03 | 2015 | 78538


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Markets & Trends

UK market outlook: Solar's rapid rise has been despite, rather than because of, market reforms. *Page 14*


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Industry & Suppliers

Destination America: The companies heading down the road of USA PV manufacturing. *Page 40*


Photo: Eckhart K. Gouras

Financial & Legal

Leasing large rooftops: Can a new way of financing help bolster the U.S. commercial PV sector? *Page 70*

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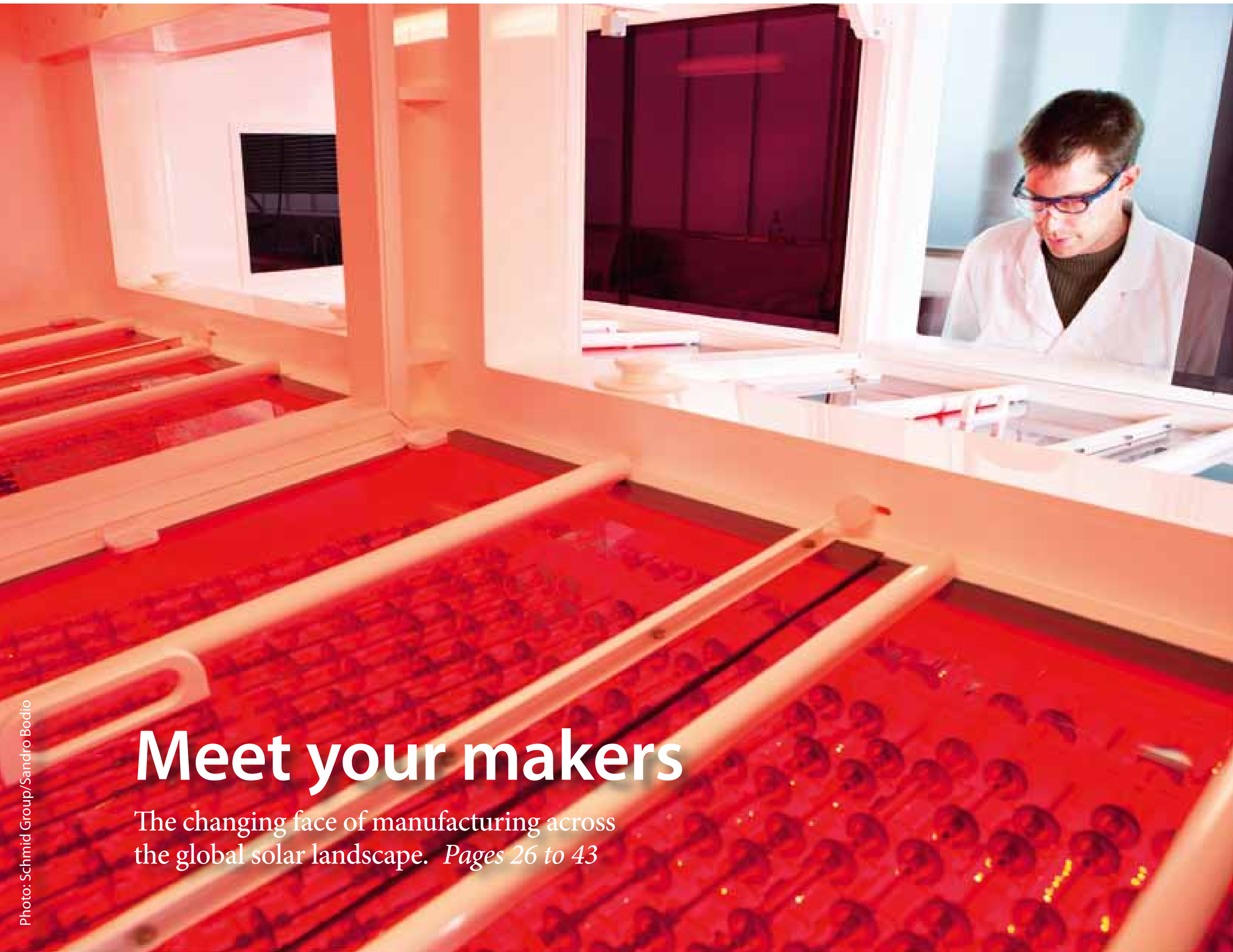
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Meet your makers

The changing face of manufacturing across the global solar landscape. *Pages 26 to 43*

Photo: Eckhart K. Gouras

The U.S. commercial and industrial market segment comes in various shapes and sizes, like this 360 kW carport system in Brooklyn, New York City.

Leasing to own: a winning formula for the US market

Solar leasing: While solar leasing as pioneered by SolarCity has catapulted US residential PV to new heights, leasing and other financial models have done little to promote commercial and industrial systems in the country. LFC Capital's Solar Ownership Program combines leasing and ownership in what could be a winning formula to help drive this market segment further.

