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CITY OF MILWAUKEE
[MILWAUKEE.GOV/ECO](https://www.milwaukee.gov/ECO)



ECO's Action on Climate and Equity
11/11/19



“WORKING TOGETHER, WE CAN MAKE MILWAUKEE A WORLD CLASS ECO-CITY ON AMERICA’S FRESH COAST.”

– MAYOR TOM BARRETT



THE NEW TRIPLE BOTTOM LINE



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Core Sustainability Programs



eco_logy eco_nomy eco_munity | milwaukee.gov/eco



Types of Climate Planning

Mitigation: Addressing the *causes* of climate change

- Reducing Fossil Fuels
 - Energy Efficiency
 - Renewable Energy
- Tree Planting and Carbon Sinks

Adaption and Resilience: Planning for the *effects* of climate change

- Flood Management
- Heat Emergencies
- Other

City of Milwaukee Climate Action

- ReFresh Milwaukee Sustainability Plan (All things Sustainability)
- 25% by 2025 Renewable Energy Plan (Mitigation)
- Energy Efficiency programs (Mitigation)
- Green Infrastructure Plan (Adaptation)
- MMSD Regional Resilience Plan



Milwaukee.gov/Climate-Action.htm

**WE ARE
STILL IN**

Milwaukee Supports Climate Action

**The City of Milwaukee Upholds the Principles of the
Paris Climate Accord**



Climate Threats

- Causes

- Overuse of fossil fuels
- Deforestation



- Threats and Effects

- Extreme Storms
- Flooding
- Food Supply
- National Security
- Human Health
- Economic losses
- Loss of Biodiversity



Scope of Climate Planning

- **Community:** Encompasses energy use from all activity within City limits
 - Limited data on community emissions
- **Municipal** encompasses energy use from city government operations only
 - City Buildings
 - Streetlights
 - Water Works
 - Fleet

- **Major sectors**
 - Buildings
 - Industrial
 - Residential
 - Transportation
- **Major Energy Types**
 - Electric Power
 - Natural Gas
 - District Steam
 - Diesel and Gasoline

HOW CAN CITY GOVERNMENT

influence an increase in renewable energy at a utility scale?

1 CITY GOVERNMENT

City government traditionally has limited influence on how investor owned utilities operate.

- Lead by example
- Leverage our Purchasing Power
- Advocate at State and PSC

2 PUBLIC UTILITIES

Public utilities are regulated monopolies that automatically connect homes and businesses to the power grid, which often comes from fossil fuels. To integrate renewable energy requires a change.

3 PUBLIC SERVICE COMMISSION

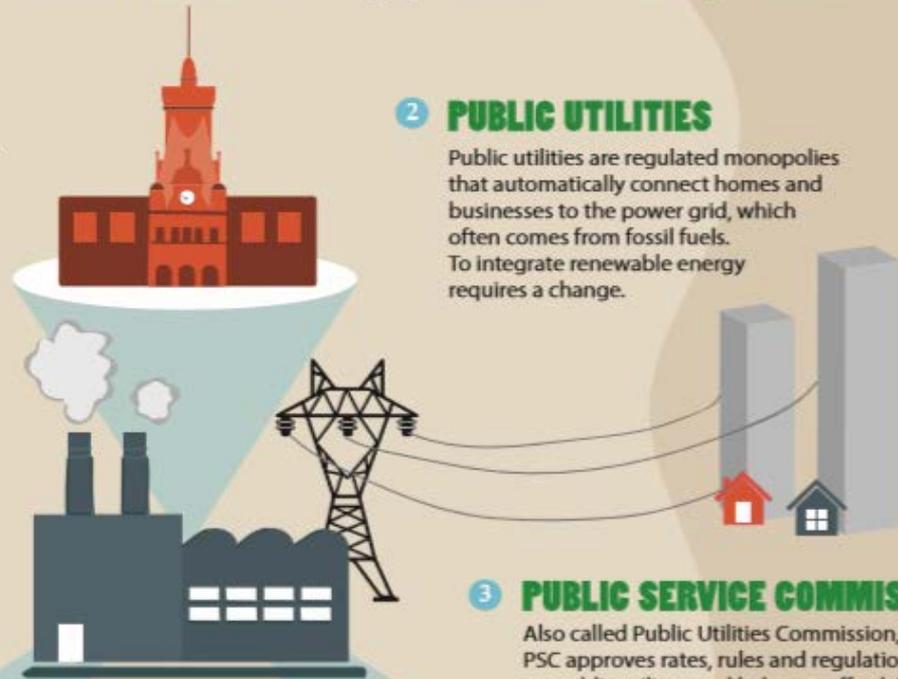
Also called Public Utilities Commission, the PSC approves rates, rules and regulations on public utilities, and balances affordability and profitability for the utility.

