



# **Power Purchase Agreements - Overview & Update -**

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# BACKGROUND

In 2019, the City of Charlottesville committed to updated greenhouse gas emissions reduction goals of 45% by 2030 and carbon neutrality by 2050.

In 2023, Charlottesville adopted the first community [Climate Action Plan](#) (CAP) to pursue these goals.

- The CAP identifies the installation of solar energy production systems on suitable municipal properties as a key implementation strategy to generate clean energy, reduce electricity bills, and reduce greenhouse gases.
- The CAP also identifies Power Purchase Agreements (PPAs) as a mechanism to expedite this strategy.



# BACKGROUND



*Bypass Fire Station*



*CATEC*

- A cost-effective climate action strategy is to install solar systems as soon as possible following roof replacements so that the life of the roof and the life of the system are aligned.
- In 2025, a 31kW solar system was completed on the Bypass Fire Station (new construction, new roof) and a 262.9 kW solar system was completed on CATEC (recent roof replacement project).
- The next two eligible (and largest) municipal buildings that have newly installed roofs are Charlottesville High School (CHS) and Charlottesville Middle School (CMS).



# CHALLENGE / OPPORTUNITY

- The potential solar system sizes for CHS and CMS come with substantial installation costs that have been deemed infeasible to pursue with local capital funding.
- An alternate financing strategy – the Power Purchase Agreement (PPA) – is a compelling opportunity.
- A PPA enables a customer to receive predictable and often low-cost electricity with no upfront cost, while also enabling the owner of the system to take advantage of tax credits and receive income from the sale of electricity.

