification or rejection.

These statutory changes resulted in a significant amount of work for CCEF employees. Employees contributed extensively to the development of a comprehensive plan for fiscal years 2009 and 2010. Three public hearings on the draft plan were held around the state at:

- Eastern Connecticut State University in Willimantic on February 19, 2008;
- South Norwalk Public Library in South Norwalk on February 20, 2008; and
- Rocky Hill Marriott in Rocky Hill on February 21, 2008.

Following the public hearings, all of the public comments were summarized and included in the plan that was submitted to the DPUC on April 7, 2008. The DPUC held several hearings on the plan and approved it on November 12, 2008.

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#### **Description of CCEF Activities**

Programs and activities of the CCEF are classified according to three goals:

***Program Goal 1: Installed Renewable Energy Capacity*** – Provide Connecticut ratepayers with access to a diverse supply of clean energy resources.

**Program Goal 2: Emerging Renewable Energy Technologies** – Identify and promote renewable technologies and tools to address challenging energy issues while providing economic development opportunities.

**Program Goal 3: Renewable Energy Demand and Sustainability** - Increase the demand for clean energy by creating model, sustainable communities.

Below are summaries of calendar year 2008 project approvals for Goals 1 and 2. A complete list of all CCEF projects funded in each town across the state is located at the back of this report.

## Program Goal 1: Installed Renewable Energy Capacity

**Feasibility Study** – Funding to cover project feasibility analysis.

Project Name	Location	Technology	Project Type	Profit	CCEF Funding Amount	Total Cost	kW AC
Water Pollution Control Facility, Greater New Haven	New Haven	Hydro	State	Not for Profit	\$13,350	\$29,850	28.2
Cargill Falls Hydroelectric	Putnam	Hydro	Commercial	For Profit	50,000	225,000	N/A
Grand Total	2				\$63,350	\$254,850	28.2

**On-Site Distributed Generation Program** - A flexible, integrated-technology, financial support program designed to stimulate demand for “behind-the-meter” installations of renewable energy at commercial, industrial, institutional, not-for-profit and governmental buildings in Connecticut.

Project Name	Location	Technology	Project Type	Profit	CCEF Funding Amount	Total Cost	kW AC
Pith Products	Ashford	Photovoltaic PV	Commercial	For Profit	\$481,324	\$916,529	97.5
Avon Old Farms School	Avon	Photovoltaic PV	School	Not for Profit	826,955	1,478,792	162.9
DBS Energy Inc.	Berlin	Photovoltaic PV	Commercial	For Profit	37,669	74,200	7.6
TJX Distribution Center	Bloomfield	Photovoltaic PV	Commercial	For Profit	699,305	1,785,423	241.5
330 E. Main Street	Branford	Photovoltaic PV	Commercial	For Profit	93,523	180,000	17.5
Pat Munger Construction Company, Inc.	Branford	Photovoltaic PV	Commercial	For Profit	45,760	128,659	9.6
Massey's Plate Glass & Aluminum, Inc.	Branford	Photovoltaic PV	Commercial	For Profit	45,424	121,126	9.6
Eastern Fabrications, LLC	Branford	Photovoltaic PV	Commercial	For Profit	49,939	101,240	9.7
Alexion (Hybrid)	Cheshire	Photovoltaic PV	Commercial	For Profit	1,344,000	2,181,404	228.6
Great Pasture Road	Danbury	Photovoltaic PV	Commercial	For Profit	1,247,707	3,020,985	326.1
Wee Burn Country Club	Darien	Photovoltaic PV	Commercial	For Profit	346,650	700,000	69.6
Tri Town Precision Plastics, Inc.	Deep River	Photovoltaic PV	Commercial	For Profit	776,661	1,669,692	172.3
IDA Properties	Derby	Photovoltaic PV	Commercial	For Profit	416,253	720,974	73.7
Walgreen's 7566	East Hartford	Photovoltaic PV	Commercial	For Profit	141,041	313,200	26.7

