



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

# EGLE ENERGY SERVICES PROGRAMS, RESOURCES & TECHNICAL ASSISTANCE FOR COMMUNITIES

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Sustainability Section

# OFFICE OF CLIMATE AND ENERGY

Executive Order No. 2019-06  
[Michigan.gov/ClimateandEnergy](https://Michigan.gov/ClimateandEnergy)

Provide guidance and assistance for the reduction of greenhouse gas emissions, renewable energy, energy efficiency, and climate adaptation and resiliency

## ENERGY SERVICES

*(Michigan Energy Office)*  
[Michigan.gov/Energy](https://Michigan.gov/Energy)

Committed to Healthy Communities, Economic Growth, and Environmental Sustainability through Energy Efficiency (EE) and Renewable Energy (RE)

# MI HEALTHY CLIMATE PLAN

(EGLE Office of Climate and Energy)

## **ED No. 2020-10 Building a Carbon Neutral Michigan**

(9/23/20)

The Michigan Healthy Climate Plan must provide strategies and recommendations for achieving and tracking progress toward the statewide goals (given above), with a focus on near-term objectives that Michigan can achieve in five years.

Draft Plan by September 1, 2021

Final Plan by December 31, 2021

Evaluate the potential impacts of proposed energy generation resources and alternatives to those resources, and also evaluate whether the IRPs filed by the utilities are consistent with the emission reduction goals included in this Directive.

Website: [www.michigan.gov/climate](http://www.michigan.gov/climate)

# COUNCIL ON CLIMATE SOLUTIONS

[\(Link\)](#)

## **EO No. 2020-182 Council on Climate Solutions**

(9/23/20)

- Advise EGLE in formulating and overseeing the implementation of the MI Healthy Climate Plan
  - Recommend emissions-reduction strategies
  - Recommend solutions for communities disproportionately impacted by the changing climate
- Council established five advisory workgroups
  - Buildings and Housing Workgroup
  - Energy Intensive Industries
  - Energy Production, Transmission, Distribution, and Storage Workgroup
  - Natural Working Lands and Forest Products Workgroup
  - Transportation and Mobility Workgroup
- 23 Members: 9 department heads; 14 residents / external experts

# EGLE SUSTAINABILITY SECTION

Energy Management  
Energy Efficiency &  
Renewable Energy

Energy  
Services

Increase Recycling  
Increase Demand for  
Recycled Materials

Recycling

Programs Provide:

- Technical Assistance
- Grants
- Resources

Pollution  
Prevention

Identify Sources of  
Pollution/Waste  
Mitigation

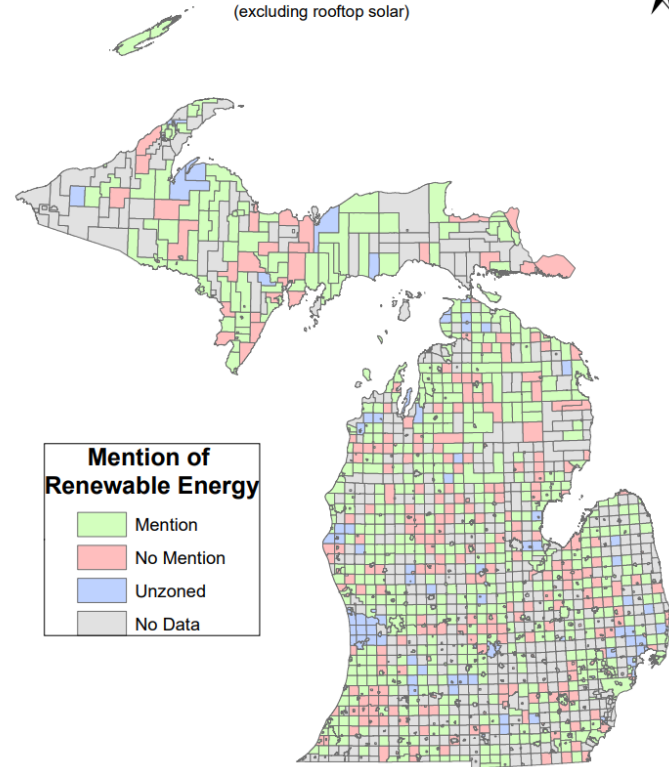
# EGLE ENERGY SERVICES

- Energy Planning & Policy, Technical Assistance
- Roadmaps – Storage, Clean Tech, Energy Asset, EV
- Charge Up Michigan
- Community Energy Management
- Agriculture & Rural Businesses Incentives
- Small Manufacturers Energy Waste Reduction
- Clean Energy for Low-Income Communities
- Clean Tech Development
- K-12 Public School HVAC Assistance
- Water Energy Nexus & Water Leak Programs

