

WELCOME TO THE



**Michigan
Municipal
Executives**

2025 Winter Institute



Building Your Efficiency Toolbox:

Strategies to create a plan, take action,
bring in funds, and measure results



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Agenda



It Starts With a Baseline

- Leverage Data to Share Impact

A Solid Foundation

- Council-Manager Relationship Development

Blueprint for Success

- Adaptable Plan Template

The Toolbox/ Q&A

- Resources and Discussion



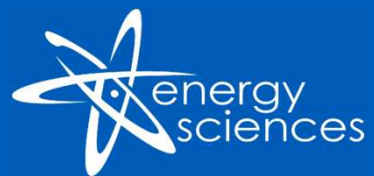
It Starts With a Baseline:

Leveraging Data to Share Impact



Michelle

Consulting Services
Program Manager



It Starts With a Baseline

The Basics of Benchmarking

Baseline: Energy use and cost for a facility over a period of time (typically 1 year)

Benchmark: tracking facility energy use and comparing it against a similar timeframe and similar facilities

Goal

- Leverage data
- Make informed decisions
- Share impact of energy efficiency





It Starts With a Baseline

Building a Baseline

- **Decide** on a time frame
- **Collect** utility bills from this period
- **Log** the data using monthly intervals
- **Save** the results to compare future data against

Consumers Energy Need to talk to us? Visit ConsumersEnergy.com or call 800-805-0490 Service Address: Facility 1 Address, City, MI ZIP, Account: 1000 0000 0000

December Energy Bill Invoice:

Account Information
 Bill Month: December
 Service dates: 11/21/2023 - 12/20/2023
 Days Billed: 30
 Portion: 21 12/23

Rate Information
 Rate Code will be listed here

Meter Information
 Your next scheduled meter read date is on or around 01/21/2024

Gas Service:
 AMR Meter
 Meter Number: 700000000
 POD Number: 000000000000
 Beginning Read Date: 11/21
 Ending Read Date: 12/20
 Beginning Read: 40486
 Ending Read: 42429 (Actual)
 Differential: 1943
 Constant: 0.1
 Correction factor: 1.01028
 (Range: 196.3 MCP)
 (Total Metered Energy Use: 196.3 MCP)

Account Summary
 Last Month's Account Balance: \$914.16
 Payment on December 04, 2023: \$914.16
 Balance Forward: \$0.00
Payments applied after Dec 22, 2023 are not included.

Natural Gas Charges
 Customer Charge: \$132.13
 Gas Distribution: 196.30 @ 0.201000: \$39.46
 Other Surcharges: 196.30 @ 0.491000: \$96.33
 Gas Cost Recovery: 196.30 @ 0.492000: \$96.88
Total Natural Gas: \$1,543.80

Total Energy Charges: \$1,543.81
 Amount Due: \$1,543.01
 By January 16, 2024
If you pay after the due date, a 2% late payment charge will be added to your next bill.

Please make any inquiry or complaint about this bill before the due date listed on the front. Visit ConsumersEnergy.com or call 800-805-0490 for details about the above charges.

Detail of Current Charges

For Service at Facility 1 Address

DTE Electric Company Business Electric Service

| Current Charges | | Current Billing Information | |
|---|------------------------------|--|--|
| Power Supply Charges | | Service Period | Nov 11, 2023 - Dec 13, 2023 |
| Power Supply Capacity Charge | 10710.5216 @ 0.038090 407.88 | Days Billed | 35 |
| Power Supply Non Capacity Charge | 10710.5216 @ 0.041050 438.87 | Meter Number | 1000000 00 |
| Power Supply Cost Recovery | 10710.5216 @ 0.011270 120.71 | Meter Reading | 11549.48184 Actual - 11416.3728 Actual |
| Other Power Supply Volumetric Surcharges | | Difference | 66.94076 |
| Delivery Charges | | Multiplier | 1.00 |
| Service Charge | 11.25 | KWH Used | 10710.52160 |
| IEAF Factor | 0.88 | Your next scheduled meter read date is on or around JAN 12, 2024 | |
| Distribution | 10710.5216 @ 0.043200 462.89 | Usage History - Average per day | |
| Other Delivery Volumetric Surcharges | 38.54 | Current Month | 355 |
| Other Delivery Surcharges | 89.26 | Last Month Ago | 427 |
| Total DTE Electric Company Current Charges | 1,564.02 | Change | -8% |
| | | Year Ago | -24% |

