



Informational Webinar/Q&A
April 11th, 2023

G&T Solar Team

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www.pasolarcenter.org

Guiding All Pennsylvanians into a Clean Energy Future



Our Vision and Mission

Our vision is that Pennsylvania becomes a leader in renewable energy through rapid and broad expansion of in-state solar generation.

We will accomplish this by providing trusted guidance to usher *all Pennsylvanians* into the clean energy economy in order to create more resilient communities.



PENNSYLVANIA
SOLAR CENTER

Guiding All Pennsylvanians into a Clean Energy Future



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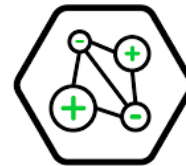


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Engineers and Scientists



Ken Gfroerer & Aileen Lampman



PENNSYLVANIA
SOLAR CENTER



TRANSFORM

Walking the Walk
Technical Assistance to the
Commercial Sector



EDUCATE

**Outreach, Public
Awareness & Resources**
Statewide Solar Resource Hub,
Media & Communications



ADVOCATE

**Policy Education &
Advocacy**
Supporting Robust Solar Policies



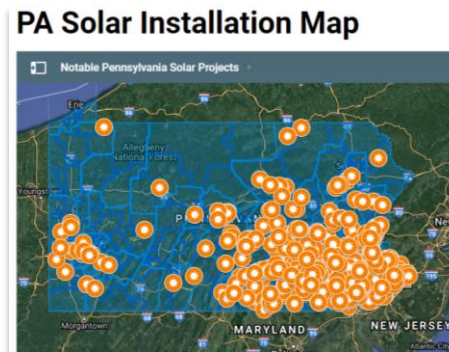
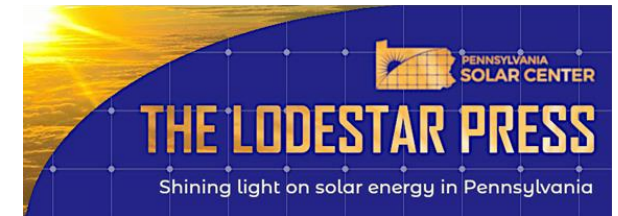


EDUCATE

Outreach, Public Awareness & Resources

Statewide Solar Resource Hub & Savvy Communications

Online presence



Facebook, Twitter, Instagram and LinkedIn: @pasolarcenter



Policy Education & Advocacy

Supporting Robust Solar Policies



LEGISLATIVE GUIDE TO STATE SOLAR POLICY PENNSYLVANIA 2021-2022

Updated February 15, 2022

The Pennsylvania Solar Center is a nonprofit organization dedicated to helping all Pennsylvanians benefit from solar energy. With decades of experience represented by our staff, Board and partners, the Pennsylvania Solar Center provides research and education on important topics impacting Pennsylvania's solar industry.

The following legislative guide contains information on policy proposals currently under consideration by Pennsylvania's General Assembly that have potential to impact Pennsylvania's solar industry. This document and its references are provided for educational purposes only and do not necessarily reflect the views or opinions of the Pennsylvania Solar Center's funders, members, partners, Board, or individual staff.

LEGEND	
These icons indicate if the PA Solar Center interprets the bill to have positive or negative impact to the solar industry in Pennsylvania as well as consideration of a bill's likeliness to garner support. This is not intended to imply endorsement, lack of support, or otherwise, for any particular legislation.	
	Bills of significant interest to watch and have potential positive impacts for solar development in Pennsylvania.
	Bills that are unlikely to pass in the current legislative session (January 2021 to December 2022) but would likely have a positive impact on solar.
	Bills of significant interest to watch and for which the Pennsylvania Solar Center has concern for the possible negative impact(s) on solar development in Pennsylvania.



Guidebooks under Development:
1) Leasing Land for Solar
2) Zoning large scale solar for municipalities





TRANSFORM

Walking the Walk

Technical Assistance to the
Commercial Sector



Galvanizing our Energy Transition through Solar (GET Solar)



Galvanizing Energy Transition

G.E.T. Solar

The **GET Solar** initiative is a streamlined process that instills organizations and communities with confidence in the process of going solar by using trusted tools and resources that connect organizations to qualified professionals making the process straightforward and simple.

We help you go solar!

Who Does *GET Solar* Serve?

Our team offers programs to help all types of non-residential organizations on their path to solar.

- **Businesses and Nonprofits (*GET Solar TrailBlazers*)**

Businesses and Nonprofits can enter any time

- **Businesses and Nonprofits in Selected Communities (*GET Solar: Communities*)**

Round Three opens April 11th, 2023

- **Municipalities (*GET Solar Local Government*)**

GET Solar CONNECT program accepting applications now

- **School Districts (*GET Solar Schools*)**

Accepting applications now

- **AgriSolar (*GET Solar Farms*)**

Coming Soon!

