

TO: Boards and Councils of Participating Entities for the Solar Power Purchase Agreement
FROM: Solar Power Purchase Agreement Working Group
DATE: November 28, 2022
RE: Renewable Energy Credits (RECs)

It is expected that the solar owner will retain the PA RECs to ensure our SPPA project meets the objective of obtaining the lowest cost. But both developers have been asked to provide REC prices for a portion of the group that would consider REC ownership.

Organizations that have climate action and/or sustainability goals need to explore purchasing RECs.

- This includes, but is not limited to COG, Ferguson, Harris, Patton, State College Borough

Renewable Energy Credits (RECs)

Renewable electricity generators produce two distinct market commodities: 1) electricity and 2) RECs. These commodities can be used and/or sold separately or together. The REC instrument embodies the social and environmental attributes of the underlying electricity generated from a renewable resource.

- One REC is created by a solar project for each megawatt hour (“MWh” or 1,000 kwh) it generates.
- Organizations purchasing RECS will pay an additional fee on top of their monthly utility bill to purchase RECs equivalent to their monthly energy use, or some portion of it.
- RECs should be considered if the organization intends to claim they are reducing their GHG gas emissions, or it is helping meet their climate goals.
- RECs will be managed annually through the retail services provided
 - If there is a defined plan, then the instructions can be acted on annually
 - Otherwise, yearly maintenance is required for RECs

Types of RECs

RECs provide a way for purchasers to demonstrate claims of renewable electricity. For our purposes it will be voluntary purchases; we do not have to purchase compliance RECs. Organizations can choose their type of REC.

1. **PA RECs – compliance:** Pennsylvania Alternative Energy Portfolio Standard (AEPS) regulation requires all compliance (utilities and suppliers) RECs to be generated from assets located in Pennsylvania which limits source options and props up the price of PA RECs. **2023 bid price: 43.00 \$/MWh**
 - Our RFP states the developer can keep these RECS which helps keep our costs low.
2. **National RECs:** The flexibility to purchase RECs generated by renewable projects in states without REC regulations (which includes most states outside the Northeast and West Coast) provides options to

purchase RECs at a much lower price. Green-e (voluntary) RECs are 3rd party verified and there are several options to select from. **Current price range: 1.5 – 3.2 \$/MWH**

What does this mean? Let's say our SPPA cost comes in at 6.5 \$/kWh, then the total price with RECs will be in the range of 6.65 \$/kWh – 6.82 \$/kWh. The REC price can be locked in with the retailer annually.

Example

If COG uses 1.5MWh of electricity in 2023 at the above price estimates:

Cost of electricity w/o RECs = \$97,500

Cost of electricity w/RECs = \$99,750 – \$102,300 [an additional \$2,250 - \$4,800 to meet our sustainability goals]

Making Renewable Energy Claims

By purchasing national voluntary RECs, the organization's claim could be:

"We purchase solar energy through our SPPA ...but sell the RECs to another party to meet our fiduciary responsibilities. The solar system is helping to green the grid in *(the PJM/ PA)*.

And we purchase RECs *(100-percent wind power)* so we have zero Scope 2 emissions for our portion of the GHG emissions inventory."

OR

"We are part of the solar project..." "We contracted with this solar generator to help build the solar installation in xx ..."

Resources

- Overview of RECs from the National Renewable Energy Laboratory (NREL)
<https://www.nrel.gov/docs/fy15osti/64558.pdf>
- Vox article with a good clear explanation of RECs
<https://www.vox.com/2015/11/9/9696820/renewable-energy-certificates>
- Description of public claims of solar electricity use
<https://www.epa.gov/sites/default/files/2017-09/documents/gpp-guidelines-for-making-solar-claims.pdf>