## On-Site Distributed Generation Program – continued

Project Name	Location	Technology	Project Type	Profit	CCEF Funding Amount	Total Cost	kW AC
Horst Engineering & Manufacturing Company	East Hartford	Photovoltaic PV	Commercial	For Profit	153,167	345,998	31.0
Deer Run Elementary School	East Haven	Photovoltaic PV	School	Not for Profit	141,517	306,252	26.6
Overbrook Elementary School	East Haven	Photovoltaic PV	School	Not for Profit	106,277	232,947	20.0
Momaugin Elementary School	East Haven	Photovoltaic PV	School	Not for Profit	85,210	180,819	16.2
East Lyme High School	East Lyme	Photovoltaic PV	School	Not for Profit	1,773,738	3,788,328	370.2
East Lyme Rent-A-Space	East Lyme	Photovoltaic PV	Commercial	For Profit	60,686	116,111	13.0
* Mill Pond Village	East Windsor	Photovoltaic PV	Commercial	For Profit	1,247,717	2,112,974	202.7
LC Doane Company	Essex	Photovoltaic PV	Commercial	For Profit	970,898	1,720,000	183.7
Elsewhere LLC (Bell Power Systems)	Essex	Photovoltaic PV	Commercial	For Profit	389,687	797,776	80.0
Stop & Shop, 760 Villa Ave.	Fairfield	Photovoltaic PV	Commercial	For Profit	943,812	1,656,433	172.8
1275 King Street (Tudor)	Greenwich	Photovoltaic PV	Commercial	For Profit	100,255	207,000	17.5
500 W. Putnam Office Building	Greenwich	Photovoltaic PV	Commercial	For Profit	387,358	844,160	76.1
Dove and Boar Farm	Hampton	Photovoltaic PV	Farm	For Profit	65,932	117,823	11.8
CT Science Center	Hartford	Fuel Cell	Commercial	For Profit	613,000	1,684,000	200.0
Aetna Life and Casualty	Hartford	Photovoltaic PV	Commercial	For Profit	850,000	1,927,493	171.2
Fuss & O'Neill Clark Building	Manchester	Photovoltaic PV	Commercial	For Profit	139,662	303,047	28.9
Eastern Connecticut Cardiology Associates	Manchester	Photovoltaic PV	Commercial	For Profit	124,138	284,323	23.4
Mansfield Family Practice	Mansfield	Photovoltaic PV	Commercial	For Profit	44,658	94,848	9.4
Middlebury Animal Hospital	Middlebury	Photovoltaic PV	Commercial	For Profit	51,194	95,870	9.1
Timex Corporation	Middlebury	Photovoltaic PV	Commercial	For Profit	1,582,413	4,016,832	190.4
Westover School, Inc.	Middlebury	Photovoltaic PV	School	Not for Profit	647,459	1,185,548	128.6
Westover School, Inc. 2	Middlebury	Photovoltaic PV	School	Not for Profit	131,620	254,336	26.2
Moody Elementary School	Middletown	Photovoltaic PV	School	Not for Profit	355,326	757,610	62.4
Consulting Engineering Services, Inc.	Middletown	Photovoltaic PV	Commercial	For Profit	55,096	149,000	10.5
Wesleyan University	Middletown	Photovoltaic PV	School	For Profit	31,698	56,587	5.7
Really Good Stuff	Monroe	Photovoltaic PV	Commercial	For Profit	755,246	1,543,240	178.5
Naugatuck High School	Naugatuck	Photovoltaic PV	School	Not for Profit	926,655	2,894,000	311.5
Kaestle Boos Associates	New Britain	Photovoltaic PV	Commercial	For Profit	157,212	269,000	27.6
Skinner Valve	New Britain	Photovoltaic PV	Commercial	For Profit	737,286	1,335,000	169.2
* Sunset Ridge	New Haven	Photovoltaic PV	Commercial	For Profit	504,353	814,083	77.9
Yale School of Forestry - ESC	New Haven	Photovoltaic PV	School	Not for Profit	494,320	970,000	84.9
Phoenix Press	New Haven	Wind	Commercial	For Profit	263,155	495,803	100.0
360 State Street (New Haven)	New Haven	Fuel Cell	Commercial	For Profit	985,000	1,970,000	400.0
Martin Kellogg Middle School	Newington	Photovoltaic PV	School	Not for Profit	565,903	1,350,000	144.3
Newtown Youth Academy	Newtown	Photovoltaic PV	School	Not for Profit	1,140,671	1,976,050	211.3
North Haven Health & Racquet Club	North Haven	Photovoltaic PV	Commercial	For Profit	853,160	1,320,361	150.3
North Stonington Town	North	Photovoltaic PV	State	Not for	80,421	127,958	15.0

