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Give Them Some Leverage

Eneref Institute reports on how third-party financing can make solar heating and cooling installations easier for property owners

Sure, economics stands in the way of solar heating and cooling (SHC) projects, but nowadays customers have a several new financing options. And more and more customers are using these options to finance SHC projects.

Armed with the right knowledge, savvy installers can offer financing options. But to sound like an expert, it's important to know the language as well – which is chock-full of abbreviations. But besides the finance-speak, we should also know a few of the familiar environmental acronyms. GHG is “greenhouse gas.” LEED certification stands for “leadership in energy and environmental design.” And to sound really fancy, MtCO₂e stands for metric ton of carbon dioxide equivalent - the measurement for carbon trading by the World Bank and others.

FUNDING & FINANCING SOURCES

“Third-party financing,” as it's called, is attractive because it allows for the property owner to pay little or nothing up front. Usually a “third party” invests in the solar water heating equipment, pays for the installation, and then sells the energy back to the property owner at a discount. You can think of it like a utility company operating from your rooftop.

The third-party financing is well-known in the photovoltaic (PV) world

and is now attracting solar hot water projects as well. With innovative financing providers like Skyline Innovations of Washington DC, Renewable Technology Developments of San Jose CA and Holocene of Raleigh, NC, expect to see more and more solar heating projects funded with third-party financing.

Skyline Innovations CEO Zachary Axelrod is very optimistic about the third-party financing structures Skyline offers. “We provide price-indexed energy. Every unit of heat we deliver will be a fixed percentage cheaper than utility-supplied fossil fuel for the property owner if we deliver it,” explains Axelrod. Skyline sells its solar energy for 15% to 35% less than the utility, and targets businesses that use a lot of hot water, like multifamily buildings, hotels, car washes and laundromats.

Holocene, who designs, builds, installs systems, provides “customized financing options” according to Stan Allison, President of Holocene Development.

The way most arrangements work is the third-party owns the system and also assumes the costs, maintenance, and risk associated with installation, performance and utility rate fluctuation. In many cases,

the third party can take advantage of available tax or grant incentives. For the property owner it's a way to go solar without capital expenditure.

POWER PURCHASE AGREEMENTS (PPA)

The most common third-party finance structure is the power purchase agreement (PPA). It is commonly used for photovoltaic projects. The property owner pays the third party for the energy it consumes, usually at a lower rate than fossil fuels. The PPA offers property owners a constant and predictable energy cost -- thereby preventing the unpredictable fossil fuel prices increases. The third party owns, operates, and maintains the system at a fixed price for the life of the contract – usually up to 20 years.

Today, solar hot water installations are financed by companies with an expertise in the technology. Renewable Technology Developments, Inc, for example, is an industry leader in solar heating and in solar cooling PPAs.

Another financing mechanism is known as a Property-Assessed Clean Energy program (PACE). Here, a municipality finances the up-front costs for an energy improvement, which the property owner repays over an extended period through a special property tax assessment. Typically, PACE financing is secured by a lien on the property.

An energy savings performance contract (ESPC) is a partnership between a property owner and an energy service company (ESCO). The ESCO conducts an energy audit to identify where energy can be saved. The ESCO designs and installs the system and arranges for funding. While ESCOs

shoot for a better than 50% energy savings, the ESCO needs to be astute enough to guarantee that the energy improvements will generate sufficient savings to pay for the project over the term of the contract, typically from 10 to 25 years.

In a utility energy service contract (UESC), a utility arranges funding and is repaid from the savings generated by the energy efficiency.

SREC

Some states have Renewable Portfolio Standards (RPS), which require utility companies to obtain a certain amount of energy from various renewable sources. A few states mandate utilities specifically procure solar energy. Utilities can do so by buying something called Renewable Energy Certificates (REC) from someone who has generated renewable energy, for example with solar.

If a utility does not meet its RPS requirement – that is, if it doesn't obtain the necessary RECs it needs to offer its customers the required amount of energy from renewable resources – then the utility instead pays a fee, called an alternative compliance payment (ACP).

That ACP fee is essentially what drives the Renewable Energy Certificate (REC) market. To avoid the ACP fee utilities look to purchase lower-costing RECs from, for example, a solar energy producer. So in states with an RPS

mandate for utilities, someone who installs solar on their rooftop may be able to sell their RECs to the utility – usually through a broker.

The type of REC a utilities buys to meet their state's specific "solar carve-out" is called an SREC – Solar Renewable Energy Certificates. The value of SRECs are based on supply and demand, and vary from state to state and from month to month. While SRECs today are mostly generated by photovoltaic systems, solar heating counts towards the solar RPS requirement in several states, including AZ, DC, MD, NC, NV, and NY. The Solar Energy Industries Association (SEIA) is working to have more states allow for solar heating to qualify as part of their RPS.

Understanding the financial language is one more tool to help us sell solar water heating systems, while sounding like a pro. ●



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This article is part of
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Eneref Institute to
demonstrate the benefits
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