- **Faith Communities (*GET Solar Faith*)**

Coming Soon!



A Brighter Future: Solar for Pennsylvania Schools



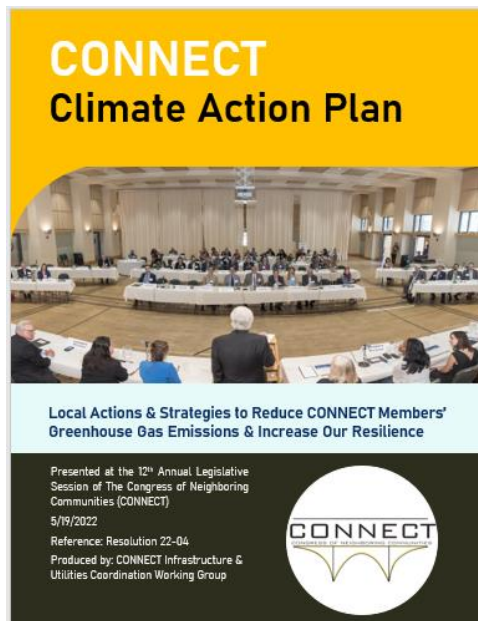
**Free Technical Assistance for
K-12 Schools in Pennsylvania**

“GET Solar CONNECT” Opportunity



You Wanted...

Focus on “municipal assets”, municipal property solar, technical assistance, capacity building, grants/funding mechanisms, help with developers...



- Why? Explore Solar for Local Govts.



- How do we see it being implemented? Free for municipalities, CONNECT cohort, Apply by April 28th!

Now is a great time to go solar!

- Utility electricity costs have risen dramatically
- Inflation Reduction Act (IRA) has increased tax benefits substantially
- IRA allows for nonprofit organizations to benefit from tax benefits
- Financing available to ensure cash-positive solar immediately or in first few years

