

Sozo Companies



Sozo operates a world-class indoor agriculture facility in Warren, Michigan. A paragon for commercial cultivation since 2018, they have worked with the Michigan Department of Agriculture to inform best-practices, and received the industry's first COVID compliance ambassador certification from OSHA Michigan. In addition, this efficient, well-staffed, and productive operation possesses deep commercial cultivation experience. This 84,000 square foot facility features highly sustainable and energy-efficient infrastructure and equipment.

“Working with DTE has allowed us at Sozo to continue to reduce our environmental impact while also continuing to invest in our business. Sozo’s state of the art facility has been made even more efficient through DTE’s forward-looking initiatives.”

- Aaron Rasty, Founder & CEO

Case study

Sozo Companies' cultivation system contains a variety of innovative energy-efficiency technologies, including LED agricultural lighting systems, and cooling load savings from reduced heat output from the LED lighting, HVAC and dehumidification measures, as well as savings from all other interactive energy systems, based on a whole-building energy model.

This project involves custom lighting incentives using LEDs for cultivation rather than the typical HID fixtures. Since LEDs are more efficient with their light production, there is less electricity used and converted to heat. This results in a reduced sensible heating load, meaning there is less heat produced by the lights that would otherwise need to be removed from the space. This results in extra savings with reduced use of the HVAC system, as less heat within the space means less cooling.

Whole-Building Energy Modeling is a multipurpose tool used in both retrofit and new building design, code compliance, qualification for tax credits and utility incentives, as well as real-

time building control. Typically, physics-based software simulates building energy use. This program takes input which includes a description of a building's dimensions, construction materials, lighting, HVAC, refrigeration, water heating, component efficiencies, and control strategies. The software then combines these inputs with information about local weather and uses physics to calculate thermal loads, the system response to these loads, resulting energy use, also with related metrics like energy costs. Programs perform a full year of calculations on an hourly basis or less. They also account for system interactions like those between lighting and heating or cooling.

In total, the energy efficient facility saves 13.2 GWh of electricity annually with an annual energy cost savings of approximately \$1,193,000.

DTE

Energy Efficiency Program for Business

Project summary



Projects included district-wide installation of horticultural LED lights and efficient dehumidifiers. These projects had a focused approach of saving energy and cost-savings, while improving the environmental impact of an indoor agricultural facility.

Energy savings summary

The energy savings results of these measures are summarized as follows:

Custom incentive measures	Annual energy savings (kWh)	Estimated annual cost savings
Indoor LED horticultural lighting	6,320,000	\$570,000
Cooling load savings due to LED horticultural lighting	1,400,000	\$130,000
Dehumidification units	760,000	\$68,000
Additional savings from whole-building energy model	4,720,000	\$425,000
TOTALS	13.2 GWh	\$1,193,000

About our program

The DTE Energy Efficiency Program for Business offers a comprehensive set of incentives for both electric and natural gas users designed to help you invest in energy efficient technologies. Here are three ways to save:

Prescriptive

Prescriptive incentives are available for many common energy efficiency measures and typically average 20% to 50% of the incremental cost of the equipment or services provided. Incentives are based on predetermined energy savings.

Custom

Custom incentives are offered for capital investment projects that are not eligible for a prescriptive incentive. Incentives are determined on a case-by-case basis and are paid per unit energy saved. Custom incentives are capped at 50% of project costs.

New construction

New construction/major renovation incentives are available for new facilities, the renovation of existing facilities or a change of use project, such as converting a warehouse into an office complex. Incentives also are available for adding load.

*Funds will be awarded on a first-come, first-served basis; program based on availability of funding and may end at any time; certain other conditions apply

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