4 STATE POLICY

State government can influence utilities by creating state policy that emphasizes the use of renewable energies.

5 CUSTOMERS & ADVOCATES

Customers with a common message can put public pressure on the utilities company to use renewable energies.



Learn More at Milwaukee.gov/EnergyEngagement





Milwaukee
SHINES

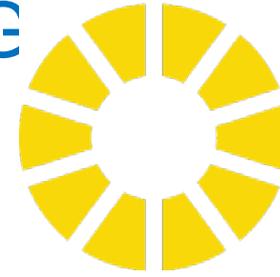
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Utility Scale Solar

- City needs approximately 15 MW of renewable energy to meet 25% by 2025 goal for municipal electric use only
- Rooftop solar alone won't get it done

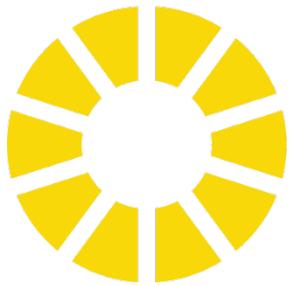


ECO'S FOUR-PRONG STRATEGY TO ADVANCE SOLAR IN MILWAUKEE



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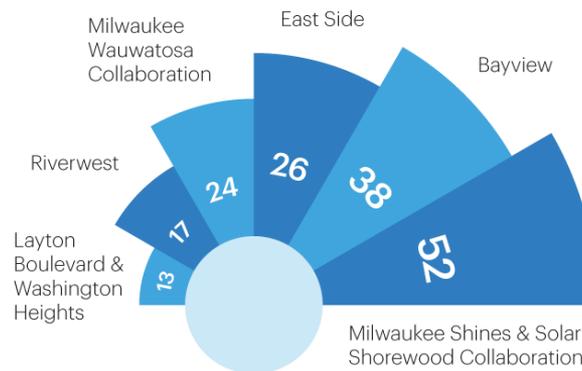
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Milwaukee Shines

MILWAUKEE SHINES supports solar energy projects and policy to help create clean, renewable energy and local jobs.

- Group Buys
- Solar Financing
- Improved permitting, planning and zoning
- 170 homeowners have installed nearly over 600 KW of solar

Milwaukee Shines Solar Group Buy
170 helped homeowners go solar.



ADVANCE SOLAR IN LOW INCOME COMMUNITIES



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- Secured grant from Institute for Sustainable Communities to support solar in Lindsay Heights, in partnership with Walnut Way
- Solar being installed at four locations, including Alice's Garden, Fondy Market, Wellness Commons, and Walnut Way Center
- Making connections between solar installers and community residents



ECO COLLABORATES WITH HACM



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- Partnership between ECO and HACM through a US DOE project working to bring solar to underserved communities



- Will install 4 kW of solar on Westlawn Gardens Management building
- Free trainings were held for City and HACM employees and HACM residents



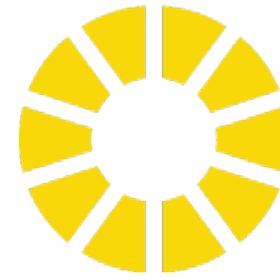
- Intro to Solar PV
- Solar O&M

SOLAR
in Your Community
CHALLENGE



westlawn
gardens

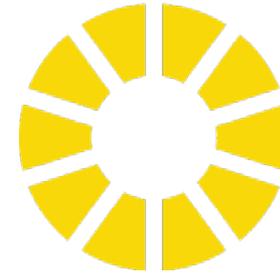
1 MW SOLAR PROJECT



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- Project planning initiated in 2017
- ~3,600 solar panels on six city properties
- Co-owned system partially financed through solar developer/installer to monetize federal solar tax credits
- Similar finance structures have been successfully used in Sauk County and Darlington School District
- Under PSC Rules, the incumbent utility approves interconnection of the system to the grid
- Our contract requires Eagle Point to get the interconnection approval; the technology of the system is fine

