

Solar for your business or commercial property

***The sustainable
solution that
pays you back***



How does solar help your bottom line?

Available

GRANTS

Solar

cash flow

UTILITY

bill savings

TAX
incentives

Solar Renewable
Energy Credits
(SRECs)

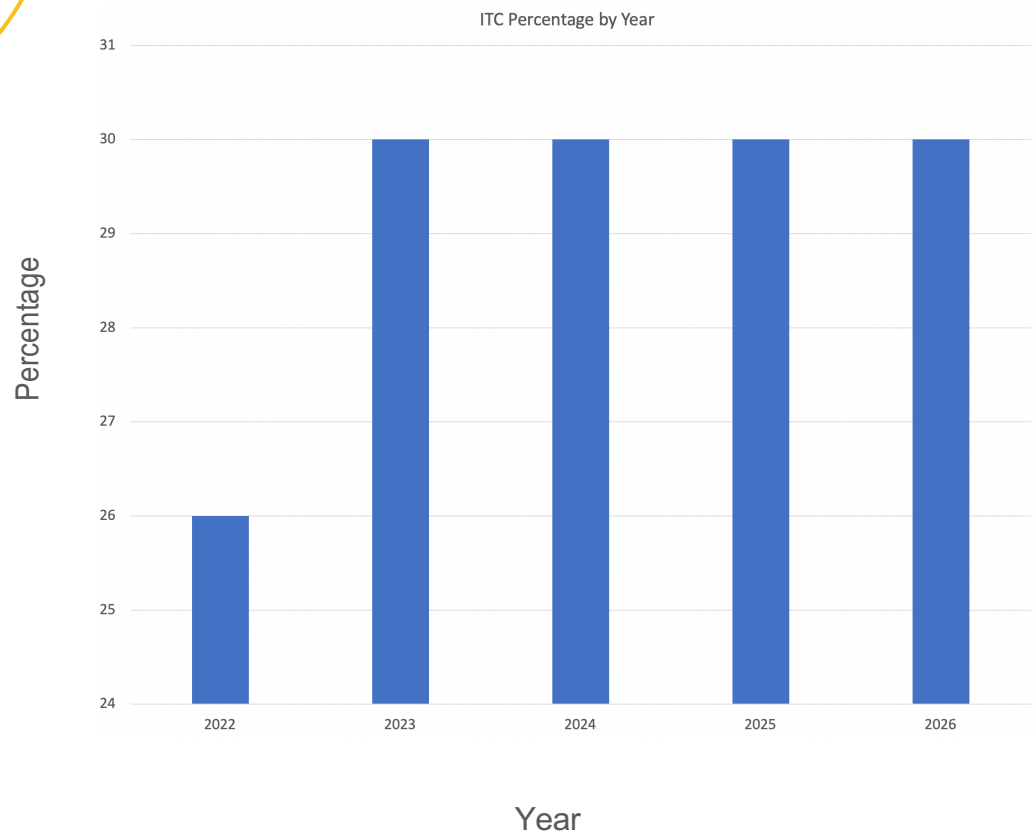


Tax Incentives

Solar Investment Tax Credit (ITC):

The federal Investment Tax Credit (ITC) allows business owners to claim a tax reduction for a specified value of solar construction costs. In 2022 the credit amount is 26%. Unlike tax deductions, this tax credit can be used to directly offset your tax liability dollar for dollar. If your tax credit exceeds your tax liability you can roll the credit into future tax periods for 20 years. The Inflation Reduction Act of 2022 increases the ITC to 30% starting in 2023, carrying through *the next decade*.

Example: \$250,000 solar project built in 2023 = \$75,000 in ITC tax credit



Federal Bonus Depreciation (MACRS):

The 2018 Tax Reform Bill modifies bonus depreciation under Code Section 168(k) to allow 100% expensing for property placed in service after September 27, 2017 and before January 1, 2023. By increasing bonus depreciation to 100%, the new tax bill essentially allows eligible entities to deduct the entire allowable tax basis of the system in the first year of operation.

Under the federal Modified Cost Recovery System (MACRS), businesses may recover investments in certain property through depreciation deductions. MACRS establishes a lifespan for various types of property over which the property may be depreciated. For PV systems, the taxable basis of the equipment must be reduced by 50% of any federal tax credits associated with the system.