*Charlottesville High School*

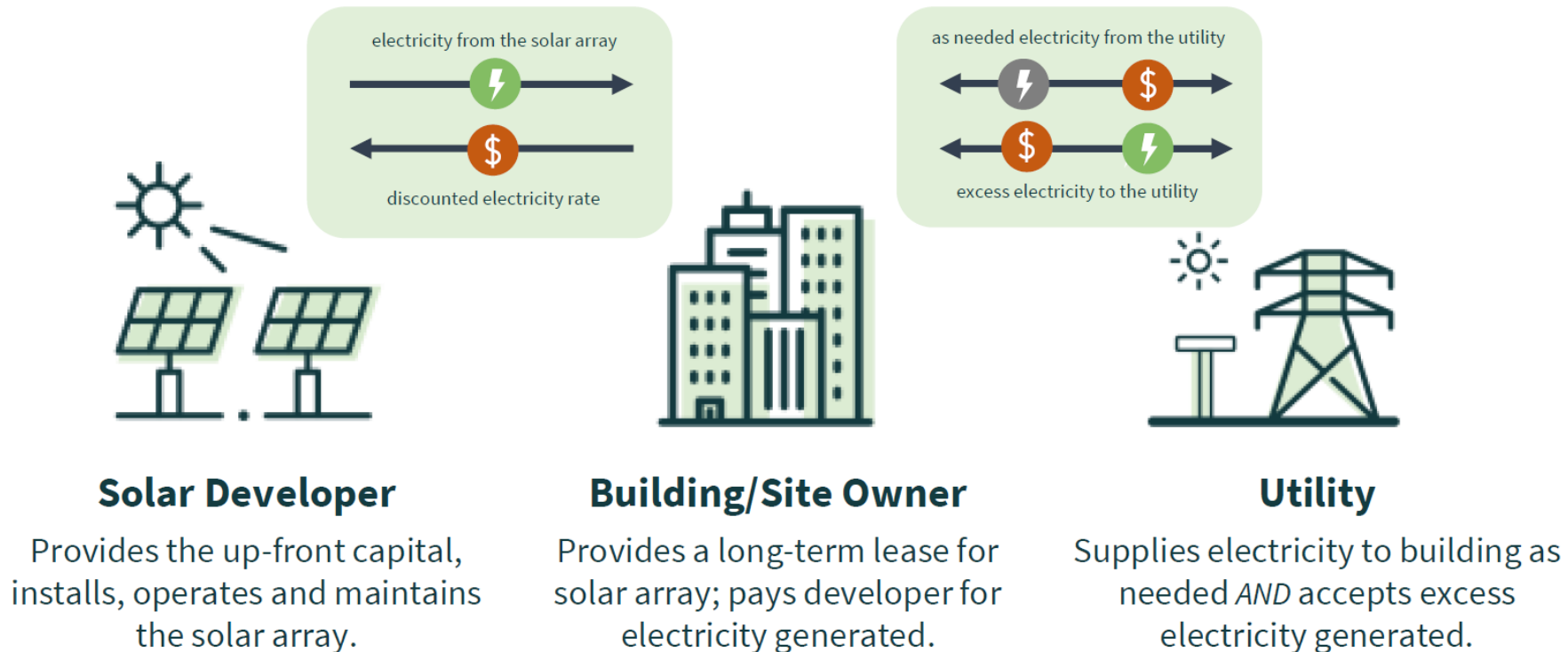


*Charlottesville Middle School*

# WHAT IS A PPA?

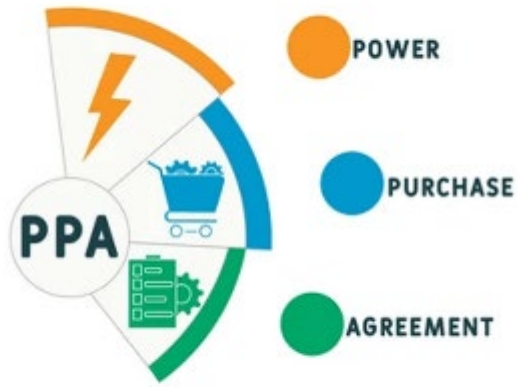
A PPA is a contract between a power producer (the seller) and a purchaser (the buyer) outlining the terms for the sale and purchase of electricity over a set period.

## Power Purchase Agreements



Modified from <https://saxonrenewables.com/>

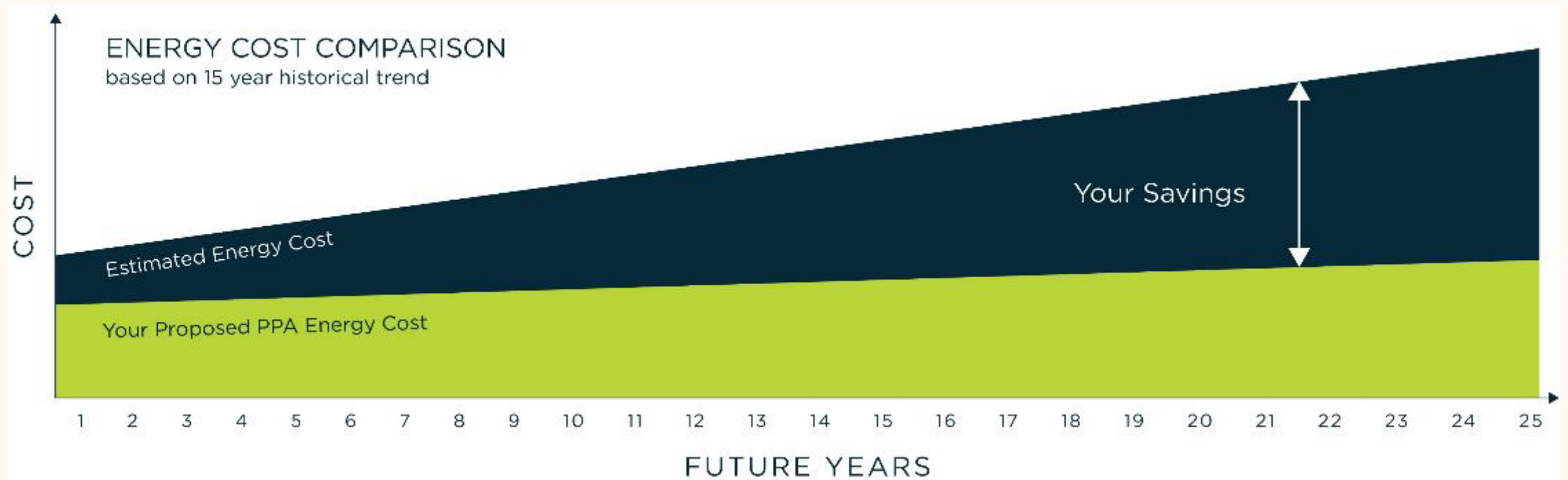
# WHAT IS A PPA?



- The PPA model allows a private solar developer to finance, install, and operate a solar array through a long-term contract and site access arrangement on the property of a host customer.
- The developer retains ownership and operational responsibility of the solar array, and the host customer purchases the system's electric output:
  - at a negotiated rate (proposed to be lower than the prevailing utility rate)
  - for a predetermined period (usually up to 25 years)
- PPAs provide price certainty for both parties and are commonly used in renewable energy projects to ensure long-term financial stability.
- PPAs can help the customer meet their climate and clean energy goals while also reducing their long-term electricity costs.
- The developer/investors also stand to make a profit on the arrangement, since they will receive stable revenue from the customer over the life of the solar array.

