



GRAND RAPIDS 2030 DISTRICT
CANNABIS
WEBINAR SERIES

**A LOOK UNDER THE HOOD: WHAT ENERGY
MODELING & AUDITING CAN DO FOR YOUR
BUILDING OPERATIONS**

Rachael Fredrickson | Consumers Energy

Eric DeVries | E3M Solutions





INTRODUCTIONS

Moderator:

Gillian Giem, Program Manager,
Grand Rapids 2030 District

Speakers:

Rachel Fredrickson, Indoor Agriculture Specialist,
Consumers Energy

Eric DeVries, President/ Energy Management Engineer,
E3M Solutions

GRAND RAPIDS
2030
DISTRICT®

Consumers Energy

Count on Us®



E³M SOLUTIONS
Energy: Efficiency, Engineering & Management

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CANNABIS

ENERGY MANAGEMENT

BEST PRACTICES GUIDE



WEST MICHIGAN

IT'S HERE!

GRAND RAPIDS

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ENERGY

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BEST PRACTICES GUIDE

PROFESSIONAL DISCLAIMER

Information provided in this presentation is based on design experience, guidelines and other sources. It does not represent a professional engineered opinion of E3M Solutions or fully apply to any/all facilities. Each company & building should understand its own requirements for zoning, code compliance and operation.



WHY ENERGY MODELING

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Equipment Design & Selection

Looking at different options for HVAC system to meet temperature & humidity targets in grow spaces

Energy Baseline & Initial Compliance

Establishing as designed benchmark for energy use and/or energy cost per square foot of building



WHAT ARE ENERGY MODELS

■ Energy Models

Computer simulation with actual construction, equipment sizing, performance, space temps, humidity requirements and other inputs. Performance is simulated against historical weather data

■ TRANE Trace

■ Carrier HAP

■ eQuest Energy

■ Others...





ENERGY AUDITS

WHY ENERGY AUDITS

Energy & Cost Savings

One of the most valuable tools in managing and identifying energy and cost savings opportunities/measures

Regulatory Requirement

Required at many levels by local and/or state licensing regulations for planning purposes



ASHRAE ENERGY AUDITS

■ ASHRAE LEVEL AUDITS

A systematic analysis of energy use and energy consumption within a defined energy audit scope, in order to identify, quantify and report on the opportunities for improved energy performance

