



earthlight

SOLAR AND ENERGY SOLUTIONS



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Earthlight Technologies provides services for commercial and residential facilities including, but not limited to:

- Solar Photovoltaic Design and Installation
- Battery Energy Storage Systems
- EV Charging
- Energy-Efficient Lighting and Controls

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Earthlight Team - *Based in Ellington, CT*

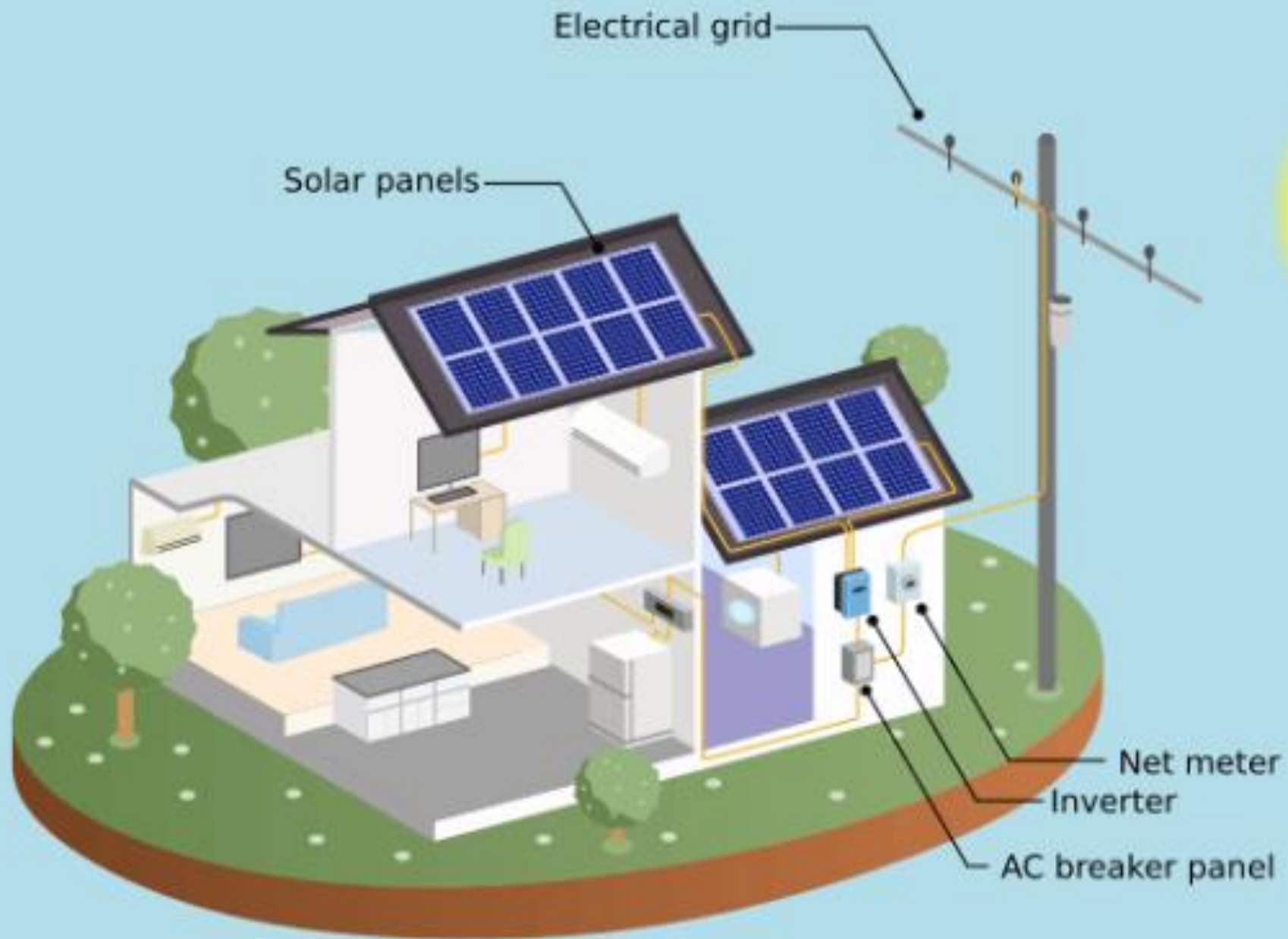
Founded in 2008
126 Employees
Primary Markets: CT, MA, OR



Earthlight Team - *Based in Ellington, CT*

- **Services Include:**
 - **Commercial and Residential Solar Design and Installation**
 - **Energy Efficiency Projects, Primarily Lighting**
 - **EV charger design and installation**
- **SBEA, BEA, PEX program contractors in CT and MA**
- **DAS approved contractor**
- **Currently 126 Employees**







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Roof Mounted Solar

Ground Mounted Solar



Solar Canopies



Federal Incentives

- 100% Bonus Depreciation – Applicable to for-profit businesses.
- 30% Federal Investment Tax Credit (ITC) - Applicable to for-profit entities, who pay income taxes.
- 30% Direct Pay Option – Designed for non-profits and municipalities. Project is paid for by the owner, then direct payment is made after solar system is energized. - 10%
- 10% Direct Pay Bonus – LMI communities and “fossil fuel communities”.
- 10% Direct Pay Bonus – Domestic content. Project must use at least 40% U.S. manufactured components.