# HOW A PPA WORKS

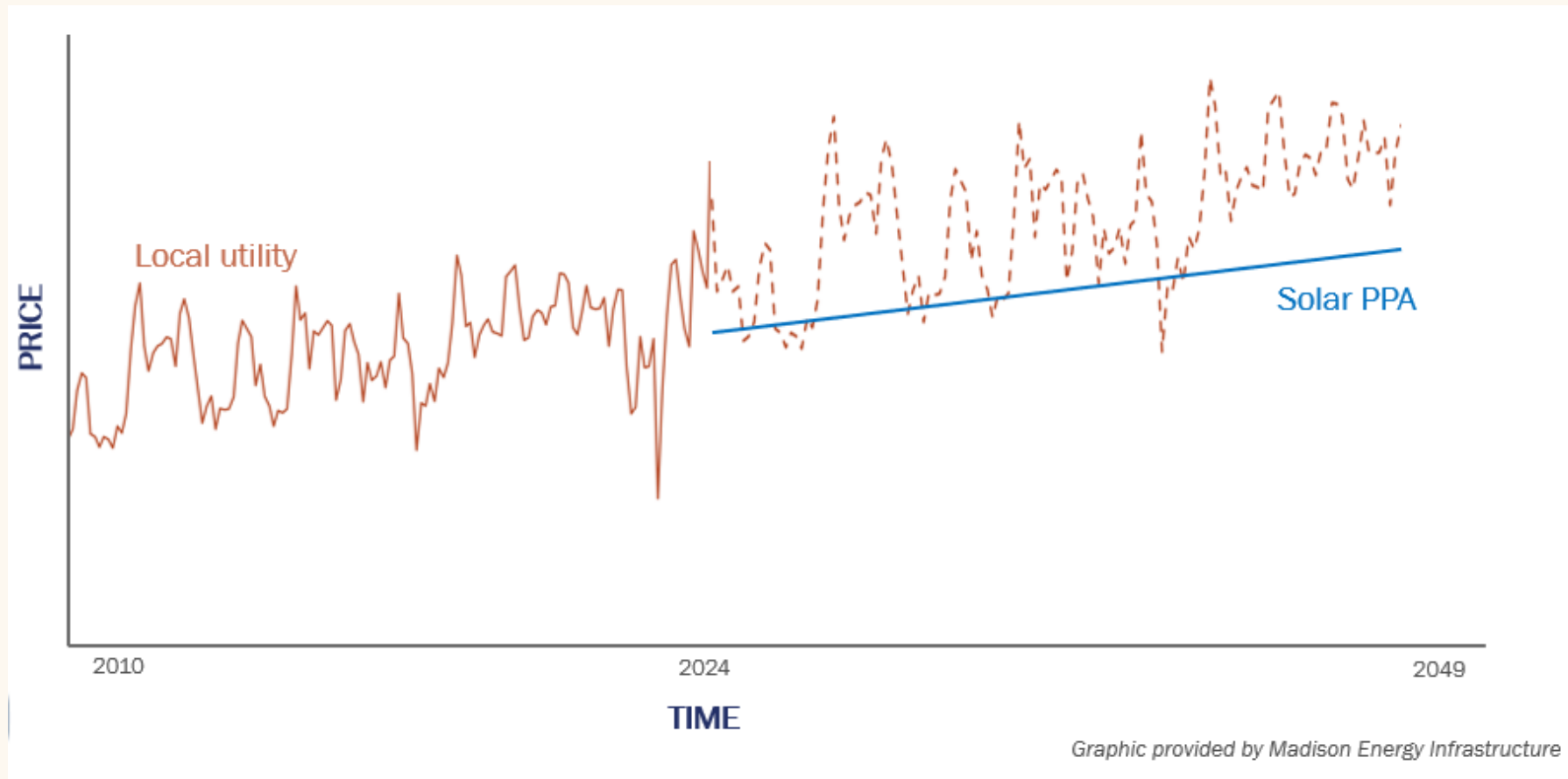
- Guaranteed energy rate
- 25 years
- No upfront capital
- No maintenance costs



Graphic provided by Madison Energy Infrastructure

# UTILITY RATES

Utility rates are expected to continue rising, projected to do so at rates higher than that has been used in the development of these PPA proposals. A PPA locks in a rate for the electricity generated by the solar system, along with an escalation rate, which provides assurance and predictability related to future energy costs.





