



CRS

center for  
resource  
solutions

# Solar Energy on Campus

## Part II: Solar Purchasing Options and Communicating Renewable Energy Use

Updated December 28, 2016

Solar Energy on Campus Part I (available at [www.resource-solutions.org/publications](http://www.resource-solutions.org/publications)) describes what a renewable energy usage claim is and the importance of retaining renewable energy certificates (RECs, also called SRECs for solar RECs) in order to make statements or reports that express or imply renewable energy use.

In this document, we examine the solar purchasing options available to higher education institutions, and the fundamental components of each deal that affect REC ownership, claims, and the environmental value of solar investments.

### Solar Purchasing Options & Usage Claims

There are six purchasing scenarios commonly encountered by higher education institutions: (1) self-generation; (2) on-site power purchase agreement (PPA); (3) direct and/or virtual PPAs; (4) community/shared solar; (5) utility and competitive supplier solar product; and (6) unbundled solar renewable energy certificates (SREC). For each solar purchasing option, we provide tables in the following pages that describe the possible deal structures and claims a purchaser can make. Reading the tables left to right shows the deal requirements associated with different claims. Neither the list of options nor the list of claims below is exhaustive.



CRS

center for  
resource  
solutions

Center for Resource Solutions 1012 Torney Ave. 2nd Floor; San Francisco, CA 94129 | 415-561-2100 | [www.resource-solutions.org](http://www.resource-solutions.org)

## Purchasing Option 1: Self-Generation

Any situation where you own the solar facility (on-site or off-site) and receive the generation from it to cover your electricity use.



Claims and associated deal requirements for institutions that own a solar facility:

Type of Claim	Example Claim	Requirements/Deal Features
<b>Owned on-site or off-site solar energy usage (consumption) claim</b>	<p>"We are powered by our own solar panels."</p> <p>"Our solar panels allow us to reduce our carbon footprint."</p>	You own the RECs produced from your system and you have not sold the RECs produced by your system.
<b>Solar energy usage (consumption) claim</b>	<p>"We are powered by solar energy."</p> <p>"We buy solar energy to reduce our carbon footprint."</p>	Same as above, or you sell or transfer the RECs from your system to another entity, or they are transferred as a result of an incentive program, and you purchase other SRECs to replace them (See "REC Arbitrage" p. 5).
<b>Claim to be supporting state goals</b>	"We help the state meet its renewable energy goals."	You sell or transfer the RECs from your system to the utility or another entity that uses them to comply with state renewable energy mandates or goals (e.g. a Renewable Portfolio Standard, RPS), or you receive an incentive that results in the utility or other compliance entity using the RECs from your system to meet state requirements or goals (incentives are discussed in "Additional Considerations," p. 6).
<b>Generation claim</b>	"We generate solar energy but the RECs are sold to others."	You sell the RECs from your solar facility to another entity, including if used for state compliance (above).
<b>Support claim (no usage)</b>	"We support solar energy and use grid electricity"	This is the only type of claim you can make for any owned generation when you do not own RECs from the system or otherwise own RECs.



## Purchasing Option 2: On-site Power Purchase Agreement (PPA) or Lease

Another entity owns the solar facility that is located on your property.



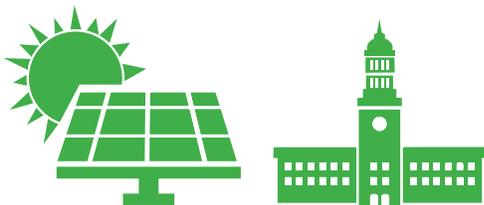
Claims and associated deal requirements for institutions with PPAs or leases for on-site systems:

Type of Claim	Example Claim	Requirements/Deal Features
<b>On-site solar energy usage (consumption) claim</b>	<p>"We are powered by the solar panels on our property."</p> <p>"Our solar panels allow us to reduce our carbon footprint."</p>	The PPA states that you, the customer, receive the RECs from the system on your property.
<b>Solar energy usage (consumption) claim</b>	<p>"We are powered by solar energy."</p> <p>"We buy solar energy to reduce our carbon footprint."</p>	Above, or the PPA states that you receive RECs from a different solar facility than the one on your property (See "REC Arbitrage" p. 5).
<b>Generation claim</b>	"We generate solar energy but the RECs are sold to others."	The PPA states that developer retains all RECs.
<b>Support claim (no usage)</b>	"We support solar energy and use grid electricity"	This is the only type of claim you can make for any on-site generation when you do not own RECs from the system or otherwise own RECs.

### Know the Restrictions for "Hosting" Claims

For on-site generation (owned, PPA, or lease), if the institution does not own the RECs, the Federal Trade Commission's (FTC) Green Guides says it is misleading for the institution to advertise or state in marketing pieces that it "hosts" a solar facility without further explanation. Institutions in this situation can make the following statements instead:

- "We generate renewable energy and sell the RECs to our utility."
- "We generate renewable energy, but sell all of it to others."
- "We installed solar panels, but sell the renewable energy to others"



## Purchasing Options 3. & 4: Direct and/or Virtual PPAs and Shared Solar

Another entity owns the system and you purchase solar electricity or SRECs through a contract with this entity. (Note: CFD stands for Contract for Differences).