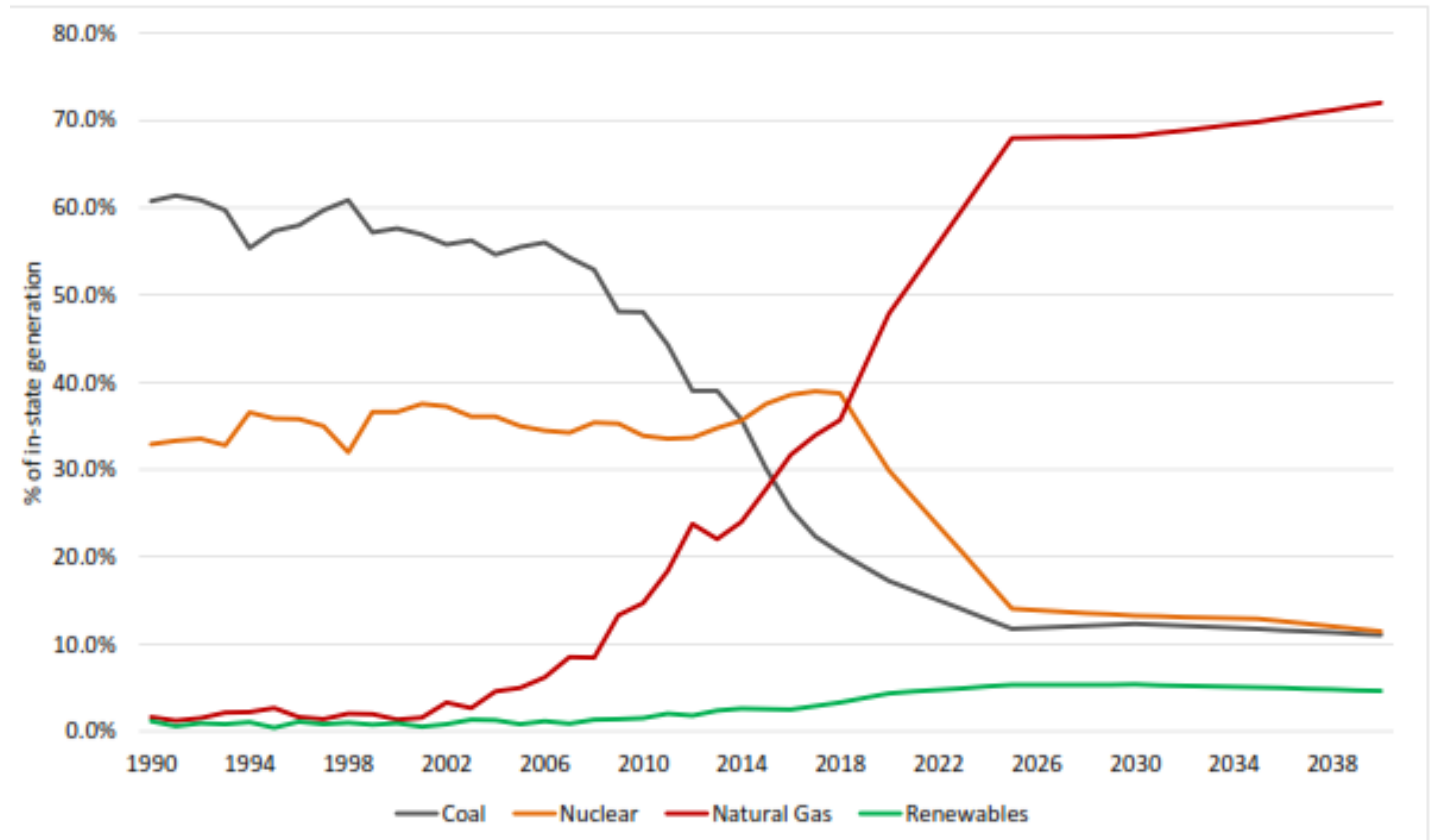


Seldom Rest Farms
Myerstown, PA

Electricity Rate Increases

- **Citizens' Electric**, up 26.6%
- **Duquesne Light**, up 17.3%
- **PECO**, up 8.1%
- **Met-Ed**, up 16.1%
- **Penelec**, up 35.4%
- **Penn Power**, up 22.7%
- **PPL**, up 38.3%
- **UGI Electric**, up 45.7%
- **Wellsboro Electric**, up 23.7%
- **West Penn Power**, up 44.6%

Putting forecasted generation into perspective



Inflation Reduction Act

Increased tax benefits for organizations going solar.

- 30% base tax credit
- Domestic Content Bonus Credit
- Energy Community Bonus Credit
- Low-Income Bonus Credit

Elective Payments – **Tax-exempt organizations can receive a Direct Payment** from the federal government based on tax benefits they can't receive.



Power Purchase Agreement (PPA)

Power Purchase Agreements are the primary vehicle for nonprofit entities to realize some of the tax benefits for solar installations.

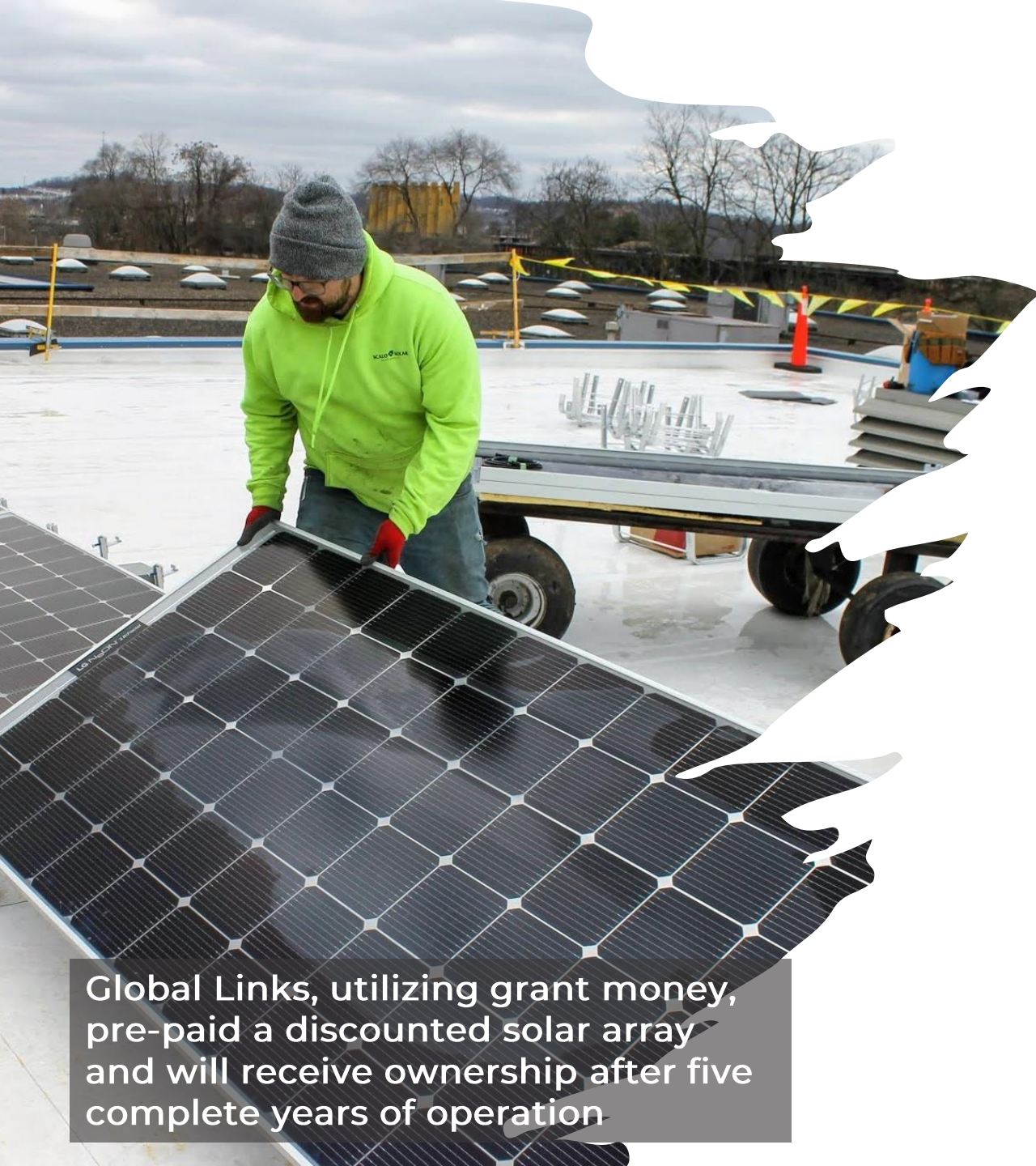
- Each PPA is a three-party agreement between a solar developer, a client, and a tax-equity investor.
- The tax-equity investor owns the solar installation and claims the tax benefits.
- The client, or host-site, receives cost saving benefits from the energy produced.
- After a certain period, the host-site may assume ownership of the installation.
- The **tax-equity investor is responsible for operations and maintenance** of the solar installation over the life of the agreement.