Total Current Charges: 1,564.02

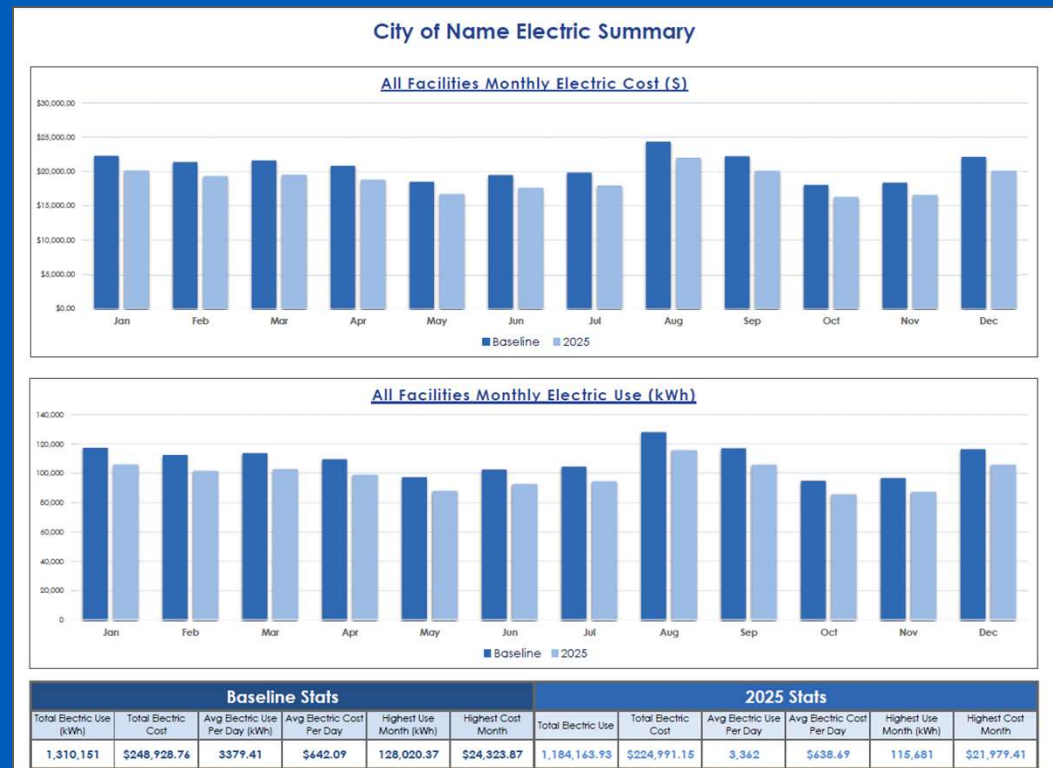
| Facility 1 Name (Street Address) | January | February | March | April | May | June | July | August | September | October | November | December | January | Total |
|----------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------------|
| Actual/Estimate | A | A | A | A | A | A | A | A | A | A | A | A | A | |
| Start date | 12/15/2022 | 1/13/2023 | 2/14/2023 | 3/15/2023 | 4/15/2023 | 5/14/2023 | 6/15/2023 | 7/15/2023 | 8/15/2023 | 9/14/2023 | 10/13/2023 | 11/11/2023 | 12/14/2023 | |
| End Date | 1/12/2023 | 2/13/2023 | 3/14/2023 | 4/14/2023 | 5/15/2023 | 6/14/2023 | 7/14/2023 | 8/14/2023 | 9/13/2023 | 10/12/2023 | 11/10/2023 | 12/13/2023 | 1/12/2024 | |
| Days billed | 28 | 31 | 28 | 30 | 30 | 29 | 29 | 30 | 29 | 28 | 28 | 32 | 29 | |
| kWh | 22,150 | 20,101 | 21,186 | 20,986 | 20,059 | 19,435 | 21,255 | 23,967 | 23,321 | 20,764 | 20,531 | 28,369 | 21,967 | 284,091 |
| Cost | \$3,765.50 | \$3,417.17 | \$3,601.62 | \$3,567.62 | \$3,410.03 | \$3,303.95 | \$3,613.35 | \$4,074.39 | \$3,964.57 | \$3,529.88 | \$3,490.27 | \$4,822.73 | \$3,734.39 | \$48,295.47 |



It Starts With a Baseline

Tracking & Monitoring

- Include your **Baseline**
- Log your utility bills **monthly**
- Review and look for **patterns**
- Consider **changes** in operations, the weather, and facility improvements





It Starts With a Baseline

Digging Deeper for Insights

- Energy Star Portfolio Manager
 - Rolling 12-month view
 - Certification
- Energy Audits
- Additional assistance and custom reports

City Hall

300 W. 13 Mile Rd, Madison Heights, MI 48071 | [Map](#)

Portfolio Manager Property ID: 33911758

Year Built: 1963

[Edit](#)

[Apply for ENERGY STAR Certification](#)

[Check Eligibility for NextGen Certification](#)

ENERGY STAR Score (1-100)

Current Score: 84

Baseline Score: 72

Summary | Details | Energy | Water | Waste & Materials | Goals | Design

[Change Metrics](#)

