Photovoltaic Installers And Manufacturers: An Evolving Relationship

The growth of the U.S. solar market has led to some important changes in the ways through which installers procure system equipment.

■ Deep Chakraborty

Solar energy sector revenue increased 67% last year - from $3.6 billion in 2009 to $6 billion in 2010, according to the Solar Energy Industries Association's report on the first-quarter results from 2011. This growth is creating new opportunities for large and small businesses in every state, as installers of solar are the critical link in the supply chain to bring solar panels to the rooftops.

In the U.S., solar installing remains a rapidly growing part of the industry. There are fewer than 10,000 licensed solar installers in the country today, but many more installers are expected to enter the solar industry in the coming years to meet the expected demand.

Meanwhile, although most global solar manufacturers are focused on adding production capacity and investing in the upstream part of the solar value chain, such as wafers and cells, to bring down costs and compete purely on price (i.e., dollars per watt), this is no longer the only business model.

The number of pure-play solar distributors in the U.S. is also increasing, and solar installers have choices, as some global manufacturers have chosen to distribute directly rather than through distributors. Other original equipment manufacturers (OEMs) have direct-to-installer sales only for modules or adopt a two-tier approach that involves selling through distributors as well.

This trend represents an emerging model for a different kind of relationship between manufacturers and installers. Offering solar installers products in smaller shipments when they are needed - and delivering them to the job site - can significantly lower installers' operating costs.

With packaged systems from manufacturers, installers can choose from several different levels of service and detail. For instance, whereas some packages arrive with only the panels, inverters and racking preconfigured, there are also all-inclusive products that might include grounding lugs, switches and permit labels configured for a specific job site.

Permit-plan drawings and data-monitoring systems can also be a part of the package. Installers must choose the level of completeness they seek on their packaged system delivered, based on their own business model.

Although many installers themselves offer full-service warehousing and prepackaged kits, this business model may be difficult to sustain in the long run, with decreasing prices and margins and an increased need for focus on the sales and marketing front as installers' competition grows.

Finance options

Financing programs for solar systems are becoming increasingly critical for solar installers. Much of the recent growth in the residential segment comes through the advent of solar leasing.

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Most expensive consumer goods leased in the U.S. today - such as cars and electronics - are leased to the homeowner directly by the manufacturer. The leasing systems now being offered by OEMs operate under a similar model.

Installers have a choice between OEM lease and non-OEM lease financing options. The OEM lease can be a logical extension of the installer's cash-sale business and allows the installer the ability to co-brand (with the manufacturer) and control the sales relationship with its end-customer on pricing and terms.

However, only a select number of installers with the right team size, locations and quality standards are offered this program by the OEMs in order for the OEM to best leverage the training and investment that goes into it.

The non-OEM lease companies manage the end-customer sales process and the branding of the program, thereby keeping the installer one level away from the transaction. They also control pricing and terms in the process. This model is more suitable for larger, high-volume installers that can make up for the lower share of the sales margin through their higher deal volumes, given their large installing crews.

Solar training for installers is also becoming an important area of focus, especially for the new and emerging space of electrical, roofing, and heating, ventilation and air conditioning (HVAC) contractors that are entering the industry. There are several types of options - from the longer five- to seven-day courses offered by training companies, to shorter one- to two-day product-focused training programs offered by manufacturers and others.

Experienced installers will benefit more by attending shorter training programs focused on specific aspects of selling or installing solar that can help them gain an edge on their competitors. Newcomers to the industry, such as HVAC professionals, are better served attending longer courses, where they can complete the required hours for accreditation for their team members.

A changing model

Warehousing and logistics are vital parts of the business, but small to midsize solar installers do not warehouse on their own and need to rely on their supply chain. They have a choice now on which kind of distributor they buy from - a pure-play distributor or an OEM distributor.

Key priorities are the local availability of the product at the right time, in the right quantities, and at predictable pricing, along with all the value-added service and technical support suppliers can provide.

One advantage of working with an OEM distributor is in planning business needs at a deeper level, because a manufacturer may have more visibility into the longer-term supply pipeline and any expected price fluctuations.

This year, for instance, solar module prices in the U.S. have fallen significantly. In a low-margin business, such as solar installation, such a drop can seriously affect the cashflow of smaller installers.

As the solar market in the U.S. continues to mature, the business model of installers is expected to change. With the advent of more competition at the end-customer level, especially driven by the new leasing model, installers will need to focus on the cost of customer acquisition and devote more of their attention to sales lead generation, sales training and local marketing.

As installed prices for solar systems drop over time, installers' margins will come under increasing pressure. Although larger and better-capitalized installers are driving increasing price competition and the lower margins with their higher sales volume, those installers that are smaller in size and not sufficiently capitalized to reach minimum scale will need to focus resources on the sales and actual installing activities in order to conserve cashflow, while outsourcing the supply-chain logistics and engineering aspects of a solar installation.

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Similarly, OEMs stand to benefit from stronger installer partnerships as the industry matures. In the long run, as solar system costs - and, therefore, prices - continue to drop and solar-generated energy prices reach grid parity in more parts of the country, a rapid increase in the deployment of solar energy is bound to take place. At the same time, solar sales transactions will become increasingly more sophisticated, with new technologies and financing mechanisms in the mix.

Few OEMs will be able to weather the increased brand competition at the homeowner level, given the complexity of the overall sales process. OEMs that are able to build sticky channel programs through strong installer networks have a much higher chance of sustained market-share growth.

Overall, the success of installer-manufacturer relationships will be a critical factor in the industry's ability to meet this upcoming demand as the solar PV market continues to grow.

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