CCAC North Campus receives discounted electricity through a long-term PPA

Long-term Power Purchase Agreements

- In lieu of paying an up-front cost for a solar installation, the nonprofit purchases the electricity provided by the solar at a discounted rate.
- A long-term PPA can extend as far as 30 years.
- Over this term, the investor (owner of the solar installation) is responsible for maintenance.
- The nonprofit often has the option to buy out the PPA contract or may become the owner at the end of the PPA term.
- This is most effective for systems above 500kW of installed solar.



Short-Term “Partnership Flip” Power Purchase Agreement

- The investor owns the solar installation for a minimum of five years per IRS expectations to ensure they can collect the full tax benefit.
- The nonprofit host-site pays a discounted amount for the full solar installation up-front or a fixed price at the end of the agreed-upon term.
- The discount is based on an amount of the tax benefits the investor is able/willing to pass on after legal and maintenance fees are factored.

Global Links, utilizing grant money, pre-paid a discounted solar array and will receive ownership after five complete years of operation

Energy Efficiency & Conservation Block Grant (EECBG)

*Currently Open, \$550M in the form of Grants OR Vouchers. Open to 'Formula Applicants' and
Competitive Grants. Office Hours & Upcoming webinars available for further information*

Formula Grant & Voucher Application- Money allocated directly to states, counties, and certain cities based on population size

- Awardees in our region
 - **PA (overall)- \$3,021,720**
 - Allegheny- \$751,200
 - City of Pittsburgh- \$337,960

Competitive Program

- Just launched- concept papers **DUE JUNE 5TH, 2023**, Local Governments can apply through January 2024
- Local Governments are encouraged to apply directly to the states-
 - *States required to sub-grant 60%+ to ineligible local governments*
 - Priority will be given to Justice 40 communities, areas designated as disadvantaged communities based on census data
- Entities encouraged to 'Team Up' with other organizations, communities, and local entities
- **WEBINAR- APRIL 18TH 2P- 3p- EECGB: Competitive Program Introductory Webinar**

GET Solar Process

1

Complete solar feasibility study and provide high level financial estimates

2

Place project out to bid to qualified regional solar developers on behalf of organizations interested in solar

3

Help organizations understand and compare proposals

4

Develop a financing strategy for organizations to complete project; usher organization to installation; provide PR support about completed project