[Change Time Periods](#)

Source EUI Trend (kBtu/ft²)

[Change Metric](#)

(Chart current as of 01/10/2025 12:00 AM EST) [Refresh Chart](#)

Metrics Summary

| Metric | Dec 2023 (Energy Baseline) | Sep 2024 (Energy Current) | Change |
|---|----------------------------|---------------------------|-----------------------|
| ENERGY STAR Score (1-100) | 72 | 84 | 12.00 (16.70%) |
| Source EUI (kBtu/ft ²) | 84.7 | 67.5 | -17.20 (-20.30%) |
| Site EUI (kBtu/ft ²) | 52.2 | 37.0 | -15.20 (-29.10%) |
| Energy Cost (\$) | 56,477.46 | 39,426.11 | -17,051.35 (-30.20%) |
| Total (Location-Based) GHG Emissions Intensity (kgCO ₂ e/ft ²) | 4.64 | 3.76 | -0.88 (-19.00%) |
| Electricity Use - Grid Purchase (kBtu) | 870,585.0 | 836,908.1 | -33,676.90 (-3.90%) |
| Natural Gas Use (kBtu) | 1,798,318.1 | 1,051,524.0 | -746,794.10 (-41.50%) |

A Solid Foundation:

Council-Manager Relationship
Strategy



Melissa Marsh
City Manager





A Solid Foundation

Identify Your Champions

Start with what you have

- Commissions, Committees, etc.
- Small wins build momentum

Leverage your **cheerleaders**

- Members of internal and external groups
- Assign activities to build on

Encourage **participation** from everyone

- Define how actions align and contribute to strategic priorities
- Everyone has a role and can contribute





A Solid Foundation

Finding Alignment

- **Connect** the dots
 - How does this action or project support current initiatives and contribute to them
- Become **empowered** to act quickly
- Focus on **solution** potential
 - Define how this can solve a problem or provide value
- **Quantify** the benefits
 - Share relevant metrics that build your case and the positive outcomes





A Solid Foundation

Coalition Building and Partners

Identify a **partner** to fill in technical gaps

- Define the gaps and where they can help
- Funding or grants may be available to support it

Band together with your **neighbors**

- Build bridges using community-based groups and non-profits
- Join and support initiatives across jurisdictions

Use the **tools and support** that are publicly available

- Michigan Green Communities
- EGLE
- Oakland County



Blueprint for Success:

Adaptable Plan Template



Shanna Draheim
Director, Policy Research
Labs





Blueprint for Success:

Michigan Green Communities

What is MGC?



A sustainability benchmarking, networking, & technical assistance program for municipalities & counties



Accelerate environmentally sustainable actions by communities **to enhance Michigan's livability & economic competitiveness** in the 21st century global green economy



Participation Benefits

- Free technical assistance
- Access to a peer network
- Easily create a roadmap of sustainability actions that work for your community



Blueprint for Success:

Green Communities Challenge

MGC Challenge Categories

1. Planning for Inclusive & Lasting Impacts
2. Climate Resilience & Adaptation
3. Energy Efficiency & Renewable Energy
4. Responsibly Managing Materials
5. Sustainable Land Use & Economic Development
6. Improving Health Outcomes
7. Protecting & Conserving Water Resources
8. Support Clean & Inclusive Mobility
9. Inspire & Mobilize Residents

CATALYST COMMUNITIES

Resource Hub



Energy Efficiency and Renewable Energy



Improving Health Outcomes



Inclusive & Lasting Impacts



Land Use



Materials Management



Mobility



Residents



Resilience & Adaptation



Water



Blueprint for Success: Sustainability Plan Toolkit



Internal Sustainability Work Plan

- *MS Excel*

Public-facing Sustainability Plan

- *MS Word*

One-page Factsheet/progress Report

- *Canva*
- *MS Word*

User Guide

- *MS Word*



Blueprint for Success: Templates to build a Plan

Action 1: Establish an internal sustainability team, made up of staff from different departments, to coordinate municipal sustainability initiatives

Sustainability initiatives span multiple departments, creating a need for greater collaboration and coordination across [city, county, or township] government. The Planning and Economic Development Department will be responsible for establishing and facilitating this working group; the departments listed below will be responsible for contributing staff time to the group.

| Staff Lead | Priority Level | Impact Level | Timeline |
|--------------|----------------|--------------|---------------------------|
| City Planner | High | Medium | September 2023 – May 2024 |

| Action | Impact |
|--|--------|
| Develop a climate adaptation and resiliency plan in collaboration with the community. | ★★★ |
| Track energy use for all municipal buildings using ENERGY STAR Portfolio Manager. | ★★★☆☆ |
| Update Capital Improvement Plan (CIP) to include future municipal renewable energy projects. | ★★★☆☆ |
| Provide access to information about community recycling programs through the municipal website, local media, social media, or other outreach mechanisms. | ★★★☆☆ |
| Conduct a community-wide brownfield audit of public- and privately-owned properties. | ★★★☆☆ |

Community Data Profile

The Community Data Profile includes demographic data about [city/county/township name], with a focus on residents and geographic areas that may be more vulnerable to environmental hazards. The data below is from the U.S. Census Bureau's American Community Survey, Neighborhoods at Risk data mapping tool, and the Climate and Economic Justice Screening Tool [add additional sources if any others were used].