State Incentives – Non- Residential Energy Solutions (NRES) (CT)

Consists of 2 components; REC and netting tariff.

- REC varies based on utility rate class and the corresponding retail utility rate. Solar contractor will figure this out for you.
- Netting tariff is the retail rate, which you will be paid for excess energy created during the day. Essentially, this is net metering.
- Limited kW capacity allowed each calendar year, depending upon size of the system.
- Utility solicitations occur semi-annually; February and August.
- Massachusetts have similar programs, with which we are able to help.

Residential vs Commercial(Non-residential)

- Residential incentives and net metering are awarded on a rolling basis.
- The annual capacity limits are currently not a concern.
- Non-residential incentives and net metering are awarded 2 times per year.
- Non-residential incentives and net metering are very competitive. There is limited annual capacity. A solar developer you trust will help you navigate the complex non-residential programs.
- REC values change annually for the non-residential program, while REC values are fixed for residential.

Utility Solar Web Resources

Eversource:

<https://www.eversource.com/content/business/save-money-energy/clean-energy-options/connecticut-non-residential-renewable-energy-solutions>

United Illuminating:

<https://www.uinet.com/smartenergy/innovation/renewable-energy-solutions>

United Illuminating Year 2 MW Allocations					
Category	Project Size (AC)	UI MW/Year	February Solicitation MW (60%)	August Solicitation MW (40%)	Project Selection Process
Low Emission	≤ 5,000 kW	2	2	Remaining MW from February	Competitive Solicitation
Large Zero Emission	≥1,000 kW ≤ 5,000 kW	7	5	2	Competitive Solicitation
Medium Zero Emission	>200 kW < 1,000 kW	8	4	4	Competitive Solicitation
Small Zero Emission	≤ 200 kW	5	3	2	First-Come, First-Served

Eversource Year 2 MW Allocations					
Category	Project Size (AC)	Eversource MW/Year	February Solicitation MW (60%)	August Solicitation MW (40%)	Project Selection Process
Low Emission	≤ 5,000 kW	8	4.8	3.2	Competitive Solicitation
Large Zero Emission	≥1000 kW ≤ 5,000 kW	35	21	14	Competitive Solicitation
Medium Zero Emission	>200 kW < 1000 kW	25	15	10	Competitive Solicitation
Small Zero Emission	≤ 200 kW	20	12	8	First-Come, First-Served

Funding Options

- Power Purchase Agreement (PPA) – No out of pocket. Use all solar energy created.
- Commercial Property Assessed Clean Energy (CPACE) – Small out-of-pocket. Short or long term financing. Reasonable rates in todays market.
- Alternative, private financing.
- Cash.
- Roof lease – Get paid to rent your roof to a third-party solar owner.

Power Purchase Agreement Example



PPA Example
6/27/2023

Utility Bill Impact				Power Purchase Agreement		Performance	
Year	Solar Production (kWh)	Avoided Rate	Electric Savings	PPA Rate	Annual PPA Payments	Annual Net Savings	Cumulative Savings
0						\$0	\$0
1	174,000	\$0.180	\$31,320	\$0.144	(\$25,056)	\$6,264	\$6,264
2	173,130	\$0.184	\$31,787	\$0.144	(\$24,931)	\$6,856	\$13,120
3	172,264	\$0.187	\$32,260	\$0.144	(\$24,806)	\$7,454	\$20,574
4	171,403	\$0.191	\$32,741	\$0.144	(\$24,682)	\$8,059	\$28,633
5	170,546	\$0.195	\$33,229	\$0.144	(\$24,559)	\$8,670	\$37,303
6	169,693	\$0.199	\$33,724	\$0.144	(\$24,436)	\$9,288	\$46,591
7	168,845	\$0.203	\$34,226	\$0.144	(\$24,314)	\$9,913	\$56,504
8	168,001	\$0.207	\$34,736	\$0.144	(\$24,192)	\$10,544	\$67,048
9	167,161	\$0.211	\$35,254	\$0.144	(\$24,071)	\$11,183	\$78,231
10	166,325	\$0.215	\$35,779	\$0.144	(\$23,951)	\$11,828	\$90,060
11	165,493	\$0.219	\$36,312	\$0.144	(\$23,831)	\$12,481	\$102,541
12	164,666	\$0.224	\$36,853	\$0.144	(\$23,712)	\$13,142	\$115,683
13	163,842	\$0.228	\$37,403	\$0.144	(\$23,593)	\$13,809	\$129,492
14	163,023	\$0.233	\$37,960	\$0.144	(\$23,475)	\$14,484	\$143,976
15	162,208	\$0.238	\$38,525	\$0.144	(\$23,358)	\$15,167	\$159,144
16	161,397	\$0.242	\$39,099	\$0.144	(\$23,241)	\$15,858	\$175,002
17	160,590	\$0.247	\$39,682	\$0.144	(\$23,125)	\$16,557	\$191,559
18	159,787	\$0.252	\$40,273	\$0.144	(\$23,009)	\$17,264	\$208,823
19	158,988	\$0.257	\$40,873	\$0.144	(\$22,894)	\$17,979	\$226,802
20	158,193	\$0.262	\$41,482	\$0.144	(\$22,780)	\$18,703	\$245,505
21	0	\$0.267	\$0	\$0.000	\$0	\$0	\$0
22	0	\$0.273	\$0	\$0.000	\$0	\$0	\$0
23	0	\$0.278	\$0	\$0.000	\$0	\$0	\$0
24	0	\$0.284	\$0	\$0.000	\$0	\$0	\$0
25	0	\$0.290	\$0	\$0.000	\$0	\$0	\$0