Claims and associated deal requirements for institutions engaged in a direct or virtual PPA, or participating in a community solar program:

Type of Claim	Example Claim	Requirements/Deal Features
<b>Solar energy usage (consumption) claim</b>	"We are powered by solar energy."	1. The PPA states that you, the customer, receive the RECs from the system, OR
	"We buy solar energy to reduce our carbon footprint."	2. The PPA states that you receive RECs from another solar facility (See "REC Arbitrage" p. 5)
<b>Support claim (no usage)</b>	"We support solar energy and use grid electricity"	PPA states that the developer or another entity retains all RECs.



### Understanding RECs Within Your PPA

Whether you have a PPA with a solar developer for the solar panels on your roof or for off-site solar generation, you should review the PPA or contract for the following:

- Words like "Renewable Energy Certificates," "Environmental Attributes," or similar
- An inclusive and comprehensive definition of the term used
- A section defining ownership of RECs or attributes

For example: "Environmental Attributes: Accrue to Seller"

## Purchasing Option 5: Utility and Competitive Supplier Solar Products

You enroll in a voluntary solar power program offered by your utility, or switch to a different electricity supplier that offers a solar product.

Claims appropriate for institutions purchasing a utility or competitive supplier solar product:

Type of Claim	Example Claim	Requirements/Deal Features
<b>Solar energy usage (consumption) claim</b>	<p>“We are powered by solar energy.”</p> <p>“We reduce our carbon footprint with solar energy.”</p>	The utility or competitive supplier program retires unique SRECs on your behalf.
<b>General support claim</b>	“We support solar energy.”	

## Purchasing Option 6: Unbundled SRECs

You purchase unbundled RECs from a utility or REC seller.

Claims appropriate for institutions purchasing unbundled SRECs:

Type of Claim	Example Claim	Requirements/Deal Features
<b>Solar energy usage (consumption) claim</b>	<p>“We are powered by solar energy.”</p> <p>“We reduce our carbon footprint with solar energy.”</p>	These statements are always allowed if you purchase and retire (or supplier purchases and retires on your behalf) unbundled SRECs.
<b>General support claim</b>	“We support solar energy.”	

## REC Arbitrage

In certain regions where SRECs have a high market value (usually due to state requirements for SRECs), in order to make a deal financially viable or more attractive, the SRECs from the facility are sometimes sold off and less expensive RECs generated from a different renewable energy facility are procured to replace them (often called “REC arbitrage”). This deal feature can be written into a PPA with a solar developer, can be undertaken by an institution itself if it owns a solar facility, or implemented via a separate contract if an institution does not own the RECs from its PPA with a solar facility. In all cases, the renewable energy usage claims made by your institution must be those associated with the replacement RECs that were purchased and ultimately owned by your institution, not the facility that you own or with which you have the PPA. Whether or not you can make solar usage claims in particular will depend on whether the replacement RECs are from a solar facility or from a different renewable energy resource.

Claim with REC Arbitrage	Arbitrage With Solar RECs	Arbitrage With Non-Solar RECs
“We have installed solar panels and are now powered by that renewable energy.”	X	X
“We are powered by solar energy.”	✓	X
“We’ve installed solar panels to sell electricity back to the grid, and purchase renewable energy from off-site to meet our electricity needs.”	✓	✓

## Additional Considerations

Other factors outside of the purchasing option you choose can impact the renewable energy claims that can be made. It is important to be aware of these factors, and whether they impact your institution, prior to making any renewable energy claims. There are certain consulting agencies or certification programs, such as Green-e, that can help navigate these considerations. A few of these considerations are listed below.

### 1. Incentives

Some state and utility incentives require that the RECs be conveyed to the utility or state to help meet RPS requirements. An example of this is Xcel's Solar\*Rewards program. If your system received this incentive, you cannot claim to be using the renewable energy produced by the system.

Claim	Solar*Rewards Participant
"By installing solar panels, we help our state meet its renewable energy goals."	✓
"We use renewable energy."	X

### 2. State Laws

Some state laws automatically count distributed generation (DG) towards utilities' RPS obligations. In Arizona, for instance, DG within an affected utilities' service territory is an "indicator of market sufficiency activity" and can be used towards RPS compliance. This means you cannot claim to be exclusively using the renewable energy from a system within this footprint unless you request a letter from the utility regulatory commission stating that the RECs from your system were not used by the utility.

Claim	AZ DG Without Letter From Utility
"By installing solar panels, we help the utility meet its renewable energy goals."	✓
"We use renewable energy."	X

## 3. Carbon Cap-and-Trade

In states where there is a cap-and-trade program covering the electricity sector, renewable energy will not reduce greenhouse gas (GHG) emissions on the grid unless the program includes a regulatory mechanism that sets aside and retires allowances on behalf of voluntary renewable energy, like the voluntary renewable energy set-asides in California and most Regional Greenhouse Gas Initiative (RGGI) states. Under these mechanisms, a pre-determined number of allowances are made available free of charge, however it is required that you or your supplier request retirement of set-aside allowances. Without making use of these mechanisms, users of solar energy in these areas can only claim to be using zero-emissions power, but not that this power avoids emissions on the grid.

Claim	Cap-and-Trade, No Set-Aside
"We use solar energy."	✓
"We use zero-emissions energy and have reduced our carbon footprint."	✓
"The solar energy we use avoids greenhouse gas emissions."	X

## Additional Resources

See the CRS website at [www.resource-solutions.org/learn/rec](http://www.resource-solutions.org/learn/rec) for a full list of additional resources about RECs and renewable energy usage claims.

*This report was developed based upon funding from the Alliance for Sustainable Energy, LLC, Managing and Operating Contractor for the National Renewable Energy Laboratory for the U.S. Department of Energy.*