Example: \$250,000 solar project

$$\begin{array}{rclclcl} \text{[Solar Cost} & - & \text{(ITC/2)]} & \times & \text{Federal Tax Rate} & = & \text{Depreciation benefit that can be used} \\ & & & & & & \text{in year 1 after solar installation} \\ \text{[\$250,000} & - & \text{(\$75,000)]} & \times & \text{21\%} & = & \text{\$45,675} \end{array}$$



Solar Renewable Energy Credits (SRECs)

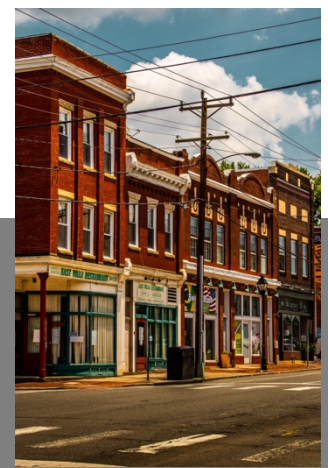
SRECs are a state-level performance-based incentive. Payments are made to solar asset owners for each 1,000 kWh (1 MWh) of electricity their system generates. The payment amount depends on the state and is determined by state compliance market conditions. State legislation sets targets for the percent of total electricity supplied by utilities. In order to meet these targets utilities must buy SRECs. Therefore, compliance market prices are driven by state mandated solar procurement targets and the amount of available SRECs in the market.



Washington DC has a very aggressive 100% renewable goal and very limited space in which to construct solar and therefore has some of the most competitive SREC prices in the nation. The current DC SREC price is: \$395/MWh or \$0.395/kWh. This is over three times the going rate for electricity, making solar projects in DC very profitable.



Maryland also has a strong SREC market with a Renewable Portfolio Standard (RPS) requiring that 50% of the state's electricity be sourced from renewable energy by 2030 with a 14.5% carve-out specifically for solar energy by 2028. Current MD SREC price is \$59/MWh or \$0.059/kWh. This price is mandated to step-down in coming years.



Virginia has been mandated by the Virginia Clean Economy Act to establish a SREC market. This market has not yet launched however payouts are currently available at \$35/MWh or \$0.035/kWh. This is a market to watch closely in 2023.



Grants & Incentive Programs by State

Maryland

Commercial Clean Energy Rebate Program

The Maryland Energy Administration (“MEA”) provides rebates to businesses, nonprofits, local governments, and State of Maryland government agencies and departments that install clean energy systems on facilities located within the State. Clean energy systems can be purchased by the applicant or installed through third-party ownership. Eligibility requirements per applicant and clean energy systems apply.

Grant awards are determined by system size and range from \$1,000 for an 8kW system to \$30,000 for a 375kW system. Applicable for project up to 375kW.

Solar Canopy Grant Program

Previously known as the Parking Lot Solar Photovoltaic Canopy with EV Chargers Grant, this program provides funding to support the installation of solar photovoltaic canopy systems over parking lot and parking garages. The program requires at least four (4) Level 2 or Level 3 electric vehicle chargers under the solar canopy. This grant will provide up to \$500 per kW-dc of canopy mounted solar PV per project, with a maximum cap of \$250,000 per project.

Washington D.C.

Solar For All

This is a yearly RFP program for community solar projects in the District. Awarded projects receive \$1.18/Watt of solar capacity in exchange for 15 years of solar production. The solar asset owner still retains tax benefits & SRECs during this time, and can sell solar production after year 16 for the remainder of the 25 warranted life of the solar installation.

Example: 500kW system = \$590,000 in Solar for All Payment in year 1 of operation.



Utility Bill savings: keeps costs low for the life of the system (25+ years)

Electricity savings come from offsetting your current bill through solar production. How much of your current electricity bill you can eliminate depends on the building's energy usage vs. the amount of available space for solar installation.

- Solar electricity is always used before electricity from the grid
- Every kWh from solar replaces one taken from the utility
- If solar produces more electricity than the building uses, excess electricity is fed back into the grid and the solar owner is credited for this export through a process known as net metering. Credits are used to offset electricity usage during months that solar production is less than building electricity usage.