## On-Site Distributed Generation Program – continued

Project Name	Location	Technology	Project Type	Profit	CCEF Funding Amount	Total Cost	kW AC
Garage	Stonington			Profit			
iPark - 761 Main Avenue	Norwalk	Photovoltaic PV	Commercial	For Profit	302,275	599,432	53.6
Saybrook Point Inn	Old Saybrook	Photovoltaic PV	Commercial	For Profit	174,649	344,772	34.4
Kohl's Dept Stores - #968	Orange	Photovoltaic PV	Commercial	For Profit	1,225,600	3,368,000	234.4
Linden School (Opel)	Plainville	Photovoltaic PV	School	Not for Profit	542,151	1,360,000	102.0
Tyrone Farm	Pomfret	Photovoltaic PV	Farm	For Profit	107,190	213,254	18.5
Precision Plastic Products	Portland	Photovoltaic PV	Commercial	For Profit	349,191	590,000	64.0
TSM Enterprises, LLC	Rocky Hill	Photovoltaic PV	Commercial	For Profit	39,142	85,108	7.2
Greyledge Farm, LLC	Roxbury	Photovoltaic PV	Commercial	For Profit	29,055	55,139	4.9
Basement Systems Inc.	Seymour	Photovoltaic PV	Commercial	For Profit	780,560	1,610,046	178.5
Honey Cell Inc	Shelton	Photovoltaic PV	Commercial	For Profit	620,806	1,623,380	154.6
Aldi, Inc. Distribution Center	South Windsor	Photovoltaic PV	Commercial	For Profit	1,966,500	3,933,000	425.5
Stamford Twin Rinks	Stamford	Photovoltaic PV	Commercial	For Profit	1,548,148	2,327,100	241.7
Rippowam School	Stamford	Photovoltaic PV	School	Not for Profit	606,822	1,252,800	109.8
Daymon Worldwide Inc.	Stamford	Photovoltaic PV	Commercial	For Profit	1,608,842	2,732,400	266.6
St. Luke's Lifeworks	Stamford	Photovoltaic PV	School	Not for Profit	605,256	1,219,038	123.5
1011 High Ridge Road	Stamford	Photovoltaic PV	Commercial	For Profit	314,899	600,071	56.3
Sharon Holdings DBA JB Moving	Stamford	Photovoltaic PV	Commercial	For Profit	185,676	398,640	36.7
McQuade's Marketplace, Inc.	Stonington	Photovoltaic PV	Commercial	For Profit	660,532	1,200,000	117.0
Flood Middle School	Stratford	Photovoltaic PV	School	Not for Profit	210,243	425,430	40.2
B.H. Davis	Thompson	Photovoltaic PV	Commercial	For Profit	35,538	80,866	7.9
Staples #309	Torrington	Photovoltaic PV	Commercial	For Profit	323,037	938,184	88.0
Ticket Software	Vernon	Photovoltaic PV	Commercial	For Profit	134,330	233,082	23.7
* School House	Waterbury	Photovoltaic PV	Commercial	For Profit	811,391	1,320,588	126.4
Chase Collegiate School	Waterbury	Photovoltaic PV	School	Not for Profit	275,795	516,122	56.1
Harvey Waterford	Waterford	Photovoltaic PV	Commercial	For Profit	274,004	524,000	49.9
Siemon Company (60 Echo Lake Drive)	Watertown	Photovoltaic PV	Commercial	For Profit	839,421	1,578,812	171.1
Taft School - Logan Field House	Watertown	Photovoltaic PV	School	Not for Profit	52,517	135,300	9.6
Walgreen's 1826	West Hartford	Photovoltaic PV	Commercial	For Profit	153,466	350,784	29.6
Whole Foods Market	West Hartford	Photovoltaic PV	Commercial	Not for Profit	411,500	575,535	80.4
* Rolling Ridge	West Haven	Photovoltaic PV	Commercial	For Profit	714,157	1,110,023	106.2
Westport Wash & Wax	Westport	Photovoltaic PV	Commercial	For Profit	17,672	29,151	3.3
Northwestern High School & Middle School	Winchester	Photovoltaic PV	School	Not for Profit	1,714,253	3,398,245	382.7
Walgreens Distribution Center	Windsor	Photovoltaic PV	Commercial	For Profit	1,935,295	4,359,744	380.1
Hartford Life Insurance (Hybrid)	Windsor	Photovoltaic PV	Commercial	For Profit	805,000	1,650,000	156.6
Hartford Life Insurance (Hybrid)	Windsor	Fuel Cell	Commercial	For Profit	1,250,000	1,580,000	300.0
Grand Total	86				\$46,693,024	\$94,011,880	9,651.5

**Pre-Development Loan Program** - Funding to qualified early-stage projects that have yet to begin siting, permitting or feasibility analysis but that may ultimately be considered under the Project 150 Program once all of the milestones are met.

Project Name	Location	Technology	Project Type	Profit	CCEF Funding Amount	kW AC
Wind Prospect	Prospect	Wind	Commercial	For Profit	\$102,375	10,000.0
Wind Colebrook	Colebrook	Wind	Commercial	For Profit	119,625	10,000.0
Chestnut Hill BioEnergy	Waterbury	Biomass	Commercial	For Profit	500,000	9,600.0
Grand Total	3				\$722,000	29,600.0

**Project 150** - A legislatively mandated initiative aimed at increasing clean energy supply in Connecticut by at least 150 megawatts of installed capacity by July 1, 2008.

Project Name	Location	Technology	CCEF Funding Amount	MW
DFC-ERG Bloomfield	Bloomfield	Fuel Cell & Energy Recovery Generator	\$50,000	3.4
Bridgeport Fuel Cell Park	Bridgeport	Fuel Cell & Organic Rankine Cycle	1,550,000	14.3
DFC-ERG Trumbull	Trumbull	Fuel Cell & Energy Recovery Generator	50,000	3.2
DFC-ERG Glastonbury	Glastonbury	Fuel Cell & Energy Recovery Generator	50,000	3.2
Cube	Danbury	Fuel Cell & Un-fired Gas Turbine	3,000,000	3.2
Triangle	Danbury	Fuel Cell & Organic Rankine Cycle	3,000,000	15.1
Grand Total	6		\$7,700,000	42.4

**Residential and Small System Program** – Initiatives designed to support the adoption of clean energy technologies such as solar and wind by Connecticut residents, non-profits and government organizations.

Municipality	# Projects	CCEF Funding Amount	Total Cost	kW AC
Ansonia	2	\$43,740	\$91,181	8.9
Ashford	2	66,249	120,390	12.3
Avon	3	64,879	137,516	13.2
Barkhamsted	2	43,924	89,106	7.6
Berlin	2	37,683	74,028	6.6
Bethany	5	105,843	218,916	21.0
Bethel	4	117,767	240,123	22.1
Bethlehem	1	33,997	63,585	6.3
Bloomfield	2	42,281	87,566	8.1
Bolton	4	101,854	192,487	18.9
Branford	15	345,642	747,748	66.3
Bridgewater	1	10,327	23,184	2.1
Bristol	2	32,454	59,122	5.8
Brooklyn	1	29,497	57,174	5.6

