

## SOLAR SOLUTIONS

Van Meter Inc. provides expert advice in the selection and design of energy systems and more. We welcome your call to discuss your next project. To speak with a Van Meter Inc. representative, call 1-800-247-1410 or 319-366-5301. We'll quickly connect you with the person or information you need.



### MODUS Engineering

MODUS is an engineering design firm headquartered in Iowa with offices in Des Moines, Iowa City and Waterloo. The firm designs mechanical, electrical, lighting, plumbing and technology systems.

### Stroh Corporation

Stroh Corporation is a commercial contractor specializing in mechanical, electrical, plumbing and energy services. The company is headquartered in Des Moines, Iowa. As an MSCA GreenSTAR certified energy solutions provider, Stroh Corporation is a leader in the energy and cost-saving movement within the HVAC industry.

### Van Meter Inc.

Van Meter is a 100-percent employee-owned distributor of electrical, automation, lighting, data comm, power transmission, utility and clean energy supplies, services and solutions. Headquartered in Cedar Rapids, Iowa, the company has 14 locations throughout the state in Burlington, Carroll, Cedar Rapids, Clinton, Davenport, Des Moines, Dubuque, Iowa City, Keokuk, Muscatine, Ottumwa, Sioux City, Urbandale and Waterloo. Van Meter stocks a comprehensive offering of solar system components – everything from modules, inverters and racking solutions to site assessment tools, wire and connectors.

Everything you need to succeed.

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#### OUR PRODUCTS



## CUSTOMER SUCCESS

CLIENT  
MARKET ONE

LOCATION  
DES MOINES, IA



[JUSTIN D. | MODUS ENGINEERING]

## HOW MARKET ONE GOT TO 'NET ZERO' ENERGY METERING

Getting to a "net zero" design for Modus Engineering's extraordinary new, eco-smart Market One building was a tall order. To find the way, they enlisted the solar power experts at Van Meter Inc. and Stroh Corporation to create a "net zero" metering system – one of the first in Iowa.

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## CHALLENGE

Market One, Des Moines, Iowa, broke ground on April 22, 2014. At almost a century old, the address underwent a nearly \$17 million renovation. To control energy costs and reduce its carbon footprint, owner MODUS Engineering's goal was to design a building that would produce as much energy as it consumes.

After exhausting efforts to attain their goal by installing high-efficiency mechanical equipment, building materials and building methods, they still needed approximately 250 kilowatts (kW) of energy to achieve their target. Their solution: install a photovoltaic (PV) solar system.

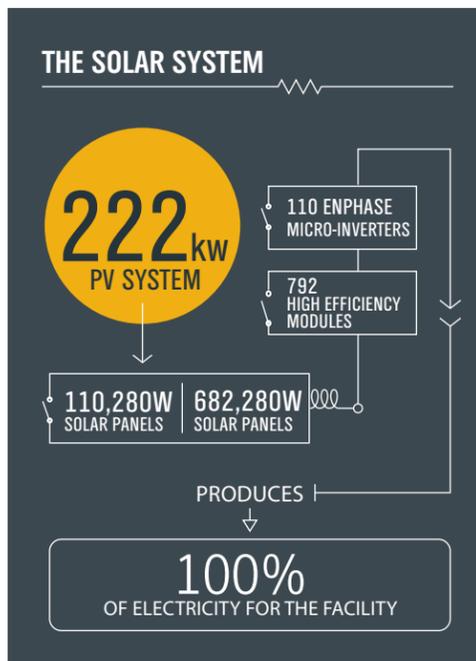
Hampering the project, however, was very limited roof space. "With this limited real-estate, we needed to reconfigure the system several times to make it work," explained Brad Duggan, Van Meter Solar Specialist.

## SOLUTION

Working closely with installers Stroh Corporation and MODUS Engineering, Van Meter assisted in the design, implementation, pre-construction, start-up and testing of two solar systems that could work within the constraints of a limited installation footprint.

Market One utilizes PV panels throughout the facility and car canopy. This 222kW PV system installation consists of 110, 280-watt (W) Solar World™ solar panels on the rooftop and 682, 280W modules on the carport, totaling 792 high-efficiency modules and 110 Enphase™ micro-inverters.

"Since the completion of the installation on January 30, 2015, this solar installation has been producing an estimated 22,000 kilowatt hours (kWh) of power monthly, enabling the business to produce 100 percent of the electricity it consumes for a 'net zero' energy bill," noted Duggan. The end result is a highly effective system that saves energy and the environment by keeping approximately 500,000 pounds of carbon per year from being released into the atmosphere.



## THE RESULT

MODUS Engineering had originally worked with another solar company that was struggling to effectively meet their changing design needs. Van Meter and Stroh Corporation were able to come in like the cavalry, take over and help design a PV system that would meet their goal.

"We had a very tight timeline on this project and I was greatly impressed with the ability of Van Meter and Stroh to go above and beyond to get the job done," said Faryal Dotani, MODUS Engineering Electrical Engineer. "Every team member played an important role. Van Meter always delivered on schedule, as promised, so the solar system could be installed without delays."

"Working with the Van Meter team of solar specialists was a positive experience. They were responsive, pricing was where it needed to be and coordinating delivery of materials was perfect," said Kelly Reames, Stroh Corporation Project Manager for the PV installation. "They helped make the project run like clockwork."

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- Kelly Reames

MODUS Engineering has a strong belief in sustainable design and hopes Market One's array of PV panels, geothermal wells, efficient lighting and more will provide a model business developers and architects can follow in their future developments. Old buildings or new, getting to "net zero" energy usage is good for business and the environment.



### WORTH NOTING

ENERGY COSTS ARE THE **SINGLE LARGEST CONTROLLABLE COST** IN MOST COMMERCIAL BUILDINGS. NATIONALLY, ELECTRIC RATES HAVE INCREASED **MORE THAN 20%** OVER THE PAST THREE YEARS. UTILITIES, INCLUDING ELECTRICITY, NOW REPRESENT ON AVERAGE 40-60% OF A BUILDING'S TOTAL OPERATING COSTS.



(SOURCE: [HTTP://WWW.STROHC.COM/STROHNEWSERVICE.HTML](http://www.strohc.com/strohnewservice.html))