Net metering varies by state:

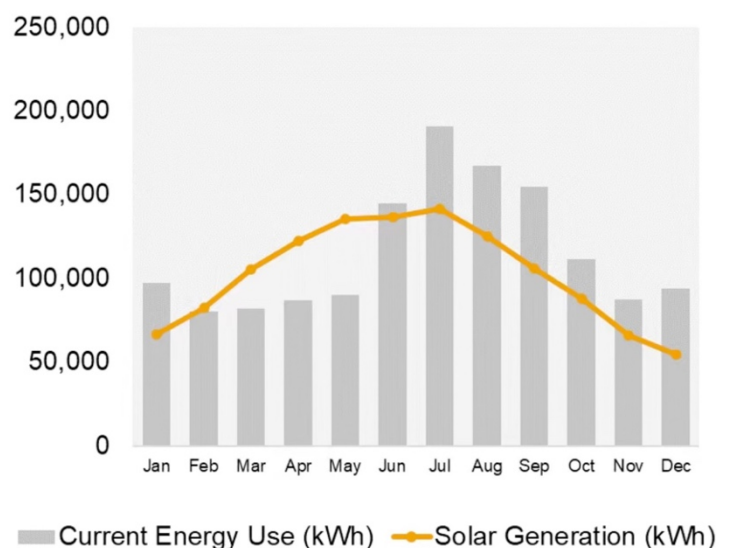
DC: Solar installations can only produce the same amount of electricity yearly as used by the meter that the solar ties into. If solar overproduces usage for one month, credits need to offset usage in another month in the same year.

MD: Solar installations can produce 200% of a building's load. If solar overproduces usage in one month, credits will be applied to any other months in same year in which usage is greater than solar production. If credits remain at the end of the year, credits are paid out to the system owner at the electricity supply rate (usually ~0.06/kWh).

VA: Similar to Maryland, but the limit for solar production over building load yearly is 150%.

Example of solar production modeled against building consumption. Overproduction in Feb-May is credited to offset usage in June-January.

Monthly Energy Use vs Solar Generation



Sample solar cash flow

(Washington D.C. project)

Positive cash flow starting in year 4

Incentive amounts

Initial cost

Effective cost after incentives

Year	Cash			Solar Generation (kWh)	Taxes		MEA Grant	Total Cash Flow	Cumulative Cash Flow
	Project Costs	SRECs	Utility Bill Savings		Depreciation	Federal Tax Credit			
0	\$ (384,200)	\$ -	\$ -	-	\$ -	\$ -	\$ -	\$ (384,200)	\$ (384,200)
1	\$ -	\$ 12,650	\$ 33,220	219,992	\$ 68,580	\$ 115,260	\$ 20,000	\$ 249,710	\$ (134,490)
2	\$ -	\$ 12,586	\$ 34,046	218,892	\$ -	\$ -	\$ -	\$ 46,632	\$ (87,858)
3	\$ -	\$ 11,434	\$ 34,892	217,797	\$ -	\$ -	\$ -	\$ 46,326	\$ (41,532)
4	\$ -	\$ 7,260	\$ 35,759	216,708	\$ -	\$ -	\$ -	\$ 43,019	\$ 1,487
5	\$ -	\$ 5,498	\$ 36,648	215,625	\$ -	\$ -	\$ -	\$ 42,146	\$ 43,633
6	\$ -	\$ 5,042	\$ 37,558	214,547	\$ -	\$ -	\$ -	\$ 42,600	\$ 86,234
7	\$ -	\$ 3,736	\$ 38,492	213,474	\$ -	\$ -	\$ -	\$ 42,228	\$ 128,461
8	\$ -	\$ 3,292	\$ 39,448	212,406	\$ -	\$ -	\$ -	\$ 42,741	\$ 171,202
9	\$ -	\$ 3,276	\$ 40,429	211,344	\$ -	\$ -	\$ -	\$ 43,704	\$ 214,906
10	\$ -	\$ 3,259	\$ 41,433	210,288	\$ -	\$ -	\$ -	\$ 44,693	\$ 259,599
11	\$ -	\$ -	\$ 42,463	209,236	\$ -	\$ -	\$ -	\$ 42,463	\$ 302,062
12	\$ -	\$ -	\$ 43,518	208,190	\$ -	\$ -	\$ -	\$ 43,518	\$ 345,580
13	\$ -	\$ -	\$ 44,599	207,149	\$ -	\$ -	\$ -	\$ 44,599	\$ 390,179
14	\$ -	\$ -	\$ 45,708	206,113	\$ -	\$ -	\$ -	\$ 45,708	\$ 435,887
15	\$ -	\$ -	\$ 46,844	205,083	\$ -	\$ -	\$ -	\$ 46,844	\$ 482,730
16	\$ -	\$ -	\$ 48,008	204,057	\$ -	\$ -	\$ -	\$ 48,008	\$ 530,738
17	\$ -	\$ -	\$ 49,201	203,037	\$ -	\$ -	\$ -	\$ 49,201	\$ 579,939
18	\$ -	\$ -	\$ 50,423	202,022	\$ -	\$ -	\$ -	\$ 50,423	\$ 630,362
19	\$ -	\$ -	\$ 51,676	201,012	\$ -	\$ -	\$ -	\$ 51,676	\$ 682,038
20	\$ -	\$ -	\$ 52,960	200,007	\$ -	\$ -	\$ -	\$ 52,960	\$ 734,999
21	\$ -	\$ -	\$ 54,277	199,007	\$ -	\$ -	\$ -	\$ 54,277	\$ 789,275
22	\$ -	\$ -	\$ 55,625	198,012	\$ -	\$ -	\$ -	\$ 55,625	\$ 844,901
23	\$ -	\$ -	\$ 57,008	197,022	\$ -	\$ -	\$ -	\$ 57,008	\$ 901,908
24	\$ -	\$ -	\$ 58,424	196,036	\$ -	\$ -	\$ -	\$ 58,424	\$ 960,332
25	\$ -	\$ -	\$ 59,876	195,056	\$ -	\$ -	\$ -	\$ 59,876	\$ 1,020,208
Totals		\$ 68,034	\$ 1,132,535	5,182,111				\$ 1,020,208	