When Stanley Fishbein, Managing Director of Chicago-based LFC Capital, first promoted his solar leasing program to developers in the U.S. early last year, he focused on the leasing and tax aspects of the program. After all, solar leasing programs had become the leading business model to attract residential customers in the U.S. to put PV systems on their roofs, and Fishbein is a tax attorney. The feedback he received from solar developers pursuing business customers surprised Fishbein and as a result, the management of LFC Capital decided to shift the marketing emphasis from solar leasing to a low-cost way for a company to obtain ownership of a solar PV system. The LFC Solar Ownership Program now combines the best of both worlds: It uses a lease to share with the customer/lessee the monetized value of the 30% federal Investment Tax Credit (ITC) it obtains for PV installations in the U.S. along with attractive options to own the system towards the end of the lease period in six or seven years. According to Fishbein, this combination can reduce the sticker price of a PV system by 40% to 50%.

LFC Capital is at home in the leasing business. Formed in 1994 as the successor of America's largest independent healthcare leasing company, LFC Capital provides equipment leasing solutions to companies in all 50 U.S. states. It has over $1.5 billion of equipment financing and leasing experience and Fishbein is leading the company's foray into the PV market.

According to Fishbein, who has 34 years' experience in the equipment leasing industry and is a board member of the New York Solar Energy Society for the past six years, LFC Capital has put together a "win-win" proposition for companies interested in solar PV, which is fundamentally different from the "winner takes all" approach he sees SolarCity and other solar companies applying to the residential PV market. These solar companies are keeping all available incentive payments for themselves, including utility rebates, environmental incentives, such as solar renewable energy certificates (SRECs), ITC and depreciation benefits, while providing their customers with an electric rate that is a modest 10% to 20% discount from the rate these customers would be paying their utility. Furthermore, there is no energy price inflation protection in these programs over their 15 to 20 year lease period. Because the value of the incentives to these developers adds up to much more than the discount in electric rate provided to customers, they are "selling the sizzle (a no cash down, expense reduction program) and not the steak", according to Fishbein.

Full use of the tax credit

Unlike leasing a car or other equipment for short-term use, solar developers told Fishbein that their business customers want to own a PV system and enjoy the benefits from owning a system over its long useful life. However, a problem arises for companies interested in owning a solar PV system when the investment doesn't pencil out because the company and its shareholders cannot derive sufficient value from the big financial kicker, the 30% ITC. This problem is widespread, and may be the reason for an anemic growth rate in commercial and industrial (C&I) PV. Most privately owned companies in the U.S. are not tax-paying entities and therefore cannot directly benefit from the ITC. These companies are organized as partnerships or other pass-through entities (limited liability companies), Corporations, etc.), whereby the company's net income is allocated among its individual partners/shareholders, who are the ones eligible to claim the ITC. A company will often not purchase a PV system when the amount of the ITC, also required to be passed to the shareholders, exceeds the amount of a shareholder's tax. Shareholders often cannot fully use their allocated tax credit because of low tax liability after their share of the company's net income is offset by a wide variety of tax deductions allowed individuals, such as losses from other businesses, property depreciation and personal deductions.

LFC's operating lease solves the problem of ITC monetization, because the lessor (LFC or one of the banks participating in its program) is able to monetize the ITC and passes through a substantial portion of its value to the company/lessee in the form of subsidized lease payments. In addition, all other available incentives are assigned to the company/lessee, making the LFC program very different from the residential leasing model in its allocation of incentives between lessor and lessee.

When it comes to acquiring expensive equipment, business executives recognize the numerous advantages an "operating lease" can provide compared to other financing alternatives or buying with cash. As Fishbein points out: "For hospitals it's not so much the tax benefits driving the economics that attracts them to operating leases, but the fact that it's off the balance sheet and it's paid for in their operating budget rather than their capital budget."

For all businesses, it is about conserving cash and improving cash flow. LFC's lease does this by eliminating up-front capital equipment cost and matching lease payments with electric savings and possible increased revenues from trailing incentives such as feed-in tariffs or the sale of SRECs.

Low cost of ownership

Of course, the market segment LFC Capital is addressing is fundamentally different than residential. Instead of homeowners, who in many cases lack an in-depth understanding of financial models, preferential tax structures and other incentives, LFC Capital is targeting businesses with annual revenues of at least $1 million that are generally run by executives with considerably more financial and tax knowledge. Targeted transaction sizes range from $100,000 to $5 million.