Feasibility Study

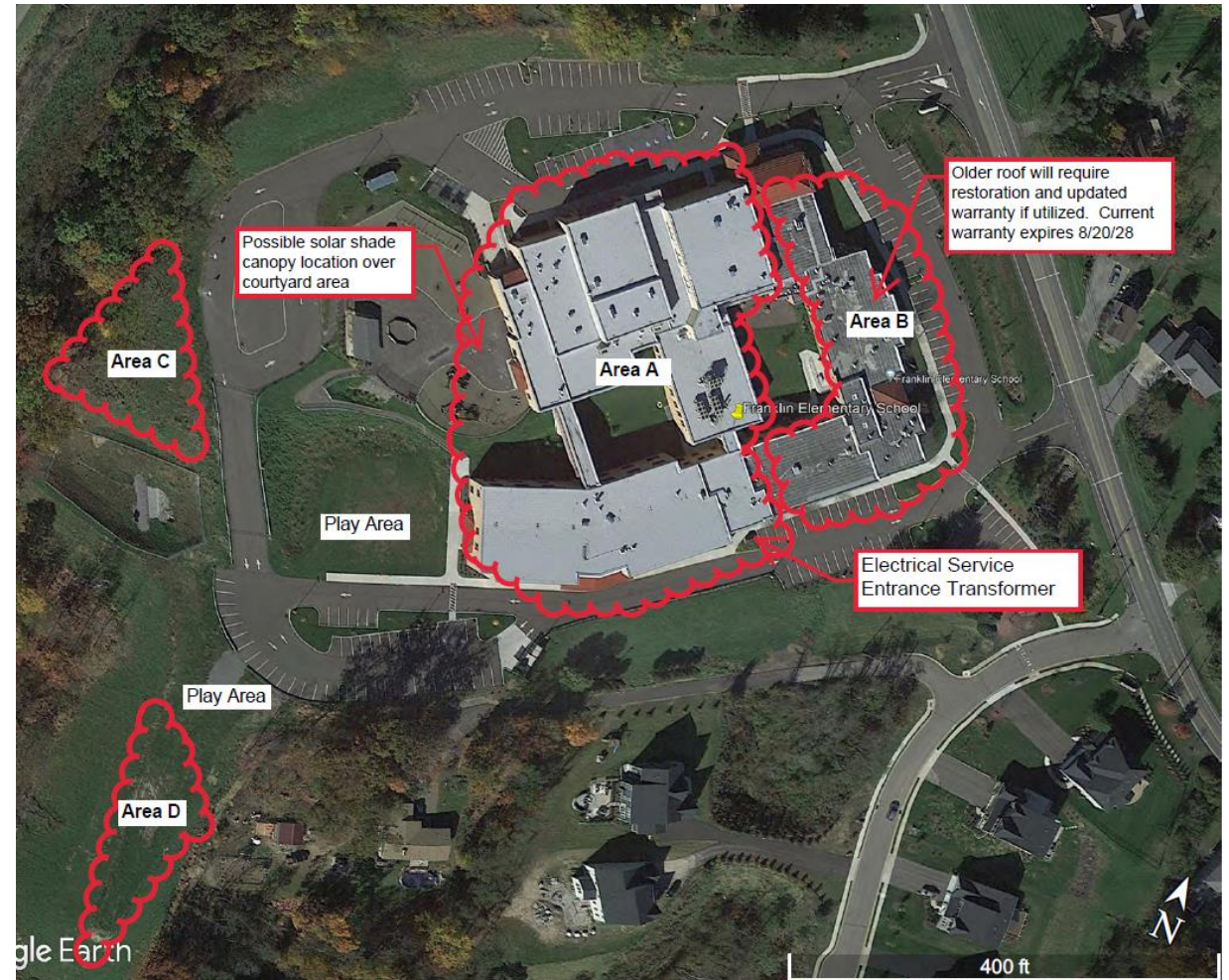
Identifying the Solar Opportunity

Get Solar (GS) team works with your staff to identify what locations are suitable for solar.

In the example below we found four key opportunities:

- Newly developed roof segment (Area A)
- Roof+Solar development (Area B)
 - Quotes must include roof redevelopment
- Two ground mounts (Areas C,D)

Solar can be **net metered** to electricity meters anywhere within a 2-mile radius, so the systems do not necessarily need to be connected to the building