# ENERGY PLANNING & POLICY

- Database of zoning for renewable energy
- Survey of local governments
- Repository of templates, guidance, FAQs, case studies, webinars, new content as needed
- Real-time consultation

Presence of Renewable Energy Ordinances -  
Michigan Townships, Cities & Villages  
(excluding rooftop solar)



# ONLINE RESOURCES

## COMMUNITY IMPACTS OF RENEWABLE ENERGY

### COMMUNITY SOLAR

Community solar is a solar energy system that generates renewable energy and is shared by multiple subscribers in a community. Learn more to find out about solar power in your community.

[LEARN MORE](#)

### CLEAN ENERGY IN MICHIGAN SERIES

The Clean Energy in Michigan Series provides case studies and fact sheets answering common questions about clean energy projects in Michigan.

[LEARN MORE](#)

"Clean Energy in Michigan" Series, Number 5  
**Brownfield Developments  
 Cadillac Community Solar**  
 By Genevieve Sertic, University of Michigan

The following case study is one of several produced recently by a Dow Sustainability Fellows project team. The team highlighted four brownfield sites in Michigan that have been developed or are being considered for solar projects. Each of these case studies examines the technical, economic, social, and other relevant characteristics of a specific project.

"Clean Energy in Michigan" Series, Number 1  
**Wind Turbine Economic Impact:  
 Landowner Payments**  
 By Leah Adelman, University of Michigan

#### Q1. How are local residents compensated for the use of their land for wind turbines?

Economic development is one of the key benefits wind development brings to the communities that host wind farms. This economic development comes in two primary forms: community-wide (primarily through the property taxes that wind developers pay to local governments) and personally through payments made directly to landowners.

Most commonly, personal payments go to landowners who allow a wind developer to place turbines or other equipment on their property. The actual amount paid to these landowners varies greatly from place to place and depends upon how many acres are included in the lease, among other factors.<sup>1</sup>

Research from communities in Michigan with windfarms finds that many of the landowners who receive payments reinvest that money in their property or use it to buy new farming equipment.<sup>2</sup> There are also many farmers who say that the money helps reduce the risk of operating a farm.<sup>3</sup>

In Michigan, some wind developers also pay neighbors who own property near wind turbines, not just those with turbines on their land. This can provide wind developers with more flexibility in siting wind projects, as some local governments require wind turbines to be farther from the homes or property lines of unpaid neighbors.

Collectively, landowners in the U.S. receive a total of about \$222 million per year from wind developers.<sup>4</sup>

Michigan Brownfields:

gan on the site of an old project on a 20-acre 1, PCE, and asbestos, before Summer 2020.

e Cadillac City Council, (a local energy supplier) solar installation. Warner onsumers Energy.<sup>1</sup>

lation. The end-users of residents, the city (65% of

windfield grant and a raining buildings on the ay off its loan through

ner generated from parable to the current urposing of a blighted rfield unlocks grant

d the Michigan Energy Office swering common questions climate-energy/energy-futures.

## PLANNING & ZONING GUIDANCE

### SOLAR RESOURCES



Guidance on incorporating renewable energy in to community plans and ordinances for solar energy.

[LEARN MORE](#)

### ZONING FOR RENEWABLE ENERGY DATABASE



In a unique project, EGLE and University of Michigan's Graham Sustainability Institute have developed the Michigan Zoning Database, a searchable source of information of municipal ordinances.

[LEARN MORE](#)

### WIND RESOURCES



Guidance on incorporating renewable energy in to community plans and ordinances for wind energy.

[LEARN MORE](#)



#### Acknowledgement

This material is based upon work supported by the Department of Energy and the Michigan Energy Office (MEO) under Award Number EE00007478.

The Clean Energy in Michigan series provides case studies and fact sheets answering common questions about clean energy projects in Michigan.

Find this document and more about the project online at [graham.umich.edu/climate-energy/energy-futures](http://graham.umich.edu/climate-energy/energy-futures).