SOLAR ON TWO (THEN THREE) TRACKS



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	Q3-4 2017	Q1 2018	Q3 2018	Q4 2018	Q1 2019
1 MW Roof-top Project (6 buildings total)	Project Planning	RFP Developed	Contract finalized	We Energies denies interconnections based on financing structure	City self-finances 209 kw solar on three libraries; Eagle Point Solar litigates against PSC and We Energies
We Energies engagement for Utility-Scale solar (DRER)	“M-6” Sustainability Directors collaborate, interested in MGE model	Joint Executive Letter to We Energies, 1 st meeting	October: WEC requests PSC docket for DRER and <i>Solar Now</i>	PSC fast tracks docket and approves proposals; ECO submits qualified support letter; WEC asks City to use <i>Solar Now</i>	ECO working on potential 2.25 MW <i>Solar Now</i> lease agreement on landfill site on College Ave near airport; Council directed LRB to review these programs

WE ENERGIES: NEW SOLAR OFFERINGS

we energies®

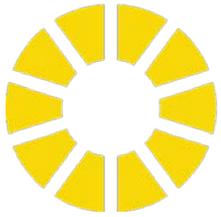


Dedicated Renewable Energy Resource (DRER) Pilot Program

- Offers Utility Scale Solar (up to 150MW)
- Structure approved by PSC but requires companion Service Agreement
- Customer pays WEC for solar but also receives revenues
- Customer gets RECs
- Does not affect general rate payer

Solar Now Rooftop Lease Program

- Utility makes lease payment to customers to put solar on their roof. Payments can vary over time
- Utility owns and operates the solar system
- City gets the Renewable Energy Credits (RECs)
- Funded by rate payers



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Solar Summary

- Wisconsin is a highly regulated utility state and we've fallen behind other states on renewable energy policy
- Utilities are becoming increasingly interested in renewable energy but also working to maintain control of the market
- City's "All of the Above" Strategy
 - City projects
 - Streamline local permitting and group-buys
 - Support robust and competitive rooftop solar market
 - Partnerships with We Energies for utility-scale solar
 - Support equity via solar job training



Energy Efficiency



- Residential Loan Program



- PACE Financing



BETTER
BUILDINGS
CHALLENGE

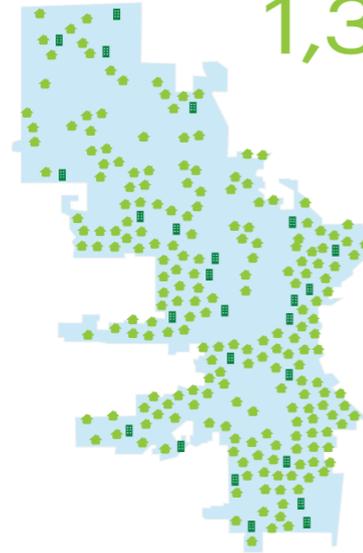
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- Comprehensive Commercial Energy Efficiency Program
- Municipal Energy Plan for Buildings and Fleet
- Energy Saving Performance Contract at Central Library
- LED streetlights

Don't let your energy dollars go up in smoke!