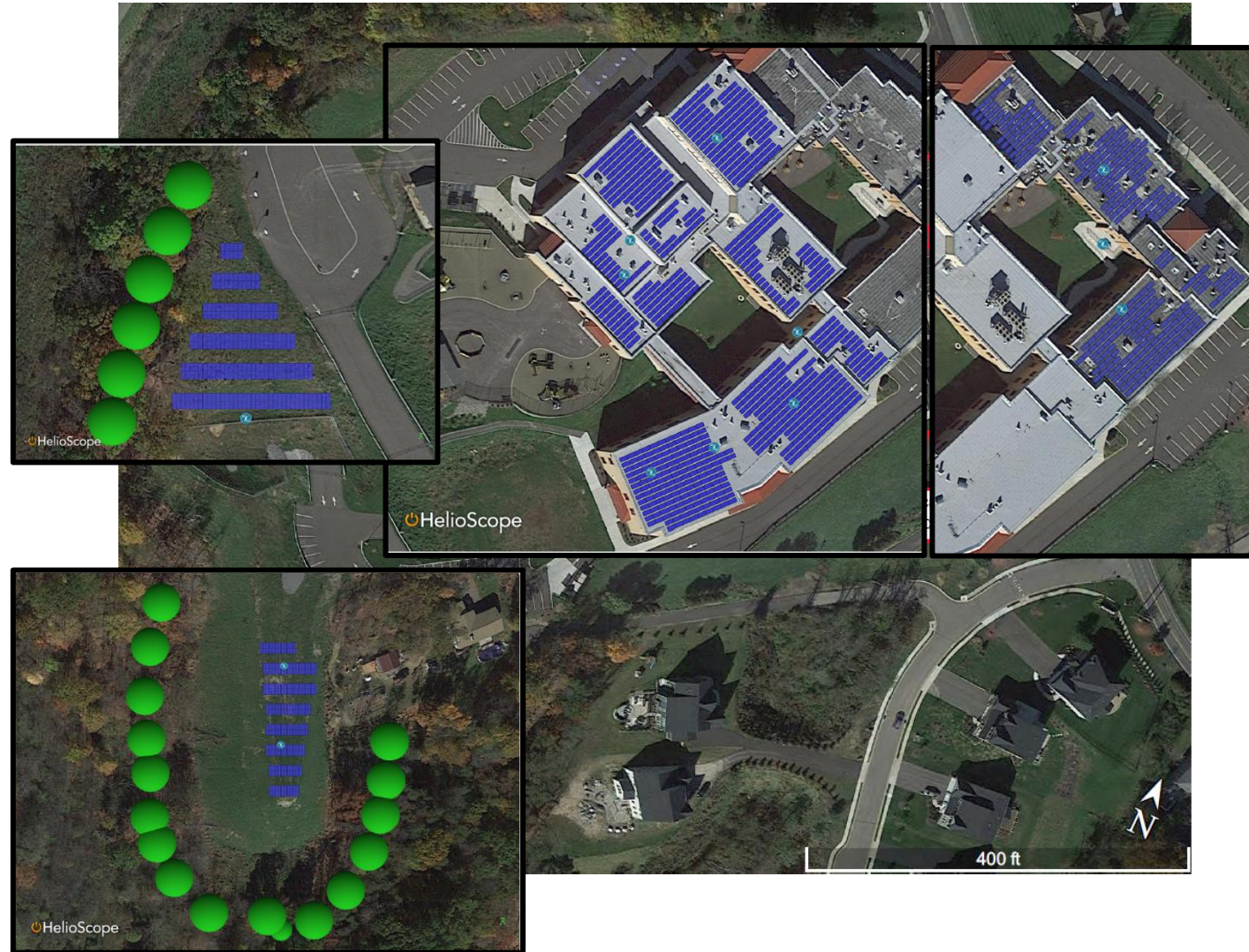


Feasibility Study

Example Solar Design

GET Solar Team provides an accurate projection of a solar design using an industry-standard solar design software, Helioscope

With an accurate design and your electricity bills we can estimate costs and savings



Feasibility Study

Cash flow Analysis

With an accurate design and your electricity bills GET Solar Team can estimate costs and savings*

All values below are estimates based on historic, existing, and presumed market data to be used as an educational purposes only.

Full Purchase Price of Solar Installation:	\$2,146,000.00
Estimated Cost Recovered through Direct Pay	\$1,073,000.00
Option:	
Adjusted Net Price of Solar Installation:	\$1,073,000.00

Year <i>from the first day of solar production</i>	Electricity Demand (kWh) <i>The amount of electricity used at this location</i>	Utility Electricity Price (\$/kWh) <i>We assume a 3% increase annually</i>	Solar Production (kWh) <i>We assume a 1/2% loss of efficiency annually</i>	Solar Energy Savings (\$) <i>Savings from solar through avoided grid cost</i>	S-RECs Generated Solar Renewable Energy Credits generated annually	S-RECs Value (\$) <i>Assumed total value of S-RECs if sold</i>	Depreciation (\$) <i>Simple Depreciation + 5 Year MACRS Schedule</i>	Cumulative Savings (\$) <i>Solar energy savings + S-RECs sold</i>
								-\$1,073,000.00
1	1,242,177	\$0.0455	1,536,000	\$69,888.00	1536	\$61,440.00	\$0.00	-\$941,672.00
2	1,242,177	\$0.0469	1,528,320	\$71,624.72	1528	\$61,132.80	\$0.00	-\$808,914.48
3	1,242,177	\$0.0483	1,520,678	\$73,404.59	1521	\$60,827.14	\$0.00	-\$674,682.76
4	1,242,177	\$0.0497	1,513,075	\$75,228.70	1513	\$60,523.00	\$0.00	-\$538,931.06
5	1,242,177	\$0.0512	1,505,510	\$77,098.13	1506	\$60,220.39	\$0.00	-\$401,612.55
6	1,242,177	\$0.0527	1,497,982	\$79,014.02	1498	\$59,919.37	\$0.00	-\$270,169.16
7	1,242,177	\$0.0543	1,490,492	\$80,977.51	1490	\$59,623.23	\$0.00	-\$137,024.42
8	1,242,177	\$0.0560	1,483,040	\$82,989.81	1483	\$59,332.39	\$0.00	-\$2,128.22
9	1,242,177	\$0.0576	1,475,625	\$85,052.10	1476	\$59,046.86	\$0.00	\$134,570.74
10	1,242,177	\$0.0594	1,468,246	\$87,165.65	1468	\$58,766.62	\$0.00	\$273,125.01
11	1,242,177	\$0.0611	1,460,905	\$89,331.71	1461	\$48,827.15	\$0.00	\$406,283.88
12	1,242,177	\$0.0630	1,453,601	\$91,551.61	1454	\$48,608.02	\$0.00	\$541,443.51
13	1,242,177	\$0.0649	1,446,333	\$93,826.66	1446	\$48,389.98	\$0.00	\$678,660.15
14	1,242,177	\$0.0668	1,439,101	\$96,158.26	1439	\$48,173.03	\$0.00	\$817,991.44
15	1,242,177	\$0.0688	1,431,905	\$98,547.79	1432	\$47,957.16	\$0.00	\$959,496.39
16	1,242,177	\$0.0709	1,424,746	\$100,996.70	1425	\$47,742.65	\$0.00	\$1,096,111.74
17	1,242,177	\$0.0730	1,417,622	\$103,506.47	1418	\$47,529.56	\$0.00	\$1,235,058.77
18	1,242,177	\$0.0752	1,410,534	\$106,078.61	1411	\$47,317.85	\$0.00	\$1,376,400.73
19	1,242,177	\$0.0775	1,403,481	\$108,714.66	1403	\$47,108.04	\$0.00	\$1,520,202.42

