

The science is clear: climate change is a threat to human life. Americans have grown increasingly concerned as the impacts reach U.S. shores and inland to the Midwest. Extreme weather damages property, raises public safety costs, and puts lives and health at risk. In light of these challenges, climate action is a fiscally responsible mayoral priority. The president may be stepping back from our Paris Climate Accord commitment, but mayors are stepping up to reduce our climate impact in communities across the Midwest.

Local energy production keeps renewable energy dollars in our communities, so residents aren't paying to import electricity generated by finite resources like coal, gas, and uranium. Clean electric vehicles and buses reduce fuel and maintenance costs, while avoiding pollution. Improving energy efficiency in city buildings makes the best use of our resources and taxpayer money. Updating local infrastructure creates installation jobs, attracts investment, and reduces carbon emissions.

Three priorities for cities' climate action



1. Achieve 100 Percent Renewable Energy for Municipal Electricity Needs by 2022

The Midwest has abundant potential for wind power and solar energy. Energy storage capacity is accelerating as battery prices fall and technologies improve. Midwest cities can achieve 100 percent renewable energy by using locally produced solar energy plus storage, purchasing clean renewable energy from third parties, and securing renewable energy credits from local solar and wind projects.



2. Rapidly Improve Municipal Building Energy Efficiency

Energy used to heat, cool, and operate buildings represents one-half to three-quarters of community-level greenhouse gas emissions. Smart energy efficiency products, technologies, and controls are available. The time has never been better for cities to reduce their energy bills and cut pollution through energy efficiency improvements.



3. Clean Up Municipal Fleets

Our nation's transportation sector now produces the largest source of greenhouse gas emissions. Any new purchases for city fleets should be electric vehicles (EV) or other zero-emission vehicles (with exception to emergency vehicles). Buying EVs is one of the most meaningful ways a city can showcase its green leadership by creating demand to drive the EV market forward while reducing pollution.

Community-wide Climate Action

Starting with these three priorities, Midwest cities of any size can significantly reduce their carbon footprint. However, there are countless other ways that cities and individuals can take climate action. Reduce transportation emissions by making walking, biking, and public transportation safe and accessible options. Absorb excess floodwaters and avoid overtaxing our sewers with green infrastructure like permeable pavement and rain gardens. Promote local food, creative reuse, and waste management to keep our local businesses strong while reducing impact on the environment. How are people taking climate action in your community? Tweet us @ELPCenter.



ELPC CLIMATE CITIES INITIATIVE

Ann Arbor, Michigan (Population: 121,477)

Climate Action Commitment

Ann Arbor's Climate Action Plan (CAP) was adopted in 2012. The plan set targets to reduce greenhouse gas (GHG) emissions 25% by 2025 and 90% by 2050. Municipal government operations are to be powered by 100% clean and renewable energy sources by 2035.

Key Strategies

Renewable Energy



- **Wind:** The City of Ann Arbor and the Hands-On Museum are partnering on a new wind energy education program, with funding support from the U.S. Department of Energy. This will include development of new wind energy exhibits and programs throughout the community.
- **Solar:** In 2007, Ann Arbor was designated by the U.S. Department of Energy (DOE) as a Solar America City. With matching funds from partners and DOE, Solar Cities was a two-year, \$632,000 project to integrate solar energy throughout the Ann Arbor community.
- The City installed its flagship solar installation at the Ann Arbor Farmers Market in 2008. The 10-kW PV system was funded by local matching funds from the Ann Arbor Downtown Development Authority and supplies about one-third of the energy needs of the market office and vendor stalls.

Building Efficiency



- The Ann Arbor Energy Office works to advance energy efficiency at the municipal level and throughout the community.
- The Property Assessed Clean Energy (PACE) program helps property owners to finance clean energy and efficiency projects. The program is open to commercial and industrial properties located in Ann Arbor. Loans range from \$10,000 to \$350,000 - up to a ten-year payback. Loans are repaid through a special assessment on the property with property taxes are collected, and offers lower interest rates than most bank loans.
- The Loan Fund for Rental Housing offers eligible rental properties access to low-interest financing for energy efficiency retrofits. The program is open to one to four-unit rental housing properties located in Washtenaw County. Financing is available for up to \$8,000 per property. Interest rates are between 2% and 3.5% with terms between 12 and 36 months.

Electric Vehicles



- **Green Fleets:** In 2004, the City developed a Green Fleets Policy to reduce municipal fuel use by 10%. By 2012, they exceeded this goal, reducing fuel by 12.4%. The policy was revised in 2018 with the goal of reducing emissions 25% from 2017 to 2025. The policy will be updated again in 2026.
- A "Green Incentive" will be put in place that allows the purchase of said vehicles and equipment if their price is within 20% of the lowest bid for that vehicle or equipment class.
- **EV Charging:** The Downtown Development Authority's (DDA) Electric Car Charger Project is a federally funded project providing 24 public electric vehicle chargers at six locations in downtown Ann Arbor. A website informs the public about the chargers, displaying their locations and availability. Since monitoring began, systems have delivered 524, 244 kWh of energy to electric vehicles.

