

Solar power for SCA buildings

Climate Change Resilience Committee

Why solar?

A win – win proposition

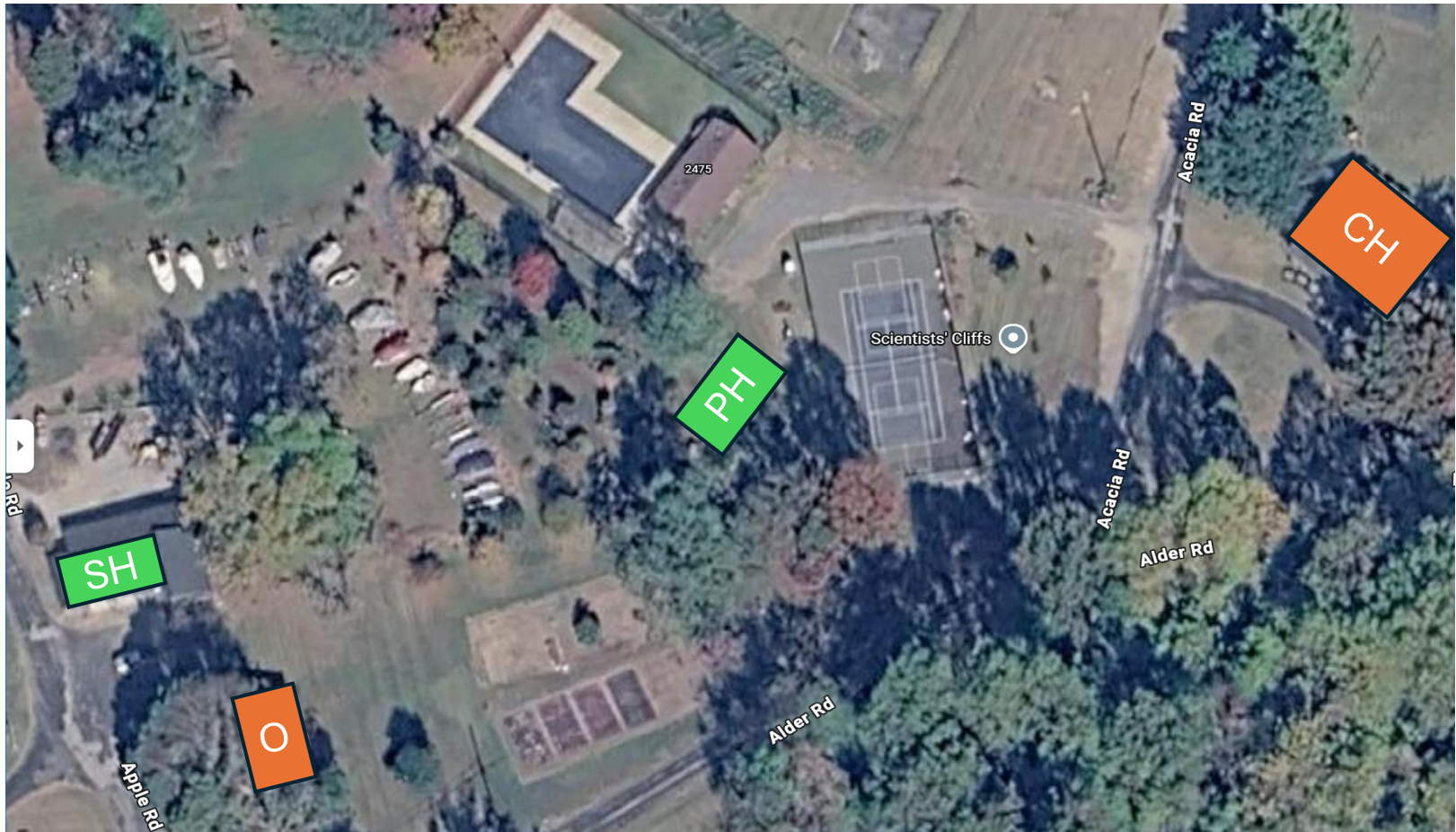
Will save a substantial amount of money

Reduces greenhouse gas footprint of Scientists Cliffs

An investment



Goal - Generate enough solar power to offset electricity used by the Shop, Office, Pool and Community House



Aggregate metering:

no panels on Comm House or Office

Panels on shop produce enough power to offset energy use by the office, panels on the pool house produce power to offset energy use by the Comm House





Panels on buildings
set back from road
and that aren't
historical
landmarks for the
community



Why now?



2027 is the last year for commercial buildings owned by non-profits to be eligible for an elective (direct) pay refund from the IRS equal to 30% of the cost of their solar system

Elective (or direct) pay means we get the \$ even though we haven't paid any taxes

Are we eligible for the 30% federal elective pay refund? YES!

SCA is a 501(c)4



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Q2. What tax-exempt organizations are eligible? (updated March 5, 2024)

A. The final regulations provide that any organization described in sections 501 through 530 that meets the requirements to be recognized as exempt from tax under those sections is eligible for elective pay. This includes, among others, all organizations described in section 501(c), such as public charities, private foundations, social welfare organizations, labor organizations, and business leagues. It also includes homeowners associations exempt under section 528.