## Residential and Small System Program – continued

Municipality	# Projects	CCEF Funding Amount	Total Cost	kW AC
Burlington	1	16,757	32,419	3.0
Canaan	1	29,630	55,792	5.3
Canterbury	2	72,327	134,384	13.3
Canton	4	119,391	220,255	25.7
Chaplin	2	52,328	97,601	9.3
Cheshire	2	43,245	88,546	8.9
Chester	5	135,625	261,964	25.6
Clinton	3	75,572	147,054	13.8
Colchester	2	61,481	126,646	11.3
Columbia	2	55,187	106,119	10.1
Cornwall	3	133,772	278,767	25.7
Coventry	4	104,108	231,941	20.6
Cromwell	3	96,514	175,511	17.3
Danbury	8	175,842	373,841	33.2
Darien	1	44,079	98,756	9.0
Deep River	4	110,162	251,913	23.8
Derby	1	24,966	53,131	4.9
Durham	3	67,272	141,608	12.4
East Haddam	8	198,617	418,737	38.3
East Hampton	1	28,515	52,893	5.2
East Haven	2	58,596	110,912	11.0
East Lyme	4	122,672	242,184	22.8
East Windsor	6	167,331	325,150	30.2
Eastford	1	29,517	57,240	5.6
Easton	5	157,607	306,517	30.4
Ellington	3	107,260	217,520	19.8
Essex	2	32,841	64,186	5.9
Fairfield	12	293,581	637,292	59.8
Farmington	6	196,557	453,390	42.7
Glastonbury	5	138,792	274,637	26.7
Granby	5	134,327	283,645	25.7
Greenwich	9	156,931	388,395	35.5
Griswold	4	126,861	244,562	23.3
Groton	1	34,304	61,215	6.3
Guilford	4	112,737	221,847	20.7
Haddam	2	55,527	114,206	10.1
Hamden	4	124,070	251,602	22.9
Hampton	5	109,221	224,084	20.7
Harwinton	5	127,430	255,676	23.0
Hebron	3	74,998	139,233	13.9
Kent	3	66,587	135,365	11.6
Killingly	4	112,980	227,600	21.7

## Residential and Small System Program – continued

Municipality	# Projects	CCEF Funding Amount	Total Cost	kW AC
Killingworth	2	54,649	108,299	10.3
Lebanon	4	87,160	178,692	15.5
Ledyard	9	233,285	438,175	45.2
Lisbon	3	129,619	243,489	24.6
Litchfield	7	180,675	351,545	31.9
Lyme	1	31,013	59,279	5.6
Madison	3	95,970	183,203	18.3
Manchester	6	181,597	368,019	34.2
Mansfield	7	154,200	303,477	28.5
Marlborough	4	104,438	199,627	20.1
Middlefield	3	75,657	130,826	13.1
Middletown	6	143,503	282,216	26.1
Milford	13	338,158	643,523	62.6
Monroe	2	52,864	110,238	11.0
Montville	2	59,979	124,962	11.8
Morris	1	7,622	15,467	1.6
Naugatuck	2	43,863	85,188	8.0
New Britain	1	32,001	60,193	5.9
New Canaan	4	107,853	263,419	22.3
New Fairfield	2	39,424	87,026	7.7
New Hartford	3	84,613	160,630	15.5
New Haven	6	76,818	162,832	13.8
New London	1	40,545	84,872	8.5
New Milford	5	130,392	266,535	25.1
Newington	4	89,990	174,134	17.1
Newtown	6	213,937	400,689	39.5
North Branford	1	24,434	62,311	6.6
North Canaan	1	32,878	62,050	5.7
North Haven	4	92,325	188,255	17.9
North Stonington	7	227,296	432,204	41.5
Norwalk	2	51,975	105,788	10.1
Old Lyme	4	104,125	204,664	20.4
Old Saybrook	2	61,794	106,525	10.9
Orange	6	191,122	369,767	37.3
Oxford	2	66,537	117,285	11.6
Plainville	1	26,305	48,254	4.5
Pomfret	6	176,505	339,718	32.9
Portland	2	61,492	112,998	11.2
Preston	4	153,308	281,414	30.0
Putnam	2	26,217	56,133	4.9
Redding	1	14,909	35,093	3.1
Ridgefield	2	47,504	99,276	8.9

## Residential and Small System Program – continued

Municipality	# Projects	CCEF Funding Amount	Total Cost	kW AC
Rocky Hill	1	10,480	22,925	2.0
Roxbury	2	67,294	129,137	12.0
Salem	5	152,821	284,057	28.2
Salisbury	6	171,864	360,342	33.0
Seymour	1	24,430	44,160	4.3
Sharon	4	134,390	272,273	25.2
Shelton	5	148,031	309,596	29.2
Sherman	4	93,017	186,110	17.2
Simsbury	6	171,778	337,223	31.5
Somers	4	121,875	236,138	22.2
South Windsor	3	70,466	146,488	13.7
Southbury	3	62,645	125,706	12.9
Southington	4	145,605	282,461	27.0
Sprague	1	35,219	73,212	6.7
Stafford	2	59,083	130,755	11.4
Stamford	5	117,670	257,597	24.4
Sterling	2	52,763	90,476	9.6
Stonington	19	593,309	1,197,102	115.7
Stratford	5	101,558	196,175	18.7
Suffield	1	28,625	57,395	5.2
Thompson	3	85,053	160,135	15.6
Tolland	1	33,485	62,870	5.9
Torrington	3	55,608	111,516	10.3
Trumbull	3	67,550	135,656	13.1
Union	1	27,997	56,454	4.9
Vernon	4	102,360	245,537	22.7
Voluntown	2	56,752	107,859	10.7
Waterbury	2	33,458	63,129	6.3
Waterford	10	259,382	498,100	49.2
Watertown	4	110,564	200,078	20.3
West Hartford	3	54,806	119,950	12.1
West Haven	2	39,451	86,503	7.9
Westbrook	2	42,806	82,114	7.8
Weston	3	79,261	175,600	14.9
Westport	5	119,492	249,451	23.0
Wethersfield	3	71,643	141,156	13.2
Wilton	3	106,274	203,509	19.6
Winchester	2	50,529	99,254	9.6
Windham	2	48,547	98,371	9.1
Windsor	1	23,085	42,054	4.0
Wolcott	4	154,417	290,213	28.0
Woodbridge	1	30,318	54,238	5.5

