



HCPS Phase II Solar Energy

2019



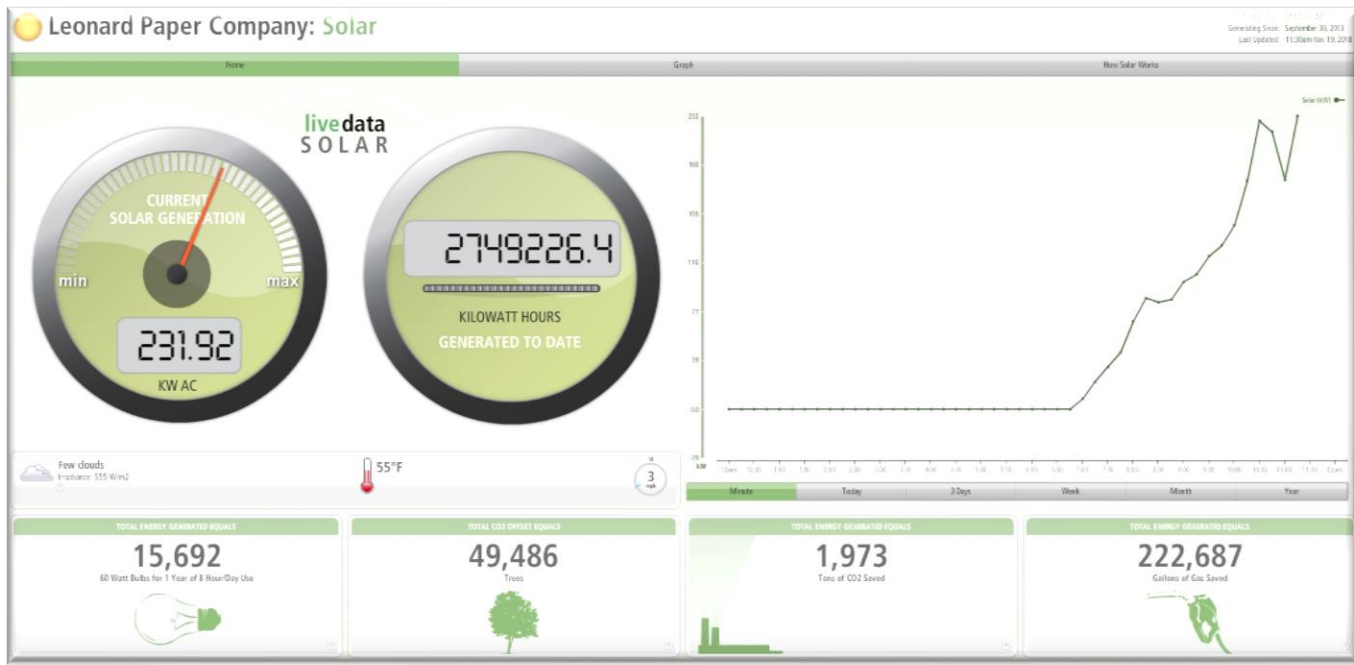


- In 2017, Maryland Energy Administration (MEA) in conjunction with Maryland Public School Construction Program requested all new and existing school rooftops be evaluated for solar electric sites.
- Legislation was approved in 2019 that lead to an increase for incentives for Solar Power; it went into effect October 2019.
- Utilizing the Montgomery County Public Schools PV Electric Generating Systems Contract we were able to work with Constellation - An Exelon Company and their Solar Business Development group to develop a Phase II PPA
- Havre De Grace Middle/High school will be constructed to be “solar ready”.

HCPS Solar Program Goals

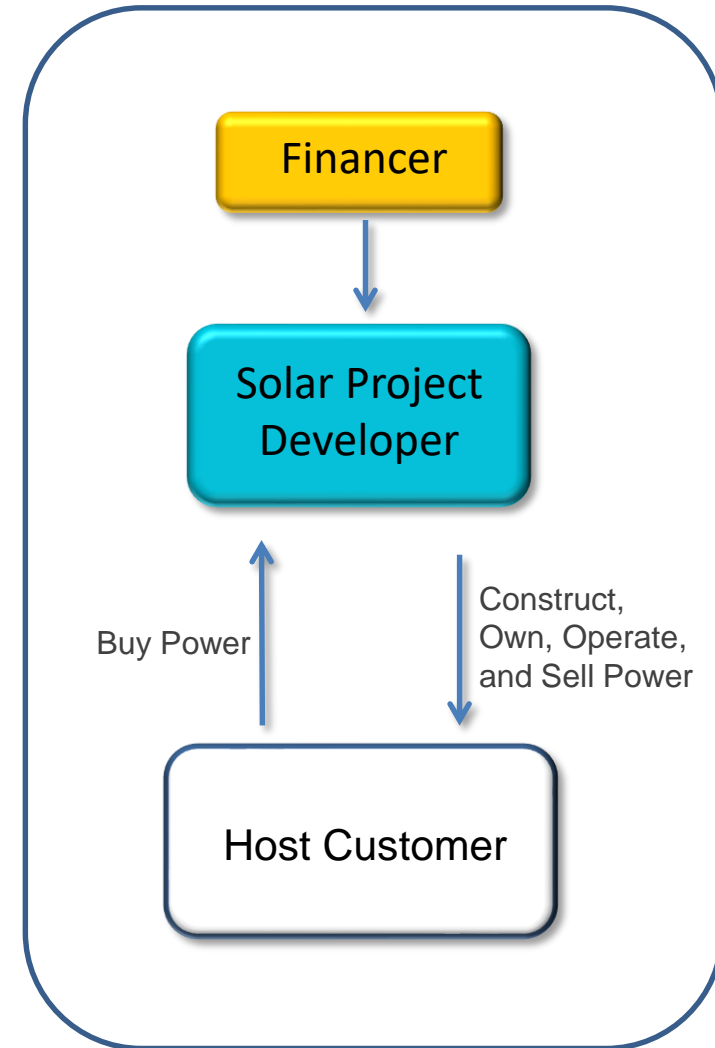
- ☺ Improve Operational Efficiencies
- ☺ Reduce use of Non-Renewable Energy & Costs
- ☺ Finance Capital Improvements
- ☺ Reduce Environmental Impacts
- ☺ Align Operations with Curriculum
- ☺ Provides “real world” educational opportunities
- ☺ Promote HCPS as an Environmental leader