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ELPC CLIMATE CITIES INITIATIVE

Grand Rapids, Michigan (Population: 198,829)

Climate Action Commitment

Grand Rapids' Sustainability Plan was adopted in 2006 and updated in 2017. The City has committed to operating all municipal buildings with 100% renewable electricity by 2025 and decreasing greenhouse gas emissions (GHGs) by 25% by 2021, as compared to 2009 levels. The City also wants to ensure the production, conversion, and renovation of committed affordable housing remains on target with goals to reduce GHG emissions.

Key Strategies

Renewable Energy



- **Water Systems solar:** In 2012, the City of Grand Rapids installed 429 solar panels on their Oak Industrial Drive Water Systems Administration building. The \$500,000 project was half funded by a federal grant and installed by Inovateus Solar. Estimated payback is 8 years and life expectancy is 30 years.
- **Butterworth Landfill:** The City is evaluating a solar array on the Butterworth Landfill, a superfund site located near downtown Grand Rapids.
- **Circuit West:** Envisioned as an "energy district," this neighborhood west of downtown Grand Rapids is planned to house an array of rooftop solar panels and battery storage facility. The panels generate between .5 to 1 MW.

Building Efficiency



- **Zero Net Carbon Building Project -** The city is in a three-year project developing "a roadmap toward a zero net carbon building sector by 2050." Zero net carbon buildings produce energy on-site, or they procure enough carbon-free renewable energy to meet the building operations' energy consumption
- The project is a collaboration of several national organizations: Urban Sustainability Directors Network, Architecture 2030, Center for Social Inclusion, Movement Strategy Center, New Buildings Institute, and Resource Media.

Electric Vehicles



- **EVs:** Indiana Michigan Power, Consumers Energy, and DTE Energy offer a special time-of-use rate option to residential customers who own a qualified PEV. DTE Energy also provides a flat rate option for \$45.65 per month for each PEV.
- **EV Charging:** 9 stations. Grand Rapids' zoning ordinance incentivizes developers to install charging stations by giving a parking bonus for each EV charging site developed: "[Electric vehicle spaces] may count as four (4) regular parking spaces. Electric car spaces shall include a charging outlet for use by the parked car..." (Grand Rapids, Michigan, Zoning Ordinance §5.10.05.B.2 Alternative Vehicles)

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ELPC CLIMATE CITIES INITIATIVE

Minneapolis, MN (Population: 422,331)
& St. Paul, MN (Population: 306,621)

Climate Action Commitment

Minneapolis and St. Paul were among the first cities in the nation to develop a framework to reduce carbon emissions. The Twin Cities committed to 100% renewable energy for municipal facilities and operations by 2022, and 100% renewable electricity community-wide by 2030.

Key Strategies

Renewable Energy

Wind: Renewable energy resources supplied roughly one-fourth of the state's net electricity generation in 2017. Wind power accounted for most of the renewable generation, providing almost one-fifth of the state's total net generation.



- Wind-energy conversion systems used as electric-power sources are exempt from state sales tax.
- Minnesota offers incentive payments of 1.5 cents per kilowatt-hour for any power sold to utilities by qualifying facilities producing less than 2 MW.
- The system must be owned and operated by the landowner where the system is sited, or by a small business, a nonprofit organization, or a tribal council, if system is located on a reservation.

Solar: The Solar*Rewards Program provides residential and commercial customers with 10 years of annual incentive payments based on the solar energy system's annual production. No sales tax on solar purchases to install solar panels on a home in Minnesota.

- Powered by the Minnesota Renewable Development Fund, the Xcel Energy Program's performance-based incentive offers solar homeowners in Xcel Energy's service area a yearly payment based on the energy production of their photovoltaic system. Xcel pays homeowners \$0.08 per kilowatt-hour (kWh) of solar power production annually for up to 10 years.
- Minneapolis and Saint Paul are recognized as Solar America Cities. The Minneapolis Saint Paul Solar in the Cities Initiative:
 - > Secured \$1 million American Recovery and Reinvestment Act Solar Market Transformation Grant which leverages and additional \$1.2 million from District Energy St. Paul.
 - > Developed a real-time solar evaluation model to more accurately predict the value of solar energy for end-users and utilities.
 - > Commissioned Net Metering "White" Paper providing an overview of national trends and best management opportunities for Minnesota.
 - > Sponsored solar trainings for regulators, local government officials, and solar instructors.

Building Efficiency

Minneapolis: uses LEED standards in the planning, design, construction, and commissioning of municipal facilities financed by the city and used by the city's charter departments.



- All new or significantly renovated municipal facilities of 5,000+ square feet must be built to a LEED Silver standard with emphasis on LEED points in Energy and Atmosphere.
- Minneapolis offers density bonuses to residential and commercial construction that aim to achieve an energy rating 35% above code. The city also offers a 2% loan program that can be used by small businesses and light manufacturing for energy efficiency improvements.