Municipality	# Projects	CCEF Funding Amount	Total Cost	kW AC
Woodbury	2	35,025	63,440	6.4
Woodstock	3	106,012	228,667	19.4
<b>Grand Total</b>	<b>507</b>	<b>\$13,567,604</b>	<b>\$27,209,933</b>	<b>2,582.6</b>

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## Program Goal 2: Emerging Renewable Energy Technologies

**Operational Demonstration Program** – Funding for pre-commercial stage clean energy projects that rely on the innovative use or application of renewable energy generation technologies.

Project Name	Locations	Technology	CCEF Funding Amount
Lite Trough	Various	Solar Water Heating	\$90,000

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Below is a summary of Goal 3 activities during calendar year 2008. A complete list of all CCEF projects funded in each town across the state is located at the back of this report.

## Program Goal 3: Renewable Energy Demand and Sustainability

**CTCleanEnergyOptions Program** – Developed by the Department of Public Utility Control, CTCleanEnergyOptions provides customers the opportunity to support clean energy by choosing to purchase it through their electric distribution company. CCEF participates in the program by supporting residential and commercial clean energy signups in communities across the state.

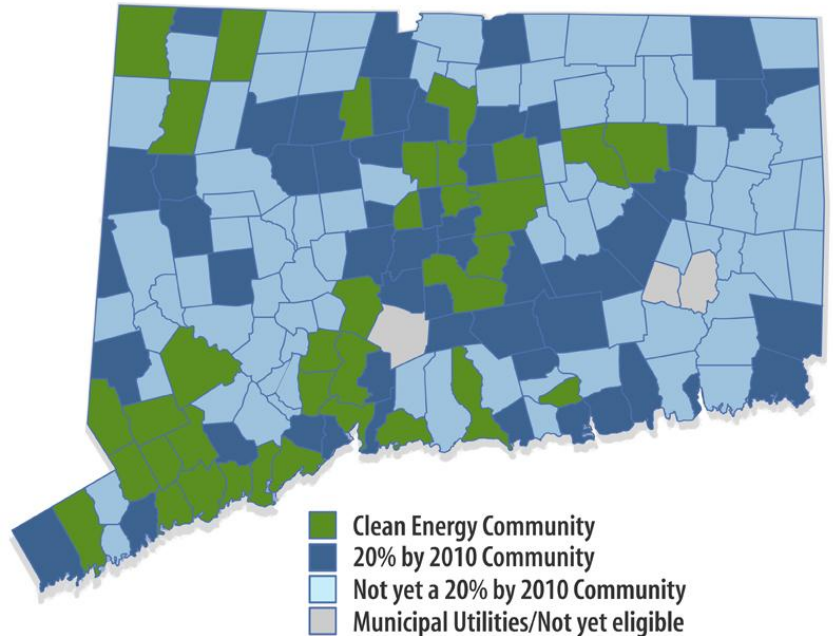
The CTCleanEnergyOptions Program generated 2,847 signups during the calendar year bringing the total number of signups to 20,158.

**20% by 2010 Campaign** – A challenge to cities and towns, to obtain at least 20 percent of the electricity for all municipal facilities from clean renewable energy sources by the year 2010. Pledging to this campaign is the first step a municipality must take in order to qualify as a Clean Energy Community.

Twenty two pledged to the 20% by 2010 Campaign during the calendar year bringing the total number of towns that have made the 20% by 2010 commitment to 87.

Municipality	20% by 2010
Avon	Jun-08
Bridgeport	Jan-08
Coventry	Feb-08

Durham	Feb-08
East Hampton	Jun-08
East Hartford	Apr-08
East Haven	Jan-08
East Lyme	Jun-08
Greenwich	Mar-08
Haddam	Sep-08
Kent	Jun-08
New Hartford	Sep-08
North Canaan	Apr-08
Norwalk	Mar-08
Pomfret	Sep-08
Putnam	Jul-08
Sherman	Apr-08
Simsbury	Mar-08
Stonington	Jun-08
Warren	Sep-08
West Haven	Jun-08
Woodbury	May-08



### Connecticut Clean Energy Comm

residents in the purchase and support of clean energy. Towns can use solar installations for municipal buildings through this program.

Ten communities qualified for Connecticut Clean Energy Communities status during the calendar year. This brings the total number of Clean Energy Communities across the state to 38.