Me2 has helped weatherize
1,336 Milwaukee homes equal
to 110 square blocks.




focus on energy
Partnering with Wisconsin utilities

Cash-Back Rewards

- insulation
- air sealing
- mechanical upgrades




summit
CREDIT UNION

Low-Interest Financing

- no money down
- no home equity
- no minimum credit score




**Happy Home
& Lower Bills**



THE CITY OF MILWAUKEE'S

BETTER BUILDINGS CHALLENGE

REENERGI ZING MILWAUKEE

ONE BUILDING AT A TIME



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ACHIEVE GOAL



PLEDGE



BENCHMARK



DOCUMENT



**BETTER
BUILDINGS
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**ENERGY
ASSESSMENT**



IMPLEMENT



**REVIEW
OPERATIONS**



FINANCE





BETTER BUILDINGS CHALLENGE

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BY THE NUMBERS

- 201 BUILDINGS ENROLLED
- 14.6 MILLION SQUARE FEET
- 133 ASSESSMENTS
- \$2.4 MILLION SAVINGS IDENTIFIED
- Funded by \$750,000 DOE grant
- 4 Year Program ended in July





PACE
FINANCING

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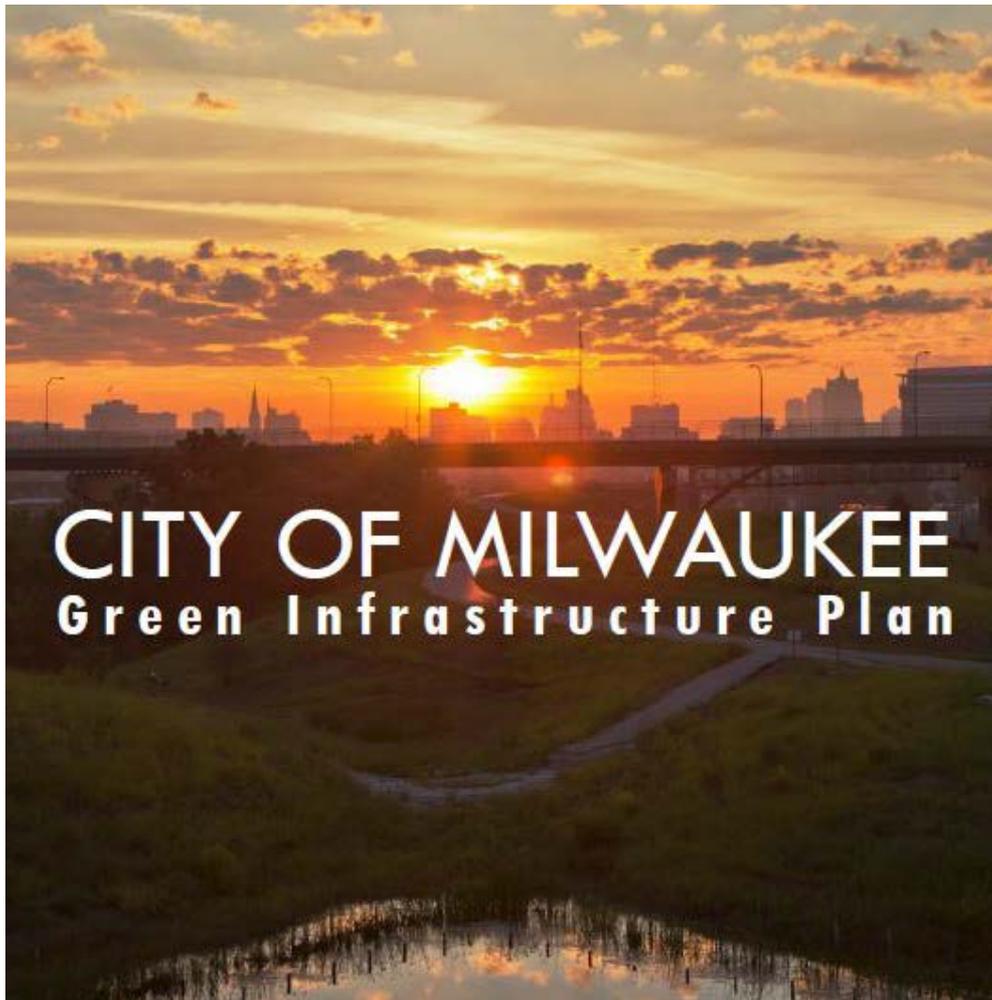
Commercial Buildings

- PACE financing overcomes financial barriers for energy efficiency, renewable energy, and water efficiency projects
- US Department of Energy has named our PACE program a national “implementation model”
- 11 projects valued at over \$14.3 million have been approved, saving building owners \$1.1m annually
- Milwaukee.gov/PACE



CLIMATE ADAPTATION

[MILWAUKEE.GOV/GI](https://milwaukee.gov/GI)



By 2030, Milwaukee will add approximately **36 million gallons** of stormwater storage by implementing green infrastructure.