Prudent to vet this with SCA accountant or lawyer. We are doing this and will have confirmation next week.

Bids from 2 companies

	Advanced Solar	Energy Select
# panels	87	84
1 st year production (kwh)	43468	45090
Base cost	\$114,840	\$107,206
Federal Elective Pay refund	\$ 34,452	\$ 32,162
Cost after federal refund	\$ 80,388	\$ 75,044
Warranty	20-25 yrs	25-30 yrs
Labor for equipment repair/replacement	\$85/hr	\$100/panel
Remove/replace panels for roof repair	\$100/panel if use their roofer	Use 3 rd party

The committee recommends Energy Select

less expensive, longer warranty, slightly higher electrical production, well known in community

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Budget request

Total project cost as submitted is \$120,000

Because of 30% federal refund, the budget to be voted on is \$84,000 split over 2 years, or \$156 in assessments in 2027 and 2028



Even though we recommend the community go with the less expensive company, we included funds in the budget request to pay for more expensive bid to be sure we have sufficient funds

Budget also includes extra \$5K in case of unexpected expenses

Very likely will need less funding than requested & will adjust the year 2 cost

How is your bill, payback time and profit calculated?



Electrical Grid



Building with solar panels

There are 3 types of energy flow to consider: (1) self-use energy directly consumed by the building; (2) energy being produced in excess of what is needed at that moment that flows onto the electrical grid; and (3) energy being drawn from the grid.

Example of SMECO bill for house with solar

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Meter Readings

Meter: 1N6033998963

Usage Period	Previous Read	Current Read	Mult.	Energy Usage
03/05/26 - 04/08/26	151965	153159	1	1193 kWhF
03/05/26 - 04/08/26	22082	23305	1	1223 kWhR

Next approx. read date: 05/08/26

Current Charges & Adjustments

Billing Period - 34 days: 03/05/26 - 04/08/26

Net Residential - 102 / Winter

Distribution Service

Facilities Charge \$9.75

Regulatory, State, and Local Taxes

Electric Universal Service Charge \$0.32

Other Charges

Net Excess Generation Credit (\$2.05)

Total Current Charges & Adjustments due 04/30/26 \$8.02

Your Net Meter Summary

Energy - Forward kWh 1193

Energy - Reverse kWh 1223

Net Usage - kWh -30

New kWh Balance -30

Message Board

Customer Rights & Responsibilities

A copy of our Customer Rights and Responsibilities booklet which defines the regulations concerning SMECO's policies, is available at

smeco.coop/rights-and-responsibilities.

Save Energy and Save Money

The EmPOWER Maryland Charge funds programs that can help you reduce your energy consumption and save you money. For more information, including how to participate, go to smeco.coop/save.

Not on bill: self-use energy

1:1 Net metering

Your Net Meter Summary

Energy - Forward kWh	1193
Energy - Reverse kWh	1223
Net Usage - kWh	-30
New kWh Balance	-30

Under 1:1 net metering, SMECO charges us the same amount for energy we draw from the grid (energy forward), as it pays us for excess energy we put onto the grid (energy reverse). At the end of the month our net usage is calculated; if we use more than we export, we pay a bit. If we export more than we use, the extra kWh's are credited towards future consumption. Once/year SMECO pays us for any kWh credits we haven't used (or under new rules we can opt to have the kWh's credited towards future year's use).

1:1 Net metering

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<i>Total Current Charges & Adjustments due 04/30/26</i>	<i>\$8.02</i>
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There are some fixed charges for being connected to the grid that are not eliminated by having solar panels. The charges for commercial buildings are a bit higher than in this bill: \$18.28 - \$26.16/month.

Self-use electricity generated by SCA solar panels is independent of net metering rules—it never appears on the SMECO bill.

Important because a lot of our power is expected to be self-use

Pool- 57% of total energy use for the 4 buildings, but almost all is during the time of year the most solar is generated

Shop – 17% of the energy use; highest use during the 12 months we examined was during early spring, but most use should be daytime.

Cost to us also reduced by SRECs
Solar Renewable Energy Credits (Certificates)

Estimated that we will receive about \$23,000 over
the next 16 years

Price of SRECs set annually by state

Uncertainties, but installing solar will still make sense

Bill passed this spring: 1:1 Net metering will be replaced with a new scheme on July 1 or when MD reaches 3000 megawatts of solar, whichever comes first.

Systems installed and connected to the grid before that threshold is reached will be grandfathered in and get 1:1 net metering. Systems installed later will not be paid as much for energy they put out onto the electrical grid as they pay for electricity they draw from the grid.

Unknowns:

- PSC will not announce new net metering rules until Feb.

- Companies will try, but can't guarantee we'll meet deadline

Known:

- If we wait until we know the new rules, we will lose the 30% refund

Mark Smith has developed a calculator that can predict the payback time (the number of years it takes to pay off the cost of the system), and ultimate profit the system generates under different possible rule changes



Bottom line: Solar will make economic sense under all reasonable scenarios even if we don't make the deadline to be grandfathered into the 1:1 net metering rules.