Municipality	CEC
Avon	Oct-08
Bloomfield	Oct-08
Bridgeport	Jan-08
Cornwall	Jan-08
Coventry	Apr-08
Easton	Apr-08
Rocky Hill	Oct-08
Salisbury	Sep-08
Stratford	Jan-08
Wilton	May-08

**Emissions Avoided** – In addition to helping residents, small businesses, municipalities and organizations generate clean electricity, CCEF programs and initiatives are having a positive impact on our environment. The table below illustrates the carbon dioxide,

carbon monoxide, nitrogen oxides and sulfur dioxide emissions avoided over the lifetime of CCEF residential and on-site distributed generation projects.

Program	# Projects	Sum of kW AC	Expected Lifetime Generation (MWh)	Lifetime CO2 Emissions Avoided (lbs)	Lifetime CO Emissions Avoided (lbs)	Lifetime NOX Emissions Avoided (lbs)	Lifetime SO2 Emissions Avoided (lbs)
OSDG	86	9,652	338,577	292,641,477	279,169	188,306	708,532
Generating energy equivalent to the needs of 2,127 Homes @700 kWh/month							

Residential	507	2,583	79,181	87,891,100	69,363	45,133	167,072
Generating energy equivalent to the needs of 377 Homes @700 kWh/month							

## Other Activity Undertaken During the Calendar Year

### New Initiatives Developed or Launched

**Affordable Housing Initiative** - Provides access to capital to ensure that the benefits of renewable energy will be available to affordable housing residents. The program will stimulate interest in, and demand for, renewable energy projects in housing facilities that historically have been built using a “lowest first cost” standard.

Please refer to On-Site Distributed Generation chart beginning on page 2. Projects listed with an asterisk before the names are affordable housing projects.

**Solar Lease Program** - To address the barrier of high initial capital costs associated with solar PV installations, the CCEF developed a Solar Lease Program to provide no money down leases to low and moderate income households and small nonprofit organizations.

**Small Wind Demonstration Program** – In order to stimulate the market and create an infrastructure for wind technology, CCEF will demonstrate the performance characteristics of several leading small/micro wind turbines in Connecticut’s wind environment and identify the appropriate economic incentives for wind projects.

**Municipal Renewable Energy and Efficient Energy Generation Grant Program** - Public Act 07-242, *An Act Concerning Electricity and Efficiency* authorized \$50 million in state bond funds for CCEF to establish a municipal renewable energy and efficient energy generation grant program. Under the program, CCEF will provide grants to municipalities for renewable energy sources or energy-efficient generation sources. No bonding has been approved by the state bond commission.

**Renewable Energy in State Buildings Program** - Public Act 07-242, *An Act Concerning Electricity and Efficiency* authorizes \$30 million in bonds for the CCEF to fund the net project costs of renewable energy and combined heat and power

(cogeneration) projects in state buildings. No bonding has been approved by the state bond commission.

**Fuel Cell Monitoring Program** - The goal of this program is to actively monitor operational, experiential and economic performance data from CT-deployed fuel cell projects to substantiate the value proposition for fuel cell technologies. It seeks to make this information accessible to potential investors, procurers and manufacturers of fuel cells in order to reduce the perception of the risk of owning or investing in this technology. This project will be ongoing for 2-5 years.

**High Performance Schools** – Designed to transform how schools are designed and built the High Performance Schools Program will motivate towns to include energy efficiency features and clean distributed generation as standard components in newly constructed schools or major renovation projects.

**Clean Energy Baseline Study** - One of CCEF's objectives is to help develop the renewable energy industry in Connecticut. Under this initiative, CCEF will conduct a baseline "green jobs" study to help identify the gaps and barriers in the industry and help identify where CCEF should be focusing investments for the future. The proposed study will ultimately have three phases and consist of identification of the baseline value chain and its contribution to the state economy, the development of a roadmap and investment options and presentation of findings. We expect the results for phase one to be available by March 1, 2009.

**Geothermal Heat Systems Study** - P.A. 07-240, *An Act Concerning Geothermal Heat Systems* required CCEF to conduct a study and analysis of ground source heat pump systems and other heating and cooling sources. The study was completed and its results were distributed to the legislature, Energy Conservation Management Board and the DPUC in March 2008.

## **Marketing**

All marketing efforts are intended to drive increased awareness about the programs and initiatives offered by the CCEF as well as increase overall awareness about the benefits of clean energy. Additionally, marketing efforts help businesses and residents understand their role in adopting clean energy.

During 2008 the Clean Energy Fund approved a new logo and brand. Its Website was redesigned to be more user friendly and to incorporate the new logo and brand. The site now serves as an information portal about clean energy for residents, businesses and communities across the state.

The Fund hosted and was involved in numerous clean energy project ribbon-cuttings and events across the state intended to promote the use and adoption of clean energy by the community. The Fund also hosted or sponsored:

- Clean Energy Communities Awards Luncheon - to honor cities and towns, businesses and residents that have made significant contributions toward the use of clean energy;

- Electrochemical Hydrogen Separator Demo Project Luncheon – With the Department of Defense and the CT Global Fuel Cell Center, celebrating the successful completion of the EHS demonstration project; and
- Statewide Solar Tour – Tour of solar installations across Connecticut;
- Connecticut Science Fair – Sponsored a clean energy award for a solar-related science project created by secondary school students.

Fund staff attended a variety of conferences and participated on panels at several major conferences that promote clean energy technologies. Staff works closely with the Connecticut Hydrogen and Fuel Cell Coalition to promote Connecticut as a destination of choice for the fuel cell industry. In part due to the efforts of Fund staff, Fuel Cell Magazine is bringing its annual fuel cell event to Hartford in 2009.

