

The Commercial-Scale Solar System Finance Landscape: A 2012 Sector Preview

Although the U.S. economy is expected to remain weak, PV projects will have no shortage of finance options.

■ David ten Kroode

Just as solar projects differ depending on size, features and installation costs, so, too, will commercial-scale solar project financing options vary in 2012 based on macroeconomic challenges, system prices and available incentives.

Amid ongoing global economic struggles, the U.S. remains a strong market for solar energy projects. Combine the market growth of 2011 with the possibilities of further drops in solar PV system prices and more uncertainty about government incentives for solar going forward, and a mix of trends is likely to emerge in commercial solar equipment financing in 2012.

Even if the 2012 economy grows slowly or not at all, commercial PV solar projects will remain a focal point for equipment financiers. Why? Because solar PV panels are increasingly being viewed by equipment financiers as a proven technology. This trend makes leasing a good fit for financing solar PV projects for small to midsize businesses, municipalities and nonprofit organizations.

This is especially true for solar customers that have a long-term view of the savings from a solar system, prior experience with solar or other renew-

able technologies, or a forward-thinking mind-set on green initiatives.

Municipalities, national retail chains, schools, wineries and universities are recent examples of customers that are often leasing small commercial-scale solar systems to realize benefits that pay out over the long run as opposed to yielding immediate savings through a power purchase agreement (PPA) - the typical commercial PV project finance structure.

For these types of organizations, lease transactions can offer advantages over PPAs, which are advanced finance structures more commonly used for larger (typically 2 MW and up) solar projects. PPAs are often combined with sale-leasebacks through special-purpose entities, and they may include administrative and legal costs that are too high for certain solar PV project sizes, businesses and organizations.

By contrast, standard equipment leases or loans avoid the sometimes disproportionate legal and administrative expenses of PPAs' requirements for smaller-scale solar PV installations. For example, standard equipment leases or loans can support cashflow-neutral solar PV projects that provide fixed monthly payments.

Princeton University is one entity that recently utilized a combination of construction financing followed by an equipment lease. In February, the university announced it had financed a 5.3 MW PV system installation comprising 16,500 panels on 27 acres.

Increased interest

Next year, it is also likely that more banks will enter the solar space or strengthen their positions. When compared with other slumping U.S. business sectors, the U.S. solar sector continues to be one of the fastest growing in the nation and a desirable area of investment for more banks and bank-owned leasing companies.

In addition, declining solar system prices are making possible shorter lease terms, which are increasing banks' appetites for PV solar project investment. Whatever happens in the broader market, banks are likely to continue their exploration of the solar space to determine how they can best participate and structure deals.

If prices for installed PV solar systems continue to drop, expect shorter financing terms to achieve cashflow-neutral investments. Currently, typical PV financing needs to be spread out over eight to 12 years in order to be considered cashflow-neutral (the point at which the periodic finance payment replaces the avoided utility payment plus production incentives, where applicable).

But if installed system prices continue to come down, the required terms will continue to shorten. This trend will open up opportunities for more financiers by closing the gap between traditional equipment lease terms of five years or less and the longer PV solar investment lease terms of eight to 12 years.

That said, the continued drop in



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PV module prices is likely to pose challenges for equipment lessors when it comes to putting residual values on panels, because equipment values are more difficult to underwrite when prices are dropping.

A market for used PV panels would help address the residual-value question and boost the availability of financing. But although used panels with residential applications can be found on such auction sites as eBay or in local markets via listings on Craigslist, a highly organized market for commercial used solar equipment has yet to emerge.

In addition, although the overall drop in PV system prices will create more financing opportunities over the long haul, the expiration on Dec. 31 of the U.S. Department of the Treasury's Section 1603 30% cash-grant program will be disruptive to this trend in the short term.

In 2010, this program supported more than 1,000 solar projects representing over \$3 billion in total investment, contributing to a nearly twofold increase in solar electric capacity, according to an October 2011 report by EuPD Research for the Solar Energy Industries Association.

The report found that extending the cash-grant program would significantly accelerate growth in the U.S. solar market over the next five years, increasing investment, employment and deployment across the country.

If the grant expires, commercial solar projects will be more dependent on tax credit investors - financiers that can use tax credits to improve finance conditions for their customers. Although there are banks and other lenders in the capital markets with the capability to benefit from tax credits, the dependency on tax credit appetite will undoubtedly limit financing op-

tions and slow growth in the industry.

Should the cash-grant program be extended, it will be easier for equipment financiers to get more solar investments done, because the grants provide more financing options. These options include applying the grants against the outstanding principal for shorter lease terms or allowing nonprofit organizations, such as educational institutions and local governments, to benefit indirectly from the grants by setting up tax lease/true lease structures.

Manufacturers' offerings

Next year, the industry will also likely see that more solar panel manufacturers and solar integrators will offer financing as part of the sales process. By offering flexible financing options as part of the sales process, many solar power equipment vendors are streamlining purchases for customers and, in some cases, allowing them to acquire PV equipment with no money due up-front so they can conserve cash for their core business.

Through equipment leasing, vendors can combine system and installation costs into one predictable monthly payment and allow qualifying customers to take advantage of any available tax benefits and renewable energy incentives.

In addition, more panel manufacturers and large solar integrators will eventually have structured finance groups that will work as intermediates between the funding source and customers. This trend means solar integrators and panel manufacturers will need finance people on the payroll to accommodate this in-house capability. As a result, more equipment finance companies will create partnerships with both panel manufacturers and solar integrators, especially those with a national footprint.

Financing expertise will become increasingly important. The unpredictable climate of dropping system prices and uncertain tax incentives will make financier expertise more vital than ever in the completion of commercial solar transactions. With this in mind, commercial solar customers, manufacturers and vendors should be careful in selecting a financing partner.

In particular, it is important to ensure any partner has the following qualities and offerings:

- experience in financing commercial solar PV and other kinds of renewable energy equipment;
- flexible financing structures, including complete project financing options that bundle installation and soft costs into one lease;
- the ability to offer construction financing prior to lease inception;
- expertise in applying any available tax incentives; and
- a track record of stability in a volatile economy.

One way to find a leasing company by geographic area, type of equipment or other factors is to visit the Equipment Leasing and Finance Association's website.

Finally, one thing is certain as 2012 approaches: Given the market's rapidly advancing technology, ever-changing tax programs and global market uncertainties, it is important to look forward and consider the different scenarios of the changing market landscape. ☛

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