# ADDITIONAL PPA INFORMATION

- A PPA contract is negotiated to balance risk between the parties while ensuring predictable revenue and/or savings for both over the long-term.
- The rate is based on project costs and project characteristics that include agreement term, escalation rate, and ownership of associated renewable energy credits.
- The developer's ability to access a 30% federal investment tax credit supports their financing strategy and can result in a mutually beneficial financial arrangement.

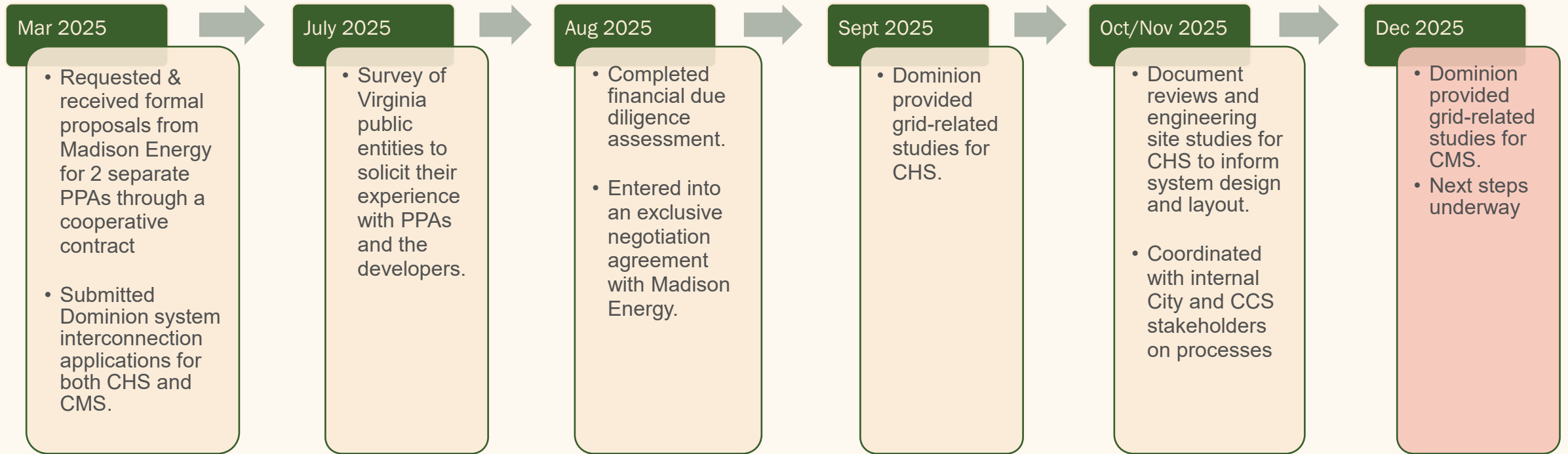
Note: One Big Beautiful Bill Act (H.R. 1), passed on July 3, 2025, provides for early termination of this federal tax credit. Per this legislation, construction must be initiated by July 4, 2026, and completed by December 31, 2027. As such, executing PPAs and initiating these projects as soon as possible is critical.

# DOMINION ENERGY RENEWABLE ENERGY PILOT PROGRAM

- Dominion is one of three Virginia utility companies that have PPA pilot programs.
- Dominion's Renewable Energy Pilot Program allows a third party who owns or operates a solar-powered or wind-powered generation facility to sell renewable energy to Dominion Energy Virginia customers via a Power Purchase Agreement (PPA).
- The program is an offering from the Virginia State Corporation Commission (SCC). Qualified customers may enter into a PPA with a third party renewable energy supplier to produce energy from a wind or solar generator located on the customer's premise.
- The pilot has a 500 MW limit for non-jurisdictional customers (the 2020 Virginia Clean Economy Act amended previous Acts to modify the existing pilot program to establish this new limit)



# TIMELINE (to date)



# PROPOSALS (\*still being finalized)

## Charlottesville High School

- System capacity: 960 kW AC
- Electrical offset: 70%
- Current average annual electricity rate: \$0.125
- Indicative PPA rate (Yr 1) with 1% escalation rate: \$0.1143  
(final diligence, design, and negotiations are underway and may impact the final rate)
- 25-year Savings: \$2.5 million