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## **Collaborative Efforts with the Connecticut Energy Efficiency Fund**

The CCEF actively works with the Energy Conservation Management Board (ECMB) in an effort to realize partnership opportunities that further benefit Connecticut's ratepayers. The CCEF meets with members of the ECMB quarterly and the CCEF has a representative attending the monthly ECMB meetings. Over the past year there have been valuable information exchanges between the two funds leading to several partnering opportunities.

### **Partnership Opportunities**

**Renewable Energy and Energy Efficiency Economic Study** - CCEF is overseeing a Renewable Energy and Energy Efficiency Economy Study. This study, which is being developed through collaboration with the Connecticut Energy Efficiency Fund, is intended to provide Connecticut policymakers with a baseline inventory of renewable energy and energy efficiency economic benefits. Additionally, this study will incorporate a gap analysis and ultimately a strategic investment plan for the CCEF.

**Energy Efficiency Audits** - The CCEF requires that energy audits be performed on all commercial facilities that apply for funding. Efficiency measures that are identified with a payback period of less than five years must be implemented prior to CCEF funding a commercial project. The CCEF and ECMB are currently in discussions regarding the ability to apply a similar requirement to residential applications.

**Smart Energy Exhibit at the Connecticut Science Center** – The CCEF works closely with the CEEF on this exhibit at the soon to be opened Connecticut Science Center. The exhibit is based on the clean and efficient energy city concept and will include a: climate change theater; PV model; fuel cell lesson; wind workshop; biomass power; water power and more.

**Generating Clean Energy Across Connecticut**  
**Summary of approved, funded or earned activity during the calendar year of 2008**

<b>City/Town</b>	<b>Communities</b>	<b>OSDG</b>	<b>Residential</b>	<b>Grand Total</b>
Andover				\$0
Ansonia			\$43,740	\$43,740
Ashford		\$481,324	\$66,249	\$547,573
Avon	\$10,000	\$826,955	\$64,879	\$901,834
Barkhamsted			\$43,924	\$43,924
Beacon Falls				\$0
Berlin		\$37,669	\$37,683	\$75,352
Bethany	\$10,000		\$105,843	\$115,843
Bethel			\$117,767	\$117,767
Bethlehem			\$33,997	\$33,997
Bloomfield	\$10,000	\$699,305	\$42,281	\$751,586
Bolton			\$101,854	\$101,854
Bozrah				\$0
Branford	\$10,000	\$234,646	\$345,642	\$590,288
Bridgeport	\$20,000			\$20,000
Bridgewater			\$10,327	\$10,327
Bristol			\$32,454	\$32,454
Brookfield				\$0
Brooklyn			\$29,497	\$29,497
Burlington			\$16,757	\$16,757
Canaan			\$29,630	\$29,630
Canterbury			\$72,327	\$72,327
Canton			\$119,391	\$119,391
Chaplin			\$52,328	\$52,328
Cheshire		\$1,344,000	\$43,245	\$1,387,245
Chester			\$135,625	\$135,625
Clinton			\$75,572	\$75,572
Colchester			\$61,481	\$61,481
Colebrook				\$0
Columbia			\$55,187	\$55,187
Cornwall	\$20,000		\$133,772	\$153,772
Coventry	\$10,000		\$104,108	\$114,108
Cromwell			\$96,514	\$96,514
Danbury		\$1,247,707	\$175,842	\$1,423,549
Darien		\$346,650	\$44,079	\$390,729
Deep River		\$776,661	\$110,162	\$886,823
Derby		\$416,253	\$24,966	\$441,219
Durham			\$67,272	\$67,272
East Granby				\$0
East Haddam			\$198,617	\$198,617
East Hampton			\$28,515	\$28,515
East Hartford		\$294,208		\$294,208
East Haven		\$333,004	\$58,596	\$391,600
East Lyme		\$1,834,424	\$122,672	\$1,957,096
East Windsor		\$1,247,717	\$167,331	\$1,415,048
Eastford			\$29,517	\$29,517

**Generating Clean Energy Across Connecticut – continued**

<b>City/Town</b>	<b>Communities</b>	<b>OSDG</b>	<b>Residential</b>	<b>Grand Total</b>
Easton	\$40,000		\$157,607	\$197,607
Ellington			\$107,260	\$107,260
Enfield				\$0
Essex		\$1,360,585	\$32,841	\$1,393,426
Fairfield	\$30,000	\$943,812	\$293,581	\$1,267,393
Farmington			\$196,557	\$196,557
Franklin				\$0
Glastonbury	\$20,000		\$138,792	\$158,792
Goshen				\$0
Granby			\$134,327	\$134,327
Greenwich		\$487,613	\$156,931	\$644,544
Griswold			\$126,861	\$126,861
Groton			\$34,304	\$34,304
Guilford			\$112,737	\$112,737
Haddam			\$55,527	\$55,527
Hamden	\$10,000		\$124,070	\$134,070
Hampton		\$65,932	\$109,221	\$175,153
Hartford	\$10,000	\$1,463,000		\$1,473,000
Hartland				\$0
Harwinton			\$127,430	\$127,430
Hebron			\$74,998	\$74,998
Kent			\$66,587	\$66,587
Killingly			\$112,980	\$112,980
Killingworth			\$54,649	\$54,649
Lebanon			\$87,160	\$87,160
Ledyard			\$233,285	\$233,285
Lisbon			\$129,619	\$129,619
Litchfield			\$180,675	\$180,675
Lyme			\$31,013	\$31,013
Madison	\$30,000		\$95,970	\$125,970
Manchester		\$263,800	\$181,597	\$445,397
Mansfield	\$20,000	\$44,658	\$154,200	\$218,858
Marlborough			\$104,438	\$104,438
Meriden				\$0
Middlebury		\$2,412,686		\$2,412,686
Middlefield			\$75,657	\$75,657
Middletown	\$10,000	\$442,120	\$143,503	\$595,623
Milford	\$20,000		\$338,158	\$358,158
Monroe		\$755,246	\$52,864	\$808,110
Montville			\$59,979	\$59,979
Morris			\$7,622	\$7,622
Naugatuck		\$926,655	\$43,863	\$970,518
New Britain	\$15,000	\$894,498	\$32,001	\$941,499
New Canaan			\$107,853	\$107,853
New Fairfield			\$39,424	\$39,424
New Hartford			\$84,613	\$84,613
New Haven	\$20,000	\$2,246,828	\$76,818	\$2,343,646
New London			\$40,545	\$40,545
New Milford			\$130,392	\$130,392