Direct Purchase Model

High-level Savings Estimate

The numbers below are based on market rates and comparable project data. This estimate is for educational purposes only.

Solar Energy System Cost and Production		PA Solar Center Estimate
Electricity Bill Savings Year One	This is the value of the electricity produced by your proposed solar installation versus the cost of paying for your electricity.	\$69,888
Estimated 25 Year Savings	Total savings (\$) provided over 25 years factoring in up-front costs.	\$1,309,585
Full Purchase Price	The full purchase price is the cash value of the system if paid for outright.	\$2,146,000
IRA Tax Benefits	The cost recovered through the federal solar tax credit and depreciation	\$1,073,000
Adjusted Net Price	Full purchase price minus estimated cost recovered through direct pay and other funds	\$1,073,000
System Size	Solar installations are measured by how many kilowatts (kW) of electricity can be produced under perfect conditions.	1,160
Electricity Production	The total electricity expected to be produced by this installation in year one expressed in kilowatt hours (kWh).	1,536,000
Price per Watt Installed	Solar installations are commonly measured by the dollar cost (\$) per Watt installed.	\$1.85
Estimate Year One Utility Supply Rate	Your estimated supply rate in year one after contract renewal (40% increase from current rate).	\$0.0455
Electricity Usage Offset by Solar	The percentage of your current electricity usage offset by the installed solar.	124%

*These are not the projections associated with the previous project slides

Request for Proposals Process

GET Solar Team Helps you Work with Solar Developers

The GET Solar Team submits Request for Proposals (RFP) to regional solar developers

GET Solar Team organizes site visits and proposal submissions

GET Solar Team works with solar developers to host group interviews to discuss submitted project proposals

GET Solar Team has experience with public entities with special requirements for unbiased, competitive bidding



GET Solar Team Helps you Review your Proposals

- The GET Solar Team helps you review your proposals using easy to understand calculators and comparison charts.
- We works with you to develop a financing strategy, identifying grant and loan options that may be available.
- We will continue to work with each organization to achieve their solar dream for as long as the organization remains committed.

Solar Developers Submitting Proposals

Proposals For: Business Company Manufactory Services	 Green Solar Co.	 Blue Solar LLC	 Steel City Solar	 More Solar
Full Purchase Price The full purchase price is the cash value of the system if paid for outright.	\$200,000.00	\$300,000.00	\$250,000.00	\$300,000.00
System Size Solar installations are measured by how many kilowatts (kW) of electricity can be produced under perfect conditions.	100 kW	150 kW	125 kW	150 kW
Electricity Production The total electricity expected to be produced by this installation in year one expressed in kilowatt hours (kWh).	120,000 kWh	160,000 kWh	130,000 kWh	160,000 kWh
Price per Watt Installed Solar installations are commonly measured by the dollar cost (\$) per Watt installed.	\$2.00	\$2.00	\$2.00	\$2.00
Electricity Usage Offset by Solar The percentage (%) of your current electricity usage offset by the installed solar.	50%	75%	57%	75%
S-RECs Generated Year One Solar installations produce Solar Renewable Energy Credits (S-RECS) that can sold for additional revenue.	100	165	130	165
Electricity Bill Savings Year One The savings (\$) generated in the first whole calendar year.	\$5,000	\$7,100	\$6,200	\$7,100
Solar Modules/Inverters Warranty Length of manufacturer's warranty (Years) for solar modules and inverters.	30/10	30/15	25/10	25/15
Estimated Savings through Warranty				



**PENNSYLVANIA
SOLAR CENTER
G.E.T. SOLAR APPLICATION 2023**

G.E.T. Solar applications are accepted based on the criteria of our current programming. For information about our current G.E.T. Solar and G.E.T. Solar Communities Rounds, go to www.pasolarcenter.org/get-solar. Applicants will be notified of admittance status within five (5) business days after submission of a completed application and all other requisite materials have been received. For more information contact the Program Director, Leo Kowalski, at leo@pasolarcenter.org.