[www.Michigan.gov/energy](http://www.Michigan.gov/energy)



# ENERGY EFFICIENCY = DECARBONIZATION

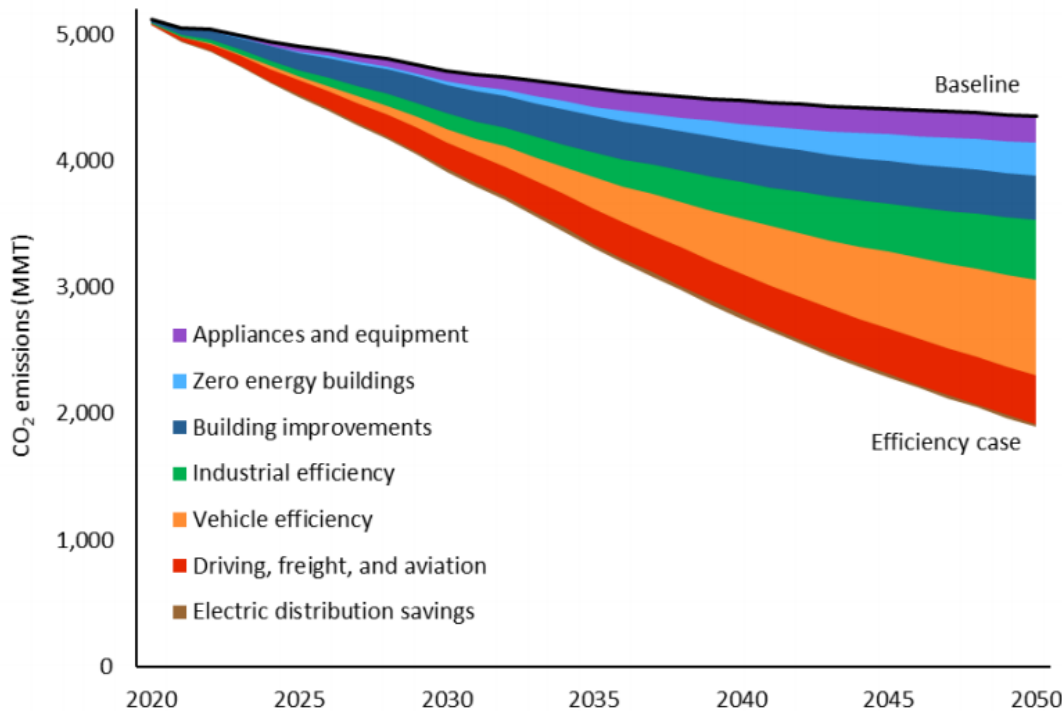


Figure ES1. Reduction in carbon dioxide emissions from combined opportunities

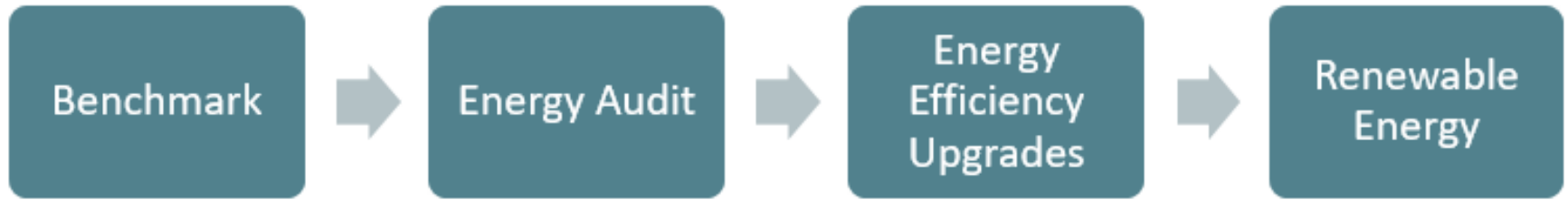
2019 ACEEE Report - Halfway There: Energy Efficiency Can Cut Energy Use and Greenhouse Gas Emissions in Half by 2050

"...research shows that energy efficiency can slash US energy use and greenhouse gas emissions by 50% by 2050 and get the United States halfway toward its climate goals."

<https://www.aceee.org/press/2019/09/energy-efficiency-can-slash>

# COMMUNITY ENERGY MANAGEMENT

Energy management is the process of tracking the energy you use, finding opportunities to reduce the amount of energy needed, take action on those opportunities, and keep monitoring your energy.



City Hall, Fire Station, Library, Public Works, Wastewater, Community Center, and other community owned facilities.