Solar Estimate - Not a Quote - Discussion Purposes Only

Prepared by: Tim Sadler: 860-543-3849

CPACE Example



PPA Example
6/27/2023

Utility Bill and Incentive Savings					Federal Incentives		Investment Performance		
Year	Solar Production (kWh)	Annual Loan Payment	Electric Savings	REC Income	Depreciation	ITC Direct Pay	Maintenance	Total Per Year	Cumulative
0		(\$7,500)						(\$7,500)	(\$7,500)
1	174,000	(\$30,906)	\$31,320	\$8,874			\$0	\$9,288	\$1,788
2	173,130	(\$30,906)	\$31,787	\$8,830		\$126,000	\$0	\$135,711	\$137,499
3	172,264	(\$30,906)	\$32,260	\$8,785			\$0	\$10,140	\$147,639
4	171,403	(\$30,906)	\$32,741	\$8,742			\$0	\$10,577	\$158,216
5	170,546	(\$30,906)	\$33,229	\$8,698			\$0	\$11,021	\$169,237
6	169,693	(\$30,906)	\$33,724	\$8,654			\$0	\$11,473	\$180,709
7	168,845	(\$30,906)	\$34,226	\$8,611			\$0	\$11,932	\$192,641
8	168,001	(\$30,906)	\$34,736	\$8,568			\$0	\$12,399	\$205,040
9	167,161	(\$30,906)	\$35,254	\$8,525			\$0	\$12,873	\$217,913
10	166,325	(\$30,906)	\$35,779	\$8,483			\$0	\$13,356	\$231,269
11	165,493	(\$30,906)	\$36,312	\$8,440			\$0	\$13,847	\$245,116
12	164,666	(\$30,906)	\$36,853	\$8,398			(\$1,875)	\$12,471	\$257,587
13	163,842	(\$30,906)	\$37,403	\$8,356			(\$1,875)	\$12,978	\$270,565
14	163,023	(\$30,906)	\$37,960	\$8,314			(\$1,875)	\$13,493	\$284,058
15	162,208	(\$30,906)	\$38,525	\$8,273			(\$1,875)	\$14,017	\$298,075
16	161,397	(\$30,906)	\$39,099	\$8,231			(\$1,875)	\$14,550	\$312,625
17	160,590	(\$30,906)	\$39,682	\$8,190			(\$1,875)	\$15,091	\$327,717
18	159,787	(\$30,906)	\$40,273	\$8,149			\$0	\$17,517	\$345,233
19	158,988	(\$30,906)	\$40,873	\$8,108			\$0	\$18,076	\$363,310
20	158,193	(\$30,906)	\$41,482	\$8,068			\$0	\$18,645	\$381,954
21	157,402	\$0	\$42,100		\$0	\$0	\$0	\$42,100	\$424,055
22	156,615	(\$30,906)	\$42,728		\$0	\$0	\$0	\$11,822	\$435,877
23	155,832	(\$30,906)	\$43,364		\$0	\$0	\$0	\$12,459	\$448,335
24	155,053	(\$30,906)	\$44,011		\$0	\$0	\$0	\$13,105	\$461,440
25	154,278	(\$30,906)	\$44,666		\$0	\$0	\$0	\$13,761	\$475,201
26	153,506	\$0	\$45,332		\$0	\$0	\$0	\$45,332	\$520,533
27	152,739	\$0	\$46,007		\$0	\$0	\$0	\$46,007	\$566,540
28	151,975	\$0	\$46,693		\$0	\$0	\$0	\$46,693	\$613,233
29	151,215	\$0	\$47,388		\$0	\$0	\$0	\$47,388	\$660,621
30	150,459	\$0	\$48,095		\$0	\$0	\$0	\$48,095	\$708,716

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Hotel Marcel – 1st Net Zero Hotel in the USA



American Legion



Ellington Housing Authority



Medway, MA - Pitched and Flat Roof Example



Solar Feasibility

- Schedule a site visit with Earthlight or your preferred solar developer to evaluate potential installation site(s).
- Analyze energy usage and configuration at each site. The most recent utility bill for each meter on-site is all we need.
- Design the solar array (with or without storage), EVSE, and/or lighting solution
- Find the best finance option.
- Apply to NRES in August or February. Capacity is limited.

Q & A

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