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Solar shingle production expands to second molder

By [Catherine Kavanaugh](#)

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RGS Energy The Powerhouse solar shingles, first developed by Dow Chemical Co., combine roof shingles with solar collection.

RGS Energy has seen such strong demand for the Powerhouse solar shingle that it has inked a deal with a second injection molding partner to meet demand for the shingle system, which combines solar power collecting with a roof shingle.

RGS, which says it is seeing more than \$570,000 worth of reservations for Powerhouse every day, has signed Clyde, Ohio-based Revere Plastic Systems LLC as a second molder.

Revere, with more than 230 presses, will join Creative Liquid Coatings Inc. in Kendallville, Ind., as part of the supply chain producing the in-roof solar shingles.

Developed by Midland, Mich.-based Dow Chemical Co. and licensed to Denver-based Real Goods Solar Inc., which does business as RGS Energy, the Powerhouse system has been hailed as a breakthrough because it serves as both a building product that can be used to replace asphalt roofs and a source of electricity. Installed flush to the roof, the product also is more visually appealing than panels on mounts tilted toward the sun.

RGS says the potential market for the updated Powerhouse system is 7 million homes a year in the United States. If it can capture 1 percent of that market through sales to roofers and homebuilders, sales could reach \$1 billion.



RGS Energy Revere Plastic Systems LLC is the second injection molder to join in the partnership to produce Powerhouse shingles.

Revere agreed to dedicate resources to support up to \$138 million in estimated Powerhouse sales after seeing the solar shingles and its "huge market potential," according to CEO Glen Fish.

"We believe our financial strength and reputation will enhance the Powerhouse supply chain," Fish said. "Beyond that, we believe as the Powerhouse line evolves, our design and engineering expertise will prove to be valuable at reducing cost and enhancing product features."

In business for more than 50 years, Revere has 750 employees serving customers that include Whirlpool, GE, Briggs & Stratton, Tyco and Dura Automotive Systems. The company has production facilities in Clyde, Jeffersonville, Ind.; Poplar Bluff, Mo.; and Brampton, Ontario.

RGS now has four partners ramping up to produce the third generation of the solar shingle series, which will be called RGS Powerhouse 3.0. In addition to the two injection molders, General Polymers Thermoplastic Materials LLC of Clarkston, Mich., will provide the polypropylene for the composite base structure and Ningbo, China-based Risen Energy Co. Ltd. will supply the solar components and wire harness connectors.

Customer reservations currently exceed \$36 million, according to RGS CEO Dennis Lacey.

"To meet growing demand, we required an additional plastic molding manufacturer," Lacey said in the release. "As we work towards UL [Underwriters Laboratories] certification in September, our supply chain partners are taking the necessary steps to be able to quickly manufacture Powerhouse."

RGS received UL approval for the base resin in April and is seeking to certify the entire system, which is made up of a base assembly, electrical connector and solar laminate.

Dow holds numerous patents for the Powerhouse technology, licensing them to RGS for \$3 million plus quarterly royalties of 2.5 percent of the net sale price.

Lacey expects 2018 to be a transformative year for RGS with quarterly operating profit "to turn positive" in 2019. He described the market opportunity for Powerhouse as tremendous and pointed to the solar mandate that passed in May in California requiring all new homes, condos and apartment buildings to be equipped with solar power starting in 2020. California is the first to adopt a state-wide mandate.

RGS plans to sell the Powerhouse 3.0 system in California through direct sales to builders and roofing companies that have been trained to install the product and become Powerhouse dealers. The company appointed former Dow Solar field technician John Hardwick as vice president of construction services. He previously oversaw sales in that state and Texas as well as training for roofing and builder partners in those two states, Colorado, North Carolina, New York, New Jersey and Hawaii.

RGS Energy also has been selected by Solarize Brookfield, a solar purchasing cooperative, to bring solar electricity to about 6,000 homes and businesses in Brookfield, Conn. The sign-up period continues through Sept. 25.

In October, Solarize North Haven, which is also in Connecticut, went with RGS Energy to deliver solar power to its 8,600 households. This state's program, Solarize Connecticut, has helped residential solar installations grow from fewer than 900 in 2012 to more than 22,000 today.

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