# CLEAN ENERGY FOR LOW INCOME COMMUNITIES (CELICA)

- Address low-income energy challenges & access to alternative energy
- State, community, and energy service providers partnerships
- Sustainable model that works for Michigan communities

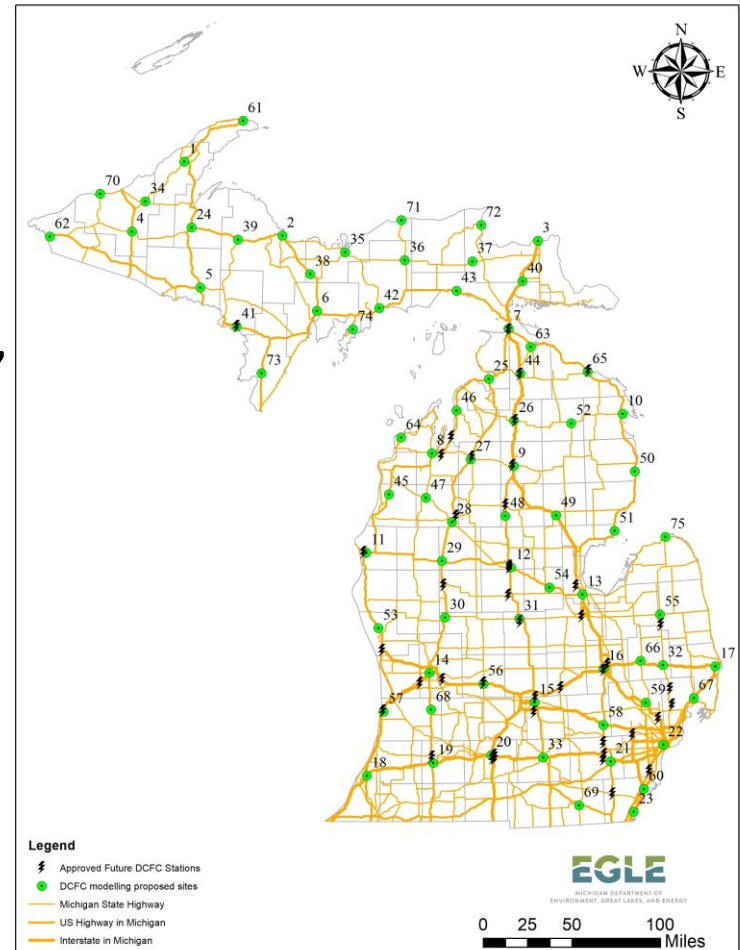
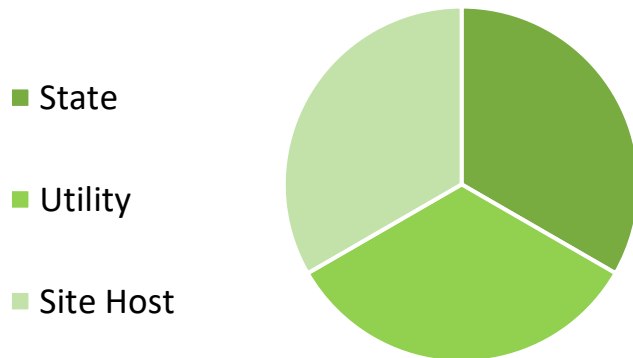


# CHARGE UP MICHIGAN



Funding for charging infrastructure to build an EV Fast charging network, to provide worry free EV travel throughout Michigan.

EV Charger Infrastructure Cost



# CATALYST COMMUNITIES

- Multi-tiered approach to providing communities with the resources and actions local governments can take towards a just transition to decarbonization.
  - Inclusive & Lasting Impacts
  - Energy Demand Management
  - Renewable Energy
  - Materials Management
  - Water
  - Mobility
  - Land Use
  - Resilience & Adaptation
  - Health
  - Food
- Online Resources
- Webinars
- Workshops
- Accelerators



## RESOURCES



Energy Demand Management



Renewable Energy



Water

## UPCOMING RESOURCES



Food



Health



Inclusive & Lasting Impacts



Resilience & Adaptation



Materials Management



Mobility

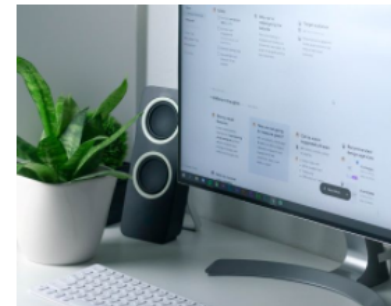


Land Use

## WEBINARS

Michigan has 1,856 local jurisdictions, ranging from the big cities to the small villages and townships, and each community may have different resources, staffing or departments they manage. Catalyst Communities webinars and events are free to communities, recorded and then posted online for future viewing, which takes out the constraints of time, travel and cost for communities.

[LEARN MORE ABOUT AVAILABLE WEBINARS](#)



# CLEAN ENERGY & ENERGY MANAGEMENT WEBINAR SERIES

CLIMATE AND ENERGY / ENERGY / COMMUNITIES

## Community Energy Management

### CLEAN ENERGY & ENERGY MANAGEMENT WEBINAR SERIES

These webinars feature local governments from across the state--both large and small--sharing with their peers their successes and challenges in improving the energy efficiency of their buildings or moving toward more renewable energy.

