

U.S. Residential Solar Distribution:
Lessons from mature industries

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Lessons from mature industries

The U.S. residential solar market has grown substantially over the past several years. Companies such as SolarCity, Sungevity, and SunRun have brought innovative business models and scale to the business. However, the market is still served by a very large number of dealer-installers. As solar increasingly becomes a mainstream business, we thought it would make sense to look at how mature industries with similarities to solar distribute and sell their products to find hints about the business models that will be successful in the future.

To do this, we identified industries whose products are, like solar, sold to consumers or installed in single family homes, related to energy, professionally installed, and that have long expected lives. We also looked for products that have an aesthetic aspect and that cost \$10,000 or more. In the end, we studied the sales channels for circuit breaker boxes, hot water heaters, flooring materials, roofing materials, central air conditioners, backup generators, and windows.

Direct to Dealers

The first thing we noticed is that industries whose value proposition, technology, or product configuration are complicated tend to use direct-to-dealer distribution channels. That is, these manufacturers sell directly to their dealers, who sell to consumers. They do not rely primarily upon intermediary distributors or wholesalers.

For example, in the \$1-billion-per-year residential backup generator market, market leader Generac sells directly to a network of dealers it has cultivated. Generac also sells through big-box retail chains and electrical wholesalers, but the majority of its business comes from its dealer channel. According to Generac, they use a direct-to-dealer channel because backup generators are a relatively sophisticated sale and they find it most effective to get their message out by working directly with their dealers.

Lennox International, the maker of several brands of central air conditioning systems, also uses a direct-to-dealer channel for its namesake brand, Lennox. The Lennox-brand products tend to be the most sophisticated in the manufacturer's lineup, and the company finds it easier to teach how to sell and service these products when it works directly with contractors instead of through intermediary distributors. The company also finds it has lower warranty claims through its direct channel than its indirect channel, which it uses for brands including Ducane, Aire-Flo, and Armstrong Air. It attributes this to the tighter control it has over contractors selling its Lennox products and the direct relationship it has with them for training and support.

Pella Corporation also uses a type of direct-to-dealer channel for windows. Pella has exclusive distributor-dealers in each market area. Some of these are owned by Pella and others are owned by entrepreneurs, but in both cases the distributor-dealers support local contractors as distributors but also operate retail showrooms and undertake consumer marketing and sales.

Distributors and Wholesalers

Notwithstanding Lennox, central air conditioning manufacturers such as Carrier, Trane, and York most often sell their products through metro-area exclusive distributors. HVAC contractors like dealing with such distributors for three reasons. First, they stock a deep inventory of repair parts for the brand they distribute, allowing contractors to get the parts needed for field repairs quickly. Apparently, consumers without air conditioning are an occupational safety hazard! Second, these distributors give contractors technical and sales training and application engineering support. Finally, they also stock ancillary items that are necessary to install central air systems, eliminating separate trips to buy ducting, wiring, and other components.

These metro-area HVAC distributors are generally not national or even statewide organizations. From a manufacturer's perspective, the advantage of this is that no single distributor is large enough to have significant negotiating leverage with the manufacturer. By contrast, manufacturers in the hot water heater market must deal with a very large, national wholesaler that effectively controls access to the market.

It appears it is the need for technical expertise and a deep, local inventory of repair parts that drives a market to exclusive distributors. The remaining markets we studied—load centers, hot water heaters, flooring materials, and roofing materials—primarily use wholesalers. In these markets technical expertise and replacement parts are less significant issues. Producers in these markets use wholesalers because they are efficient and contractors enjoy the broad inventory, convenient locations, and credit they offer.

Trade Marketing

Our third major observation about the industries we studied is that manufacturers engage in trade marketing to stimulate demand from contractors and dealers even if their direct customers are wholesalers or distributors.

Broadly speaking, this type of marketing takes three forms. In some cases, producers develop field sales organizations that call on important contractors, even if individual orders are placed through intermediaries. They may also provide technical assistance for particularly large opportunities or meet with purchase influencers such as consulting engineers or housing developers.

Consumer credentials are another significant aspect of many trade marketing programs. For example, GAF, the largest roofing materials manufacturer in North America, offers three levels of credentials: Authorized, Certified, and Master Elite. These attempt to signal to the consumer that a given contractor has the training and expertise to do a good job.

Finally, manufacturers give contractors benefits that are tiered according to the size or importance of the contractor. For example, the top tier of GAF dealers get help with web site design and hosting, a web-based direct mail service, TV and radio advertising assistance, more comprehensive warranties, vehicle purchase discounts, and even access to a group healthcare plan.

Application for Manufacturers

Based on our study of these industries, we have three key recommendations for module manufacturers in the residential business. First, deal directly with as many dealers as is economically feasible. Solar is still a complicated sale. Like backup generators, grid-tied solar is a discretionary purchase and it takes some sophistication to sell it and configure it. Manufacturers who deal directly with their dealers are best able to get their message to where it counts. In addition, while the sales and installation of solar systems is still a highly fragmented market, a few dealers have started to pull away from the pack. Manufacturers should deal directly with these customers not only because they are large and important, but because their needs are different than those of smaller dealers.

Clearly, however, dealing directly with potentially thousands of dealers will not be feasible for all manufacturers. Some contractors just do not purchase enough for a direct sales relationship to make economic sense. In these situations it makes sense to use an intermediary. In choosing an intermediary or intermediaries, manufacturers should explore the specific functions they require partners to perform. Is holding inventory locally important? Is replacement parts inventory an important part of distributors value? Is it important to have existing trust with the potential installers? Will the distributor be providing technical support, engineering services, and sales training, or will those things come from the manufacturer? The answers to these questions will make clear whether it makes more sense to use an exclusive distributor, non-exclusive distributor, wholesaler, agent, or finder.

Finally, regardless of whether sales are booked directly or through an intermediary, producers should create trade marketing programs targeting contractors.

Application for Installers

This work also suggests some answers for companies that sell solar to end customers. First, ask yourself which channels can provide you with the services you need at the right price. If you are a very large dealer, chances are that you have the scale to do your own technology evaluations and system designs. You may also want to separately source each key component of a solar system. Even so, there may be times when using an intermediary can give you faster or cheaper access to hardware or when using an intermediary's design or engineering capabilities allows you to staff more aggressively.

Mid-size and smaller dealers, especially, may not have the scale to keep a solar design engineer busy year-round. Such a dealer may also benefit from getting everything required for installation delivered in one package to the customer site. Choose a manufacturer or distributor that provides the best overall value, not just the lowest price for each module.

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