Total Savings



Power Purchase Agreements (PPAs):

A PPA, or Power Purchase Agreement, is a popular choice among entities that want to take advantage of the clean energy production but do not necessarily want to own the PV system. This particular type of financing requires minimal to no upfront capital cost and provides a quicker payback than most. The building owner leases the space to the third-party investor and pays for the energy produced at a reduced rate. Though the business would not own the system hardware or take advantage of the federal tax benefits, the business owner is able to still reap the financial benefits of solar. Below you will find an example of a Power Purchase Agreement financial breakdown:

\$0 upfront costs

Year 1 Cashflow

Year			Solar Generation (kWh)	Total Cash Flow	Cumulative Cash Flow
	PPA Payments	Utility Bill Savings			
0	\$ -	\$ -	-	\$ -	\$ -
1	\$ (10,851)	\$ 11,855	102,371	\$ 1,003	\$ 1,003
2	\$ (10,905)	\$ 12,031	101,860	\$ 1,126	\$ 2,129
3	\$ (10,959)	\$ 12,210	101,350	\$ 1,251	\$ 3,381
4	\$ (11,013)	\$ 12,392	100,844	\$ 1,379	\$ 4,760
5	\$ (11,068)	\$ 12,577	100,339	\$ 1,509	\$ 6,269
6	\$ (11,123)	\$ 12,764	99,838	\$ 1,642	\$ 7,910
7	\$ (11,178)	\$ 12,955	99,338	\$ 1,777	\$ 9,687
8	\$ (11,233)	\$ 13,148	98,842	\$ 1,915	\$ 11,602
9	\$ (11,289)	\$ 13,343	98,348	\$ 2,055	\$ 13,657
10	\$ (11,344)	\$ 13,542	97,856	\$ 2,198	\$ 15,855
11	\$ (11,401)	\$ 13,744	97,367	\$ 2,343	\$ 18,198
12	\$ (11,457)	\$ 13,949	96,880	\$ 2,492	\$ 20,690
13	\$ (11,514)	\$ 14,157	96,395	\$ 2,643	\$ 23,333
14	\$ (11,571)	\$ 14,368	95,913	\$ 2,797	\$ 26,130
15	\$ (11,628)	\$ 14,582	95,434	\$ 2,954	\$ 29,083
16	\$ (11,686)	\$ 14,799	94,957	\$ 3,113	\$ 32,197
17	\$ (11,743)	\$ 15,020	94,482	\$ 3,276	\$ 35,473
18	\$ (11,802)	\$ 15,243	94,009	\$ 3,442	\$ 38,915
19	\$ (11,860)	\$ 15,470	93,539	\$ 3,610	\$ 42,525
20	\$ (11,919)	\$ 15,701	93,072	\$ 3,782	\$ 46,307
21	\$ -	\$ 15,935	92,606	\$ 15,935	\$ 62,242
22	\$ -	\$ 16,172	92,143	\$ 16,172	\$ 78,414
23	\$ -	\$ 16,413	91,683	\$ 16,413	\$ 94,828
24	\$ -	\$ 16,658	91,224	\$ 16,658	\$ 111,485
25	\$ -	\$ 16,906	90,768	\$ 16,906	\$ 128,391
Totals	\$ (227,543)	\$ 355,934	2,411,457	\$ 128,391	