Why is it important to think about social vulnerability? Some residents may be more affected by environmental hazards (e.g., less able to recover after a flood) and some may face barriers to accessing sustainability opportunities (e.g., upfront costs of energy efficiency). By understanding who these residents and communities are, the [city/county/township] can better design projects, plans, and policies to ensure that they benefit from sustainability investments.

[Fill out the yellow boxes in the Social Vulnerability and Climate Exposure tables with data from the Community Profile in your MGC Excel template workplan. See the Excel template for instructions on accessing the data from Headwaters Economics' [Neighborhoods at Risk tool](#).]

| Social Vulnerability | | | | |
|---------------------------------|----------------------|----------|---------------|----------|
| | [City/Township Name] | | [County Name] | |
| Population | insert # | | insert # | |
| Families in poverty | insert # | insert % | insert # | insert % |
| Housing units that are rentals | | | | |
| People of color | | | | |
| Households with no car | | | | |
| Children under 5 years | | | | |
| People over 65 years | | | | |
| People with disabilities | | | | |
| People without health insurance | | | | |

Establish Your Team

- Across All Departments

Define Your **Priority** Actions

- Rate Their Impact

Create a Community **Profile**

- Demographic Information
- Environmental Hazards
- Climate Exposure
- Economic Barriers
- Risk Analysis



Blueprint for Success: Putting the Plan into Action

| Goal Statement: <i>Enter energy goal statement here.</i> | | |
|--|--|---|
| Catalyst Communities Energy Resources | | User Guide |
| CATEGORY | SUBCATEGORIES & DESCRIPTIONS | ACTION ITEMS |
| Energy Efficiency & Renewable Energy | Benchmark & Track | 1 Conduct energy audits on municipal facilities. |
| | <i>Identify your municipality's energy use and track it over time, noting both your achievements and areas for improvement.</i> | 2 Adopt decarbonization targets for municipal operations and facilities. |
| | | 3 Track energy use for all municipal buildings using ENERGY STAR Portfolio Manager. |
| | | 4 Implement an internal revolving loan fund, or similar financing tool, for municipal energy projects. |
| | Fund Energy Efficiency & Renewable Energy | 5 Implement a public financing or grant program to support community energy efficiency and renewable energy projects. |
| | <i>Encourage the deployment of public and private renewable energy projects by establishing financing tools that lower the cost burden for implementing renewable energy projects.</i> | 6 Ensure equitable access to any/all energy efficiency and renewable energy financing and grant program(s). |
| | | 7 Update 6-year Capital Improvements Plan (CIP) or Asset Management Plans to include current or future municipal renewable energy project(s). |
| | Renewable Energy Deployment | 8 Adopt policies and/or ordinances that support renewable energy projects on private property (e.g., solar/wind ordinance, renewable energy overlay zones, expedited permitting). |
| | <i>Increase the use of renewable energy in your municipal buildings and public spaces.</i> | 9 Implement at least one new renewable energy project (e.g., solar thermal, solar photovoltaic, geothermal, wind, district heating/cooling systems, biodigesters, biomass, or energy storage system) on public buildings/property in the last year. |

Excel Template

Action Category Tabs

- Align with GCC Categories and Action Items

Planning Columns

- Team/Staff Responsible
- Specific tasks
- Timelines
- Funding Sources
- Notes
- Challenges

The Toolbox:

Resources/ Q&A

Questions & Answers

Resources available through Google Drive:

- Tip Sheet and Links to Online Resources
 - EGLE
 - Catalyst Communities
 - Energy Star Portfolio Manager
 - Michigan Green Communities Sustainability Plan Template
- Downloadable Templates
 - Simple Energy Baseline and Monitoring Spreadsheet
 - Sample Complete Baseline Report
 - Michigan Green Communities Sustainability Toolkit
- Presentation Slides





Thank You

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City of Madison Heights

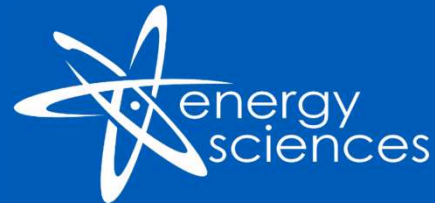
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