- Teachers and students can log onto the solar portal to:
 - Gather data on energy produced
 - Compare seasons and years for optimal generation
 - Determine and track trends in data



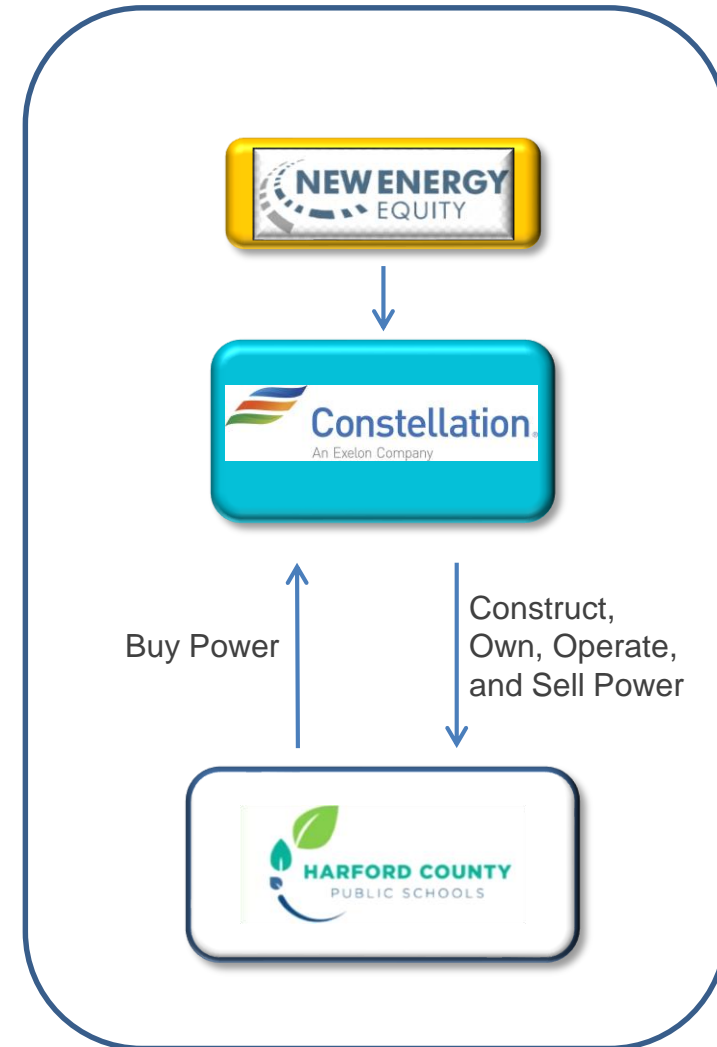
Power Purchasing Agreement HOPS

- A process allowing a customer to host an onsite solar electric system and purchase the power over a specific time period.
- The solar system is owned and operated By a Solar Project Developer (SPD).








Power Purchasing Agreement

- Constellation – An Exelon Company secures the financing to design and construct solar electric systems at 6 host sites on HCPS schools.
- Constellation will maintain the solar electric systems and sell the power to HCPS.
- HCPS agrees to purchase all the electricity produced by the system at an agreed rate.
- HCPS pays no distribution charges.
- HCPS has purchase options at the end of the term.





Power Purchase Agreement *Advantages*

-  No upfront capital investment
-  No ongoing maintenance costs
-  No risk for antiquated technology
-  Mature industry with experienced contractors
-  Predictable and stable operating costs



Phase I

Solar Electric Sites

Location	Number of Panels	kW (DC)
Aberdeen HS	663	149
Bel Air HS	627	107
Fallston HS	1092	185
Patterson Mill M/HS	1092	262
Edgewood HS	1204	271
Magnolia MS	1760	299



Phase I

Solar

- Project Economics – 980 kW (5 sites)
- \$0.075/kWh PPA rate vs. BGE \$0.10/ kWh
- Current Savings Total = \$95,000**





Phase II

Proposed Solar Electric Sites

Location	Number of Panels	kW (DC)
Aberdeen MS	1,404	491.4
Havre De Grace MS	2,106	737.1
Hickory ES	936	327.6
Joppatowne HS	2,106	737.1



Phase II

Projected Savings

	Without Solar	With PPA
Electricity Rate Year 1	\$0.1002	\$0.0800
Annual Rate Increase	3%	1.99%
Annual Energy Usage (kWh)	4,474,280	2,791,572 (1,682,708 provided by Solar Panel)

PPA Savings	
Saving Projection Years 1- 5	\$80,000 - \$100,000
Cumulative Savings Projection Years 1-25	\$1,470,000 - \$1,820,000



QUESTIONS AND DISCUSSION