■ ASHRAE LEVEL 1

Walk-through analysis with high level information

■ ASHRAE LEVEL 2 ★

More detail with actual cost budgets & savings

■ ASHRAE LEVEL 3

Investment grade analysis focused on long term planning



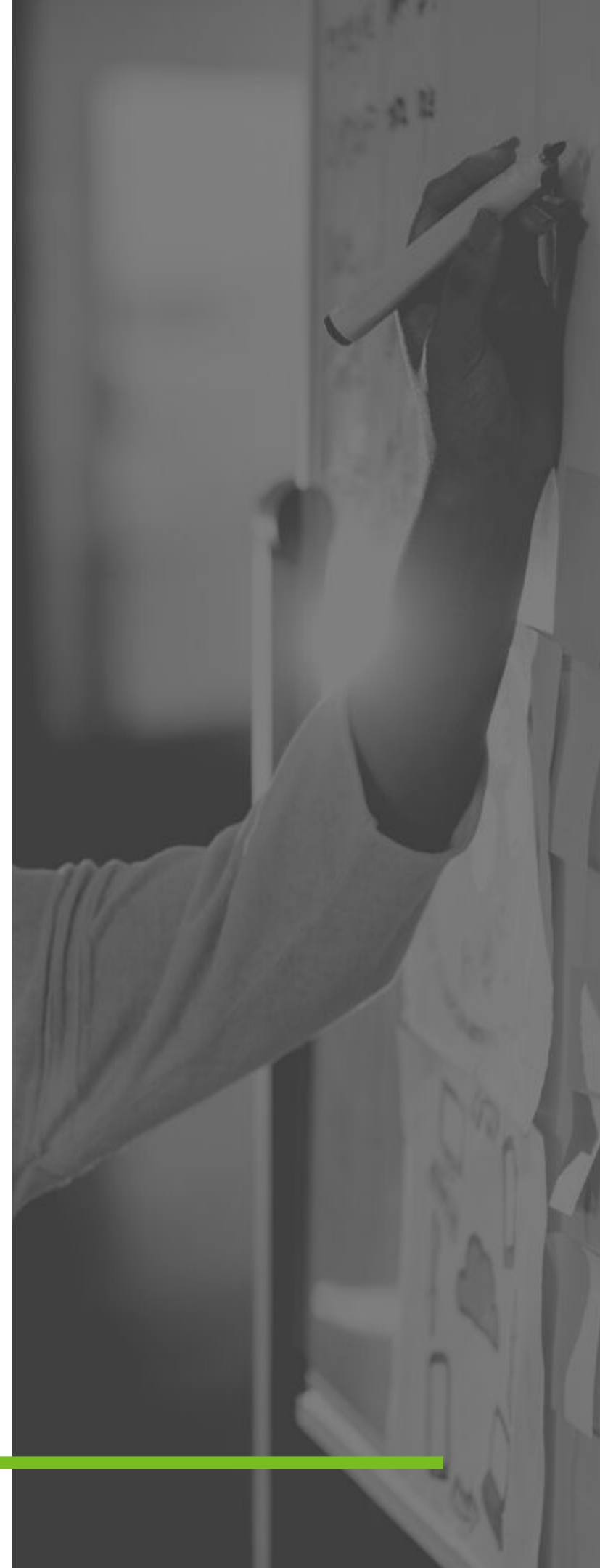
ENERGY ASSESSMENTS

■ **Treasure Hunts & Assessments**

There is no 'Set It & Forget It' in regards to a building operation plan.

■ **Whiteboard Session**

Opportunity that we provide here at E3M to connect people with an Energy Team to start the planning process.



KEY TAKEAWAYS

■ **Garbage In & Out**

Understanding that effective energy modeling is only achievable with accurate information being input

■ **Operational Benefits**

Designing and evaluating your system properly can result in higher yields, maintenance benefits and others.

■ **Compliance**

Regulatory compliance to receive and maintain your license

■ **Cost Savings**

Financial savings and increased profits from improved efficiency



Questions
&
Answers



Consumers Energy Business Energy Efficiency Program

Rachel Fredrickson

We are Here to Help



Comprehensive Business Incentives

Prescriptive Incentives

- Over 300 measures in total
- 45 measures specific to agriculture

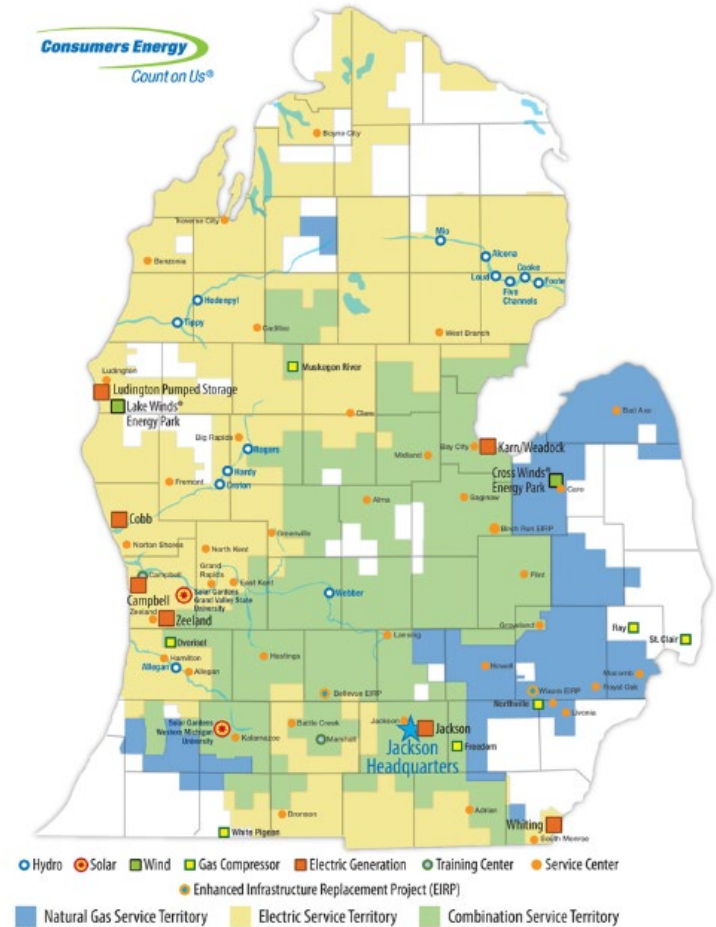
Custom Incentives

- Incentives are determined on a case-by-case basis
- Must be between a 1 and 8 year payback period