## Charlottesville Middle School

- System capacity: 720 kW AC
- Electrical Offset: 100%
- Current average annual electricity rate: \$0.125
- Indicative PPA rate (Yr 1) with 1% escalation rate: \$0.1208  
(final diligence, design, and negotiations are underway and may impact the final rate)
- 25-year Savings: \$1.4 million

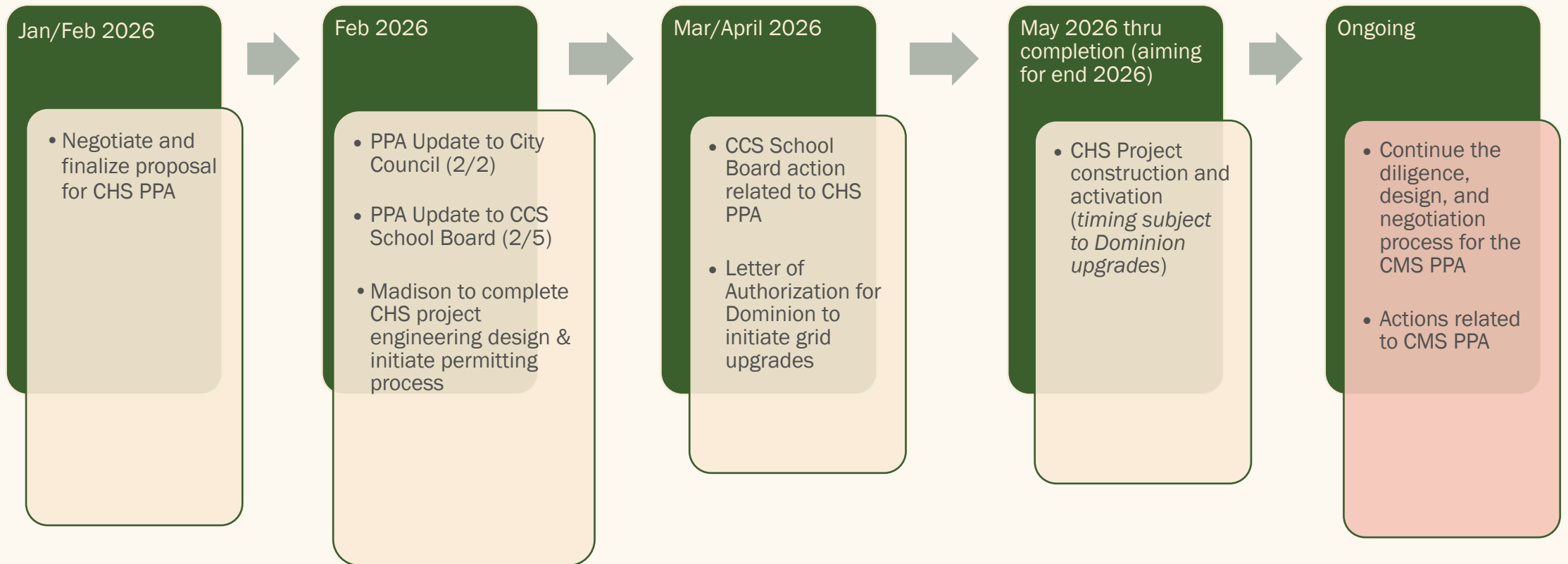


# CHS SYSTEM LAYOUT



# TIMELINE (upcoming)

- Site owner contemplated to be the party in the PPA with Madison Energy as the “Purchaser” of the electricity produced by the solar system.
- Site owner is also contemplated to be the party to execute the site access agreement.



# KEY BENEFITS

- **Feasibility:**

- PPAs offers a strategy to rapidly install large solar on our largest, eligible roofs without local capital investment
- Operations (including maintenance) remain the responsibility of the owner for the term of the PPA

- **Renewable Energy Procurement:**

- PPAs support the growth of renewable energy sources
- PPAs help advance climate and sustainability goals

- **Cost Savings:**

- PPAs provide significant long-term cost savings compared to traditional utility electricity rates.
- Combined, the PPAs for CHS and CMS are projected to save money in Year 1 with nearly \$4 million in savings over the proposed 25-year terms of the agreements.

- **Price Stability:**

- PPAs offer price stability by locking in electricity rates for the duration of the agreement, providing budget certainty for energy costs.



# Thank You