#### Upcoming Webinars:

- **Clean Energy Financing Through Michigan Saves**  
**Thursday, June 17, 2021: 11:00am - 12:00pm**  
In this session, learn about the nation's first nonprofit green bank, Michigan Saves. Originally established through a Michigan Public Service Commission grant, this now independent bank provides energy consumers with low-interest financing for their efficiency improvements through partnerships with private-sector lenders. Hear the details from a Michigan Saves expert as well as real community experiences from local municipalities.  
[Register](#)
- **Sustainable Wastewater Infrastructure and Energy Savings with SWIFT**  
**Upcoming in Mid-July**  
The Department of Energy's Sustainable Wastewater Infrastructure of the Future (SWIFT) Accelerator is partnering with the state of Michigan to help reduce energy consumption and adopt next-generation technologies at local wastewater treatment facilities across the state. Learn about the various opportunities provided by SWIFT, including a new Wastewater Energy Management Toolkit, to help municipalities engage with their water utility and find ways to save energy.  
[Register](#)
- **EPA Resources for Local Governments**  
**Wednesday, August 11, 2021: 11:00am - 12:00pm**  
The Local Energy and Environment Program from the Environmental Protection Agency (EPA) offers a multitude of tools and publications to help local governments reduce greenhouse gas emissions, improve energy efficiency, and explore renewable energy options. In this session, hear from EPA representatives as they walk through key resources for local governments to help formulate cost-effective, energy saving strategies and achieve cross-cutting community benefits.  
[Register](#)
- **Experiences with Michigan Community Solar**  
**Upcoming in September**  
Community solar is a hot topic in Michigan, but do you know what it actually entails? In this session, learn about the various definitions of community solar, what's been done in Michigan thus far, and how low-income community members can benefit. Also hear from experts who helped establish some of the state's early community solar projects as they share their experiences and lessons learned.  
[Register](#)

#### Past Webinars:

- **EGLE's Energy Efficiency Programs for Communities**  
[Recording](#) | [Slides](#)
- **The Michigan Energy Code Adoption Process**  
[Recording](#) | [Slides](#)
- **Energy Benchmarking for Municipal Facilities**  
[Recording](#) | [Slides](#)
- **Using EZMT Online Mapping to Plan for Clean Energy**  
[Recording](#) | [Demo](#) | [Slides](#)
- **Conducting Energy Audits on Municipal Facilities**  
[Recording](#) | [Slides](#)
- **Facilitating Community-wide Clean Energy Improvements Using PACE Financing**  
[Recording](#) | [Slides](#)
- **Helping Facilitate Rooftop Solar in Your Community**  
[Recording](#) | [Slides](#)
- **Introduction to Planning & Zoning for Wind and Solar**  
[Recording](#) | [Slides](#)
- **Planning & Zoning for Utility-Scale Wind**  
[Recording](#) | [Slides](#)
- **Planning & Zoning for Utility-Scale Solar**  
[Recording](#) | [Slides](#)
- **Financing Energy Efficiency Improvements Using Energy Savings Performance Contracts**  
[Recording](#) | [Slides](#)

[www.Michigan.gov/energy](http://www.Michigan.gov/energy)

# ACCELERATORS

- Rocky Mountain Institute (RMI)
  - Clean City Cohort, a cohort of communities working together on common energy issues:
    - Solar Deployment
    - Energy Labeling Programs
    - Rental Housing Energy Efficiency Standards





# SOLSMART

- SolSmart is a national designation program designed to recognize communities that have taken key steps to address local barriers to solar energy and foster the growth of mature local solar markets.
- Partnership with the Solar Foundation to help communities achieve SolSmart designation.



# DOE SUSTAINABLE WASTEWATER

## INFRASTRUCTURE OF THE FUTURE (SWIFT)

- Technical Assistance and resources to achieve energy efficiency at wastewater facilities.
  - Track 1. SWIFt Toolkit Training: designed to provide resources that support best practices and innovative approaches to establish and implement energy management and planning.
  - Track 2. SWIFt Energy Recovery (SWIFter) Accelerator: For facilities ready to adopt more advanced energy recovery technology, customized technical assistance on energy data management, energy efficiency improvements, advanced technology integration (e.g., renewable energy, resource recovery, biosolids, and advanced data management), and project financing.

Michigan Department of  
**Environment, Great Lakes, and Energy**



Questions?

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[www.Michigan.gov/ClimateandEnergy](http://www.Michigan.gov/ClimateandEnergy)