This is the equivalent of adding **143 acres of green space** throughout the City.

Green infrastructure will be designed, installed, and maintained by an inclusive workforce that is representative of the its diversity.

The Green Infrastructure Plan will help Milwaukee adapt to climate change while creating a healthier and more resilient city.



WATER
CENTRIC
CITY
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GREEN INFRASTRUCTURE STRATEGIES

- Climate Change adaptation in City code
- Green Schools
- Green Streets
- Green Development
- Green Lots
- Green Jobs





HOME
GR/OWN

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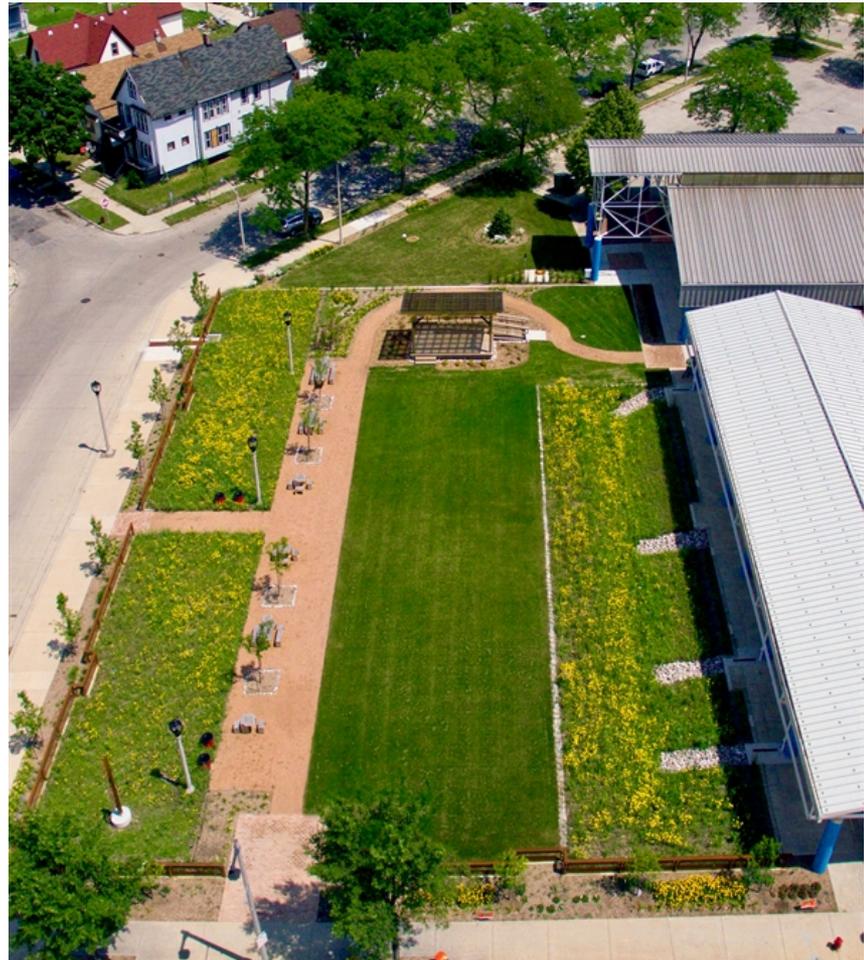
Focus on 53206





HOME
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Fondy Park



New Mobility Options

- Downtown Streetcar: “The Hop”
- Bublr Bikes
- Zipcar
- Electric Vehicle Charging Stations
- CNG stations
- Pedestrian friendly developments
- Scooter pilot
- Complete Streets Policy
- Lake Express Ferry



Suggested Next Steps

- ECO has \$43,000 available from DOE for GHG Inventory and Climate Planning
- Revitalize Me² with equity lens
- Review We Energies renewable energy programs in more detail
- Local Communities Coalition for Climate Action to Advance State Climate Policy

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milwaukee.gov/eco
refreshmke.com