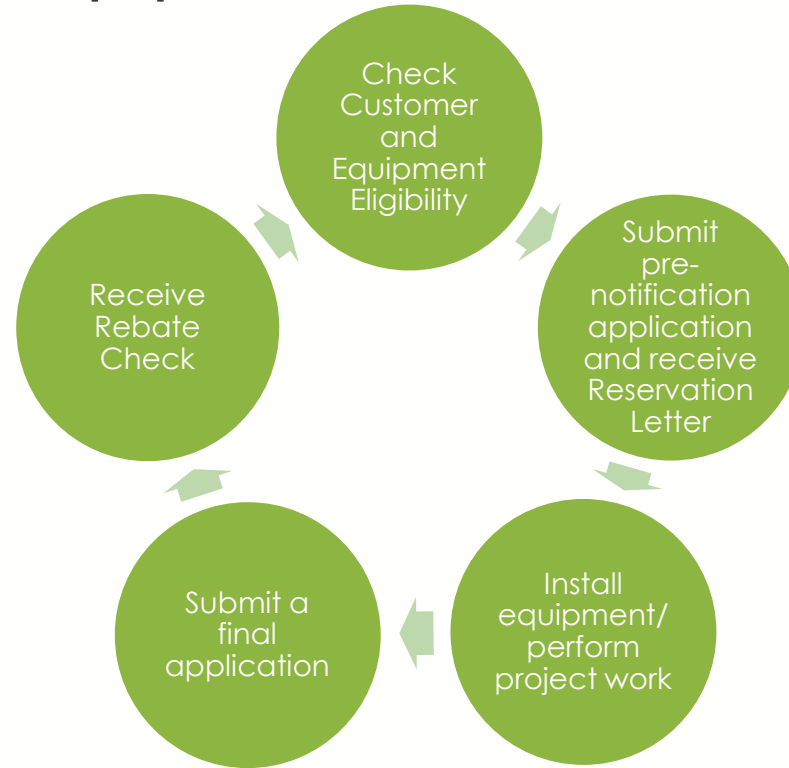
Note: Incentives are paid upon project completion and final engineering approval.

How Do I Qualify?

- Consumers Energy business account number (natural gas, electric or combination)
- Federal tax ID number
- New construction projects must be located within our territory and be using Consumers Energy as their energy provider



Incentive Application Process



Incentive Caps and Limits

| Facility Incentives | Cap per Program Year |
|----------------------------|---|
| Prescriptive | 75% of the total project cost |
| Custom | 50% of the total project cost |
| Customer Limits | Cap per Program Year |
| Large Natural Gas | \$1M across all facilities per customer |
| Large Electric | \$2M across all facilities per customer |

Program Effective Dates



Incentive Resources

ConsumersEnergy.com/startsaving



Business Energy Efficiency ▾

Save energy, earn rebates and create a more comfortable workplace with our variety of energy efficiency solutions built for your business.



Contact Us

Call us at 877-607-0737 or email us.

[Email Us](#)



Let's Save Energy Together

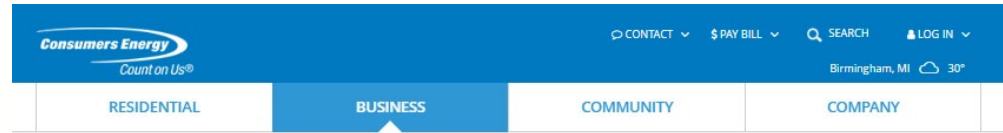
Saving energy saves your business money. Discover the many ways your business can save, or tell us a little about your business to find the solutions best suited to you.

Trade Ally Program

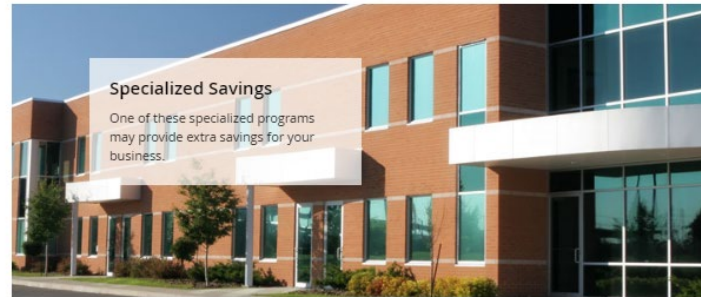
- Contractors that have been trained by Consumers Energy on how to use the efficiency program
- Third party payment release
- Find a contractor
- [Consumersenergy.com/business/energy-efficiency/select-a-contractor](https://consumersenergy.com/business/energy-efficiency/select-a-contractor)

Additional Specialty Programs

- New Construction
- Buy Michigan Bonus
- Steam Trap Express
- Network Lighting Controls
- Business Instant Discount
- Michigan Saves



Special Programs for Businesses ▾



Special Energy Efficiency Programs for Your Business

Learn about our wide variety of energy efficiency programs designed for particular industries or energy uses. Find the savings that fit your business below.



Contact Us

Call us at 877-607-0737 or email us.

[Email Us](#)

Rebates for Your Business

Discover the rebates available when you make energy efficient updates to your business.

[Learn More](#)

Energy Efficiency Success

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QUESTIONS?

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NEXT WEBINAR

**COMPARING HPS TO LED LIGHTING
SIDE-BY-SIDE IN MICHIGAN INDOOR GROW:
WHY LED WON**

Please fill out our 2 minute survey at the end of this webinar. Thank you!

Thank you to our Visionary Supporters!



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

