



# Cuyahoga County-wide Hub Solar Financing

Making solar cost-effective for municipalities and non-profits across Cuyahoga County

## Think 'going solar' is too expensive? Not anymore...

Have you explored "going solar" in the past, and thought that you just couldn't make the numbers work out? It's time to take another look, thanks to the Cuyahoga Hub Solar Financing program.

By aggregating multiple solar installations across the County, the Hub Solar Financing program has secured better pricing for area cities and non-profits. The Hub has also cut the administrative, legal and financing costs to make solar accessible for building owners who cannot capture solar tax benefits themselves. The Hub Solar Financing program has qualified a third-party solar finance partner willing to work with smaller cities and non-profit organizations that otherwise may have not been able to access affordable solar financing. A standardized power purchase agreement and no-cost technical assistance makes solar viable across Cuyahoga County today.

## About the Cuyahoga County Clean Energy Financing Hub

Cuyahoga County launched the Clean Energy Financing Hub to accelerate broad and deep integration of clean energy technologies across the County. The Hub is a public-private partnership between Cuyahoga County and Eutectics, a mission-driven company focused on making clean energy mainstream by mobilizing affordable capital for building owners of all types.

## Building Owner Savings for Sample 100 kW Rooftop Solar Project



Sample Pre-Paid PPA Chart utilizing Hub financing.

## Capturing Savings from the Sun

The Hub Solar Financing program has identified third-party solar finance partners willing to fund smaller rooftop solar projects, through a pre-paid power purchase agreement.

Building owners will make a single upfront payment equal to approximately 70% of the total system cost. Solar energy savings will begin as soon as the solar equipment is installed and will continue for at least 25 years.

The upfront payment may be made from existing funds, or from financing facilitated by the Hub. In most cases, the solar energy savings will exceed finance payments from the outset.



The Cuyahoga County HUB is a partnership between Eutectics™ and Cuyahoga County. Connect with Shanelle Smith, Deputy Director with the Cuyahoga County Department of Sustainability for more information.



# Pre-Paid PPA Cash Flow for Sample 100 Kilowatt Solar Project

100 Kilowatt System	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	25 Year Total
Pre-Paid PPA	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	
<b>EXPENDITURES</b>											
Project Cost	\$ 250,000										\$ 250,000
Pre-Paid PPA Amount	\$ 175,000										\$ 175,000
Pre-Paid PPA Financing	\$ (175,000)										\$ (175,000)
Operations & Maintenance								\$ 437	\$ 1,332	\$ 1,352	\$ 27,154
Insurance								\$ 146	\$ 444	\$ 451	\$ 9,051
Hub Financing Repayment	\$ 4,060	\$ 12,179	\$ 12,179	\$ 12,179	\$ 12,179	\$ 12,179	\$ 12,179	\$ 12,179	\$ 12,179	\$ 12,179	\$ 243,583
<b>Annual Expenditures</b>	<b>\$ 4,060</b>	<b>\$ 12,179</b>	<b>\$ 12,762</b>	<b>\$ 13,955</b>	<b>\$ 13,982</b>	<b>\$ 279,788</b>					
<b>Cumulative Expenditures</b>	<b>\$ 4,060</b>	<b>\$ 16,239</b>	<b>\$ 28,418</b>	<b>\$ 40,597</b>	<b>\$ 52,776</b>	<b>\$ 64,955</b>	<b>\$ 77,135</b>	<b>\$ 89,897</b>	<b>\$ 103,852</b>	<b>\$ 117,833</b>	
<b>INCOME</b>											
Energy Savings	\$ 4,088	\$ 12,570	\$ 12,882	\$ 13,202	\$ 13,530	\$ 13,867	\$ 14,211	\$ 14,564	\$ 14,926	\$ 15,297	\$ 425,059
Ohio SRECs	\$ 530	\$ 1,581	\$ 1,573	\$ 1,565	\$ 1,557	\$ 1,550	\$ 1,542	\$ 1,534	\$ 1,526	\$ 1,519	\$ 15,484
<b>Annual Income</b>	<b>\$ 4,618</b>	<b>\$ 14,151</b>	<b>\$ 14,455</b>	<b>\$ 14,767</b>	<b>\$ 15,088</b>	<b>\$ 15,416</b>	<b>\$ 15,753</b>	<b>\$ 16,098</b>	<b>\$ 16,453</b>	<b>\$ 16,816</b>	<b>\$ 440,543</b>
<b>Cumulative Income</b>	<b>\$ 4,618</b>	<b>\$ 18,769</b>	<b>\$ 33,224</b>	<b>\$ 47,991</b>	<b>\$ 63,079</b>	<b>\$ 78,495</b>	<b>\$ 94,248</b>	<b>\$ 110,346</b>	<b>\$ 126,799</b>	<b>\$ 143,615</b>	
<b>Annual Net Nominal</b>	<b>\$ 558</b>	<b>\$ 1,972</b>	<b>\$ 2,276</b>	<b>\$ 2,588</b>	<b>\$ 2,909</b>	<b>\$ 3,237</b>	<b>\$ 3,574</b>	<b>\$ 3,336</b>	<b>\$ 2,498</b>	<b>\$ 2,834</b>	<b>\$ 160,755</b>
<b>Cumulative Net Nominal</b>	<b>\$ 558</b>	<b>\$ 2,530</b>	<b>\$ 4,806</b>	<b>\$ 7,394</b>	<b>\$ 10,303</b>	<b>\$ 13,540</b>	<b>\$ 17,113</b>	<b>\$ 20,449</b>	<b>\$ 22,947</b>	<b>\$ 25,782</b>	