Lifetime Savings

Total System Production



Community Solar:

There is another option for business owners to install solar on their roof. For warehouses & larger structures that have under-utilized roof assets, they can lease their rooftop space for a solar array to be installed so that energy produced can be bought and sold by a “community solar” program. This solar business plan is a simple three step process:

1. Lease your roof space to a clean energy investor or utility.
2. These third-party entities install and own the system
3. Receive monthly install payments from the third party entities

Fees are typically paid on the production of the solar array.

The produced solar is then sold to “off-takers” or groups of ratepayers that have determined to buy solar from a system producing within their regional grid. This type of arrangement is a win for the system owner since they have a site for the array, a win for the off-taking ratepayers buying clean energy, and a win for the building owner who is now generating revenue from an otherwise unutilized building asset. This model is heavily used by Prologis and other real estate investment firms.

Rooftop solar can be key to either structuring an additional revenue stream or it can be a powerful tool in offsetting electricity bills for the building’s own use.



How it works

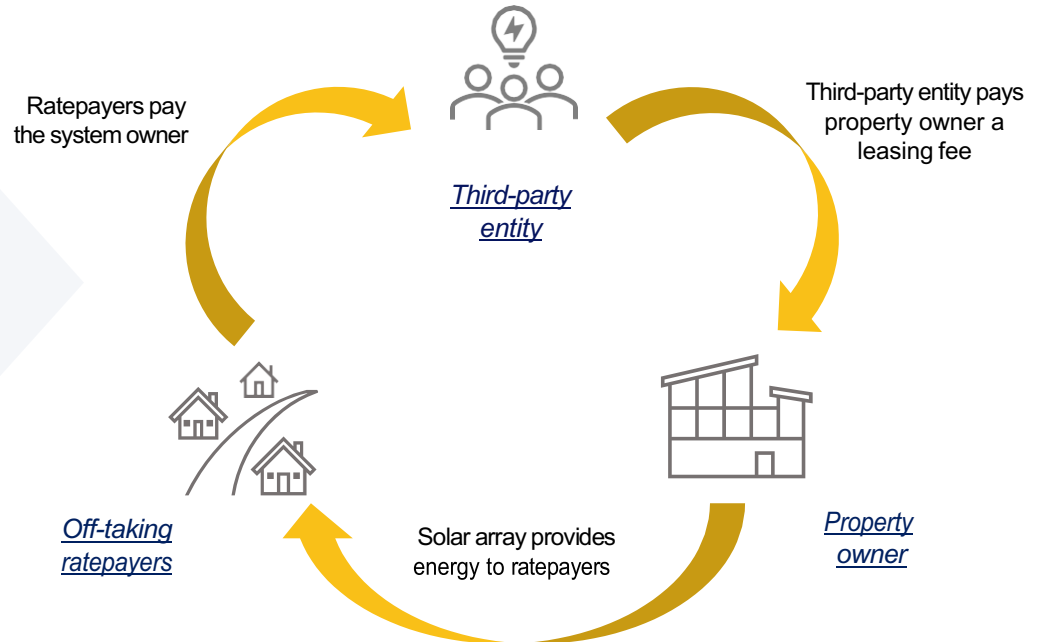


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For more information on this document or commercial solar details, give us a call: 410-505-4848
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