## Generating Clean Energy Across Connecticut – continued

City/Town	Communities	OSDG	Residential	Grand Total
Newington		\$565,903	\$89,990	\$655,893
Newtown		\$1,140,671	\$213,937	\$1,354,608
Norfolk				\$0
North Branford			\$24,434	\$24,434
North Canaan			\$32,878	\$32,878
North Haven		\$853,160	\$92,325	\$945,485
North Stonington		\$80,421	\$227,296	\$307,717
Norwalk		\$302,275	\$51,975	\$354,250
Norwich				\$0
Old Lyme			\$104,125	\$104,125
Old Saybrook		\$174,649	\$61,794	\$236,443
Orange	\$15,000	\$1,225,600	\$191,122	\$1,431,722
Oxford			\$66,537	\$66,537
Plainfield				\$0
Plainville		\$542,151	\$26,305	\$568,456
Plymouth				\$0
Pomfret		\$107,190	\$176,505	\$283,695
Portland		\$349,191	\$61,492	\$410,683
Preston			\$153,308	\$153,308
Prospect				\$0
Putnam			\$26,217	\$26,217
Redding			\$14,909	\$14,909
Ridgefield	\$100,000		\$47,504	\$147,504
Rocky Hill	\$10,000	\$39,142	\$10,480	\$59,622
Roxbury		\$29,055	\$67,294	\$96,349
Salem			\$152,821	\$152,821
Salisbury	\$20,000		\$171,864	\$191,864
Scotland				\$0
Seymour		\$780,560	\$24,430	\$804,990
Sharon			\$134,390	\$134,390
Shelton		\$620,806	\$148,031	\$768,837
Sherman			\$93,017	\$93,017
Simsbury			\$171,778	\$171,778
Somers			\$121,875	\$121,875
South Windsor		\$1,966,500	\$70,466	\$2,036,966
Southbury			\$62,645	\$62,645
Southington			\$145,605	\$145,605
Sprague			\$35,219	\$35,219
Stafford			\$59,083	\$59,083
Stamford	\$10,000	\$4,869,643	\$117,670	\$4,997,313
Sterling			\$52,763	\$52,763
Stonington		\$660,532	\$593,309	\$1,253,841
Stratford	\$20,000	\$210,243	\$101,558	\$331,801
Suffield			\$28,625	\$28,625
Thomaston				\$0
Thompson		\$35,538	\$85,053	\$120,591
Tolland			\$33,485	\$33,485
Torrington		\$323,037	\$55,608	\$378,645
Trumbull			\$67,550	\$67,550

**Generating Clean Energy Across Connecticut – continued**

<b>City/Town</b>	<b>Communities</b>	<b>OSDG</b>	<b>Residential</b>	<b>Grand Total</b>
Union			\$27,997	\$27,997
Vernon		\$134,330	\$102,360	\$236,690
Voluntown			\$56,752	\$56,752
Wallingford				\$0
Warren				\$0
Washington				\$0
Waterbury		\$1,087,186	\$33,458	\$1,120,644
Waterford		\$274,004	\$259,382	\$533,386
Watertown		\$891,938	\$110,564	\$1,002,502
West Hartford	\$10,000	\$564,966	\$54,806	\$629,772
West Haven		\$714,157	\$39,451	\$753,608
Westbrook			\$42,806	\$42,806
Weston			\$79,261	\$79,261
Westport	\$10,000	\$17,672	\$119,492	\$147,164
Wethersfield	\$10,000		\$71,643	\$81,643
Willington				\$0
Wilton	\$40,000		\$106,274	\$146,274
Winchester		\$1,714,253	\$50,529	\$1,764,782
Windham			\$48,547	\$48,547
Windsor	\$5,000	\$3,990,295	\$23,085	\$4,018,380
Windsor Locks				\$0
Wolcott			\$154,417	\$154,417
Woodbridge	\$40,000		\$30,318	\$70,318
Woodbury			\$35,025	\$35,025
Woodstock			\$106,012	\$106,012
<b>Grand Total</b>	<b>\$605,000</b>	<b>\$46,693,024</b>	<b>\$13,567,604</b>	<b>\$60,865,628</b>