APPLICATION FORM

General Information

ORGANIZATION NAME	
ORGANIZATION ADDRESS	COUNTY
IS THIS ORGANIZATION A COMMERCIAL BUSINESS OR TAX-EXEMPT ENTITY?	
TO WHAT INDUSTRY OR SERVICE SECTOR DOES YOUR ORGANIZATION BELONG? (E.G. MANUFACTURING, FOOD SERVICE, RELIGIOUS, MUNICIPAL, ETC.)	

Solar Committee Information

PRIMARY CONTACT	TITLE
EMAIL ADDRESS	PHONE NUMBER
SECONDARY CONTACT	TITLE
EMAIL ADDRESS	PHONE NUMBER
OTHER CONTACT (OPTIONAL)	TITLE
EMAIL ADDRESS	PHONE NUMBER

Submit a *G&T* Solar Application by Friday, April 28, 2023

Signed Letter of Intent and MOU are due Friday, May 12, 2023

- Provide a copy of recent electricity bill showing 12 months of usage data.
- Participants are encouraged to provide additional relevant materials, such as:
 - documentation of any recent roof repairs
 - blueprints
 - photographs of electricity infrastructure
- Applications can be found on our website at www.pasolarcenter.org/get-solar/



About the PA Solar Center GET Solar Solar Commonwealth Contact Us

PA Solar Center

We are a non-profit committed to expanding the benefits of solar energy to all Pennsylvanians

Let Us Help You Go Solar

G.E.T. Solar
G.E.T. Solar Communities
Businesses and Nonprofits
Municipalities
Residential
Frequently Asked Questions
Find a Solar Contractor

Connect



Sign the Energy Freedom petition!



ENERGY FREEDOM

Application Materials Available on Website

- Go to pasolarcenter.org and click through to get to the *GET Solar Connect* page or go to <https://pasolarcenter.org/get-solar/g-e-t-solar-communities/connect/> for all relevant materials.
- Reach out to leo@pasolarcenter.org to ask questions or set up time to discuss your project.

Solar Prequalification Form

Not sure if your business or non-profit's property is right for solar? Fill out the pre-screening form below and we will let you know if your property is a good candidate for solar and a good fit for the *GET Solar* program. We will also be able to answer any of your questions about the process of going solar generally and as part of our program.

Please feel free to complete the prequalification survey to get a high-level assessment of your property's solar potential. Prequalification is not required to submit an application to *GET Solar*. Please include all addresses for which you are seeking solar into one submission.

G.E.T. Solar Prequalification Survey

(For the address field, please use the address of the organization looking to go solar.)

Contact Information

Organization Name

Street Address (Optional)

Address Line 2 (Optional)

Postal Code

City

State

First Name

Last Name

Email

Mobile Phone (Optional)

Employer Information

Occupation (Optional)

Employer (Optional)

Additional Information

TYPE OF ORGANIZATION

WHERE WOULD THE SOLAR BE INSTALLED (ROOFTOP OR GROUND)? IF BOTH ROOFTOP AND GROUND ARE AVAILABLE, BRIEFLY DESCRIBE

Don't

Help
Ever
the S

You can m
just click t

Fill Out Prequalification Survey

Want more information before submitting an application?

Fill out a prequalification survey on our website to get a high-level assessment of your solar potential.



Going Solar can be Simple

GET Solar is an opportunity to work with an unbiased nonprofit organization of solar experts.

We guide you through the entire experience.

There are no obligations or contracts to move forward with a project through *GET Solar*. Your only commitment comes if you sign a contract with a qualified solar developer.



2023 Application period for interested municipalities – DUE DATE April 28th, 2023.

Take advantage of a free solar consulting service as *GET Solar* Team will do most of the work for you:

- G.E.T. Solar team works with you to assemble required materials
- G.E.T. Solar team releases Request for Proposals to solar developers for entire cohort, through Fall.
- G.E.T. Solar team assists municipalities:
 - Solar Feasibility/Site Visit
 - Interviewing/hosting developers
 - Analyzing proposals
 - Developing a financing strategy (including Power Purchase Agreements)

TO APPLY, VISIT <https://pasolarcenter.org/get-solar/g-e-t-solar-communities/connect/>

For more info
please contact:

Leo Kowalski, leo@pasolarcenter.org
Director of Programming
Pennsylvania Solar Center