Assumptions: Energy production and finance payments both begin September 1, 2016; current cost of electricity \$0.11/kWh; 10 years of SRECs assumed using March 2016 market pricing. Pre-Paid PPA amount equal to 70% of total project cost; financing at 3.5% over 20 years; Annual energy escalation of 3%, annual O&M and insurance inflation of 1.5%. Eutectics has provided illustrations of repayment schedule, assuming moderate to good credit. Final eligibility, amortization and payment schedule will be determined upon formal project submission and approval.

Eutectics does not provide tax advice. Project owners should consult their accountant or tax professional.

## Next Steps for Going Solar

### Register the Project with the Hub

Prepare initial information, including:

- Past 12 months of electric bills (if available);
- Age of roof (if available), and
- Contact information for decision-maker.

### April - May

- Select contractor(s) to perform initial engineering at each potential host solar site & present project bids;
- The project representative and facilities manager (if applicable) will be present to grant access and identify specific building concerns, and
- The Hub will assist registered projects owner in evaluating bids, but will not provide recommendations.

### June - July

- Site host reviews and signs power purchase agreement (PPA) and contract.

### July - August

- Construction commences.

### August - September

- Construction completed.

### System Interconnection

- Energy production and savings!

## Sample Cash Flow Estimates

Expected pre-paid PPA savings and payback for two possible payment options:

100 kW system	Hub Financing for Initial Payment	Self-Financed
<b>Initial Payment</b>	\$0 out-of-pocket	\$175,000
<b>Simple Payback</b>	Immediate	Year 12
<b>25-Year Savings</b>	\$160,755	\$229,338
	(cash flow shown above & on graph)	

## FAQs

### Q: How were solar contractors selected?

**A:** A request for qualifications (RFQ) was sent to every registered solar provider in the Green Energy Ohio, Certified Photovoltaic Installers/Integrators List. Eutectics analyzed responses based on estimated pricing, experience, insurance qualifications, bonding capacity, and willingness to apply to prevailing wage and high road standards. The Hub solar financing partner then reviewed the contractors' RFQ responses, financial information and completed projects. Upon project registration, building owners will be provided a list of pre-qualified approved contractors.

### Q: Why does the Cuyahoga Hub Solar Financing program utilize a pre-paid PPA and not a traditional PPA?

**A:** Traditional PPAs are cost-effective in regions with high energy prices and lucrative SREC markets such as the West Coast and the Northeast. A traditional PPA price in Cuyahoga County in 2016 is likely to double a city's electricity price. By combining the pre-paid PPA with the benefits of a larger portfolio of projects, the Hub Solar Financing program has made going solar cost-effective today.

## Start Your Solar Project Today!



Contact Shanelle Smith, Deputy Director of the Cuyahoga County Department of Sustainability to register your project with the Cuyahoga County Clean Energy Finance Hub.

Once registered, project owners will select from a provided list of approved and pre-qualified solar contractors to perform initial engineering bid(s).

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