SolarCity and its brethren in the industry have created programs utilizing leases and power purchase agreements (PPAs) whereby customers reduce their electricity bills using solar without incurring a capital cost. In both of these arrangements, the solar developer obtains the ITC and all other available incentives. The PPA is a popular cost reduction program that can make good financial sense when the off-taker of the power is a nonprofit organization, because under U.S. tax law the ITC is not available to nonprofit organizations on a direct purchase or to a lessor in a lease with the nonprofit. Both of these programs are lucrative business models for the solar developers and their tax equity partners, many of whom are large, profitable technology companies in Silicon Valley, California, that are also interested in boosting their corporate social responsibility by investing in renewables. However, savvy private business owners are critical of these developers and their programs for retaining a disproportionate share of incentives.

With this state of affairs in the U.S., LFC Capital entered the solar industry last year with a leasing program providing companies with a bigger share of the incentives. However, as Fishbein discovered while he was rolling out his program, another "solar operating lease," albeit more "win-win" than "winner takes all", had limited appeal to businesses in

Photo: LFC Capital, Inc.

Stanley S. Fishbein, Managing Director of LFC Capital, is also a board member of the New York Solar Energy Society, a chapter of the American Solar Energy Society.

Photo: Dennis Schroeder/NREL

The commercial and industrial solar market was rather disappointing in the period 2012 to 2014, a time in which residential PV has boomed in the U.S., largely based on residential solar leasing programs.

the U.S. due to concerns about the fair market value purchase option at the end of the lease period and how a company would pay the purchase price. The breakthrough came last summer, when a fixed price early buy-out option was added to the lease along with a 10 year investment strategy suggesting the use of a loan to finance the lessee's purchase price. With a strong emphasis on a predictable low cost of ownership added to the mix, the renamed "LFC Solar Ownership Program" resonated with solar developers targeting the C&I market.

Equipment leasing in the U.S. is a complex topic involving separate classification rules for accounting and tax treatment. Without delving into these details, LFC Capital has managed to structure their lease to allow them to obtain the ITC, and under U.S. tax rules depreciate 85% of their system cost while they are the system owner during the lease period. Depreciation will be recaptured as ordinary income to the extent of the system's later sales price to the customer/lessee.

The lease is structured so that the customer/lessee shares in the monetized value of LFC's tax incentives (by way of subsidized lease payments) and obtains tax savings from the 100% deduction of its lease payments as an ordinary business expense. This combination of incentives creates a low cost path to ownership of the system by the customer/lessee. A fixed price early buy-out option after six years along with a fair market value purchase option at the end of the seventh year provide the customer/lessee with low cost of ownership and assurance that they will be treated fairly in later years, while satisfying tax rules. Also in accordance with tax rules, there is an equipment return provision (at the customer/lessee's expense) if neither purchase option is exercised.

Savings between 40% and 50%

Fishbein's description of the program as "a low-cost way for a company to own a solar system" also resonates with company management, most importantly its Chief Financial Officer (CFO). While owning the PV system after a period of six or seven years sounds good, getting there in a very predictable way sounds even better to the CFO. The company's end game is ownership. By traversing a relatively short period as a lessee on an operating lease, the outcome is a saving of between 40% and 50% from the upfront invoice price that LFC will pay to the developer. While this outcome is very attractive to a company that cannot monetize the 30% ITC, it also appeals to companies desiring off-balance sheet accounting treatment that are not keen on a longer term commitment to a power purchase agreement. Additional tax benefits are available to the company after the lease period when it is allowed under U.S. tax rules to depreciate its purchase price of the PV system and obtain a tax deduction for any interest incurred when paying back a loan used to purchase the system.

The key lever to reduce costs is the 30% ITC, which LFC Capital uses to subsidize the monthly lease payments. This is the crux of the "win-win" proposal LFC Capital is bringing to the C&I market, along with all other solar PV incentives, such as feed-in tariffs and SRECs, going completely to the customer/lessee. It is financial innovation of this kind that will hopefully drive the American C&I market in coming years. So far this market has been disappointing with nearly zero growth in the period 2012 to 2014, a time period in which residential PV has boomed in the U.S., largely based on residential solar leasing programs. At the same time the National Renewable Energy Lab (NREL) sees up to 100 GW of C&I potential by 2030, making this segment of the overall U.S. PV market no less attractive than residential PV.

At LFC Capital the take-up rate has certainly increased since the ownership angle of the program was put in the spotlight. From just three small transactions in the second quarter of 2014, the company has ramped up to 17 transactions in the second half of last year, ranging from 50 kW to 300 kW systems and amounting to a total capacity in excess of two megawatts. Hopefully, financial innovation in the C&I space will provide the tipping point for this part of the market. One major test will come with the step-down of the ITC from 30% to 10% in 2017. While President Obama's 2016 budget calls for an extension of the ITC at 30%, it's too early to tell whether Congress will go along with this plan. We can only hope that the rising tide of solar transactions across all key market segments (utility-scale, C&I, and residential) will make it clear to both sides of the aisle in Washington, DC, that the ITC serves as a key driver to make solar PV an affordable mainstream clean energy component of America's energy mix. ◆ Eckhart K. Gouras