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ELPC CLIMATE CITIES INITIATIVE

Minneapolis, MN (Population: 422,331)
& St. Paul, MN (Population: 306,621)

Building Efficiency



Saint Paul: The City's sustainable building policy for private development applies to the planning, design, construction, and commissioning of any new construction project receiving more than \$200,000 in City and/or HRA funding. The Developer must choose for the project one of the following rating systems and levels with which to minimally comply:

- **Commercial Projects:**

- > LEED New Construction 3, Silver or
- > Green Globes, 2 globes or
- > State Guidelines Benchmarking and Beyond Compliant or
- > Saint Paul Port Authority Green Design Review

- **Residential Projects:**

- > LEED for Homes or LEED NC 3, Silver or
- > Minnesota Green Star, Silver or
- > Green Communities, Minnesota Overlay Compliant

Electric Vehicles

Minneapolis: There are 253 public charging station ports. 22% of the ports offer free charges. The City and MnDOT have purchased wind credits from Xcel Energy for these charging stations. Drivers pay the parking rates for the ramps and for the electricity used – about \$3.20 for a “full tank.”

- Minneapolis' Green Fleet by the Numbers:

- > 2 Plug-In Hybrid Vehicles
- > 71 Hybrid Vehicles
- > 3 All-Electric Vehicles
- > 404 Flex Fuel Vehicles
- > 290 Bio-Diesel Vehicles
- > 1 Dust-Free Street Sweeper



St. Paul: The City is committed to being a leader in the deployment of electric vehicles (EVs) and charging infrastructure.

- The City of St. Paul - with HOURCAR and Xcel Energy - applied for federal grant funding to launch a new electric car sharing service.
 - > The new service line envisions 150 battery electric vehicles, supported by 70 mobility hubs with charging infrastructure.
 - > The proposed mobility hubs will be structured around a .6 mile grid within a 35 square mile service area in the metropolitan area.
 - > The application is for federal funding through the Congestion Mitigation and Air Quality Improvement Program. If awarded, the new service could be available as early as 2020.
- The City has installed 23 public stations for charging all-electric and hybrid electric vehicles, and additional stations are being installed by other private and public entities.
 - > The solar charging stations, paid for in part from a \$2.8 million federal stimulus grant through the U.S. Department of Energy, cost \$35,000 per unit and are eligible for a total rebate of \$8,910 from the Xcel Energy Solar*Rewards program.

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ELPC CLIMATE CITIES INITIATIVE

Madison, Wisconsin (Population: 255,214)

Climate Action Commitment

The Madison Common Council updated the 2011 Sustainability Plan in 2017 to commit to a goal of 100% renewable energy and zero net carbon for the City and Madison community.

Key Strategies

Renewable Energy

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- **Wind:** Through Madison Gas and Electric's (MGE) Green Power Tomorrow (GPT) program, wind and solar power can be purchased. GPT is only one cent more per kWh. MGE recently built the 66-MW Saratoga wind project in Iowa. This accounts for 7% of MGE's capacity. There are approximately 10,000 MGE residential customers who already buy green power that is generated in the region. Customers have already helped to:
 - > Prevent CO2 emissions equivalent to 11,000+ homes' electricity use for one year.
 - > Offset GHG emissions equal to 180+ million miles driven by average passenger vehicle.
 - > Connect nearly 600 customer-owned solar electric systems to the local grid.
 - **Solar:** In June 2016, the City of Madison unveiled an updated MadiSUN Program, featuring a group purchase program for rooftop solar and an affordable solar energy loan.
 - > 2018 contract between Madison and OneEnergy Renewables, LLC will result in the construction of five community solar arrays totaling 14 megawatts (MW) in 2019. The decision to provide financing to this project represents the largest commitment by a single Wisconsin customer to expanding solar capacity.
 - > MGE also seeks to purchase 100-MW share of two large solar farms in the near future.

Building Efficiency

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- Sustain Dane's MPower Business Champion Program is a one-year, customizable program for businesses and organizations in the Greater Madison Region that want to reduce their environmental impact while saving costs and creating a healthier, more engaged workplace and community.
 - On September 1, 2015, the Madison Common Council voted to support creation of a voluntary benchmarking program to encourage building owners to improve their energy management practices and cut energy costs. The program is intended to reduce overall building energy consumption of 50% by 2030 in public and private sector buildings.

Electric Vehicles

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- **EVs:** Drive Electric, a partnership between MGE, Wisconsin Clean Cities and Nissan has helped sell electric vehicles in the greater Madison area by promoting deep discounts and tax incentives on the all-electric Nissan LEAF.
 - **EV Charging:** The city of Madison has 129 public charging station ports (Level 2 and Level 3) within 15km. 82% of the ports are Level 2 charging ports, and 26% of the ports offer free charges.
 - > MGE has installed 30 public charging stations powered by 100% wind energy. 27 stations offer Level 2 charging. 3 stations have a DC Fast Charger. Both CHAdeMO and CCS charging are available.

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ELPC CLIMATE CITIES INITIATIVE

Cincinnati, Ohio (Population: 301,301)

Climate Action Commitment

Cincinnati committed to transitioning to 100% renewable energy by 2035.

Key Strategies

Renewable Energy



- City-wide solar - The city of Cincinnati submitted a request for proposals in November, 2018 for what would be the largest solar array by a city on city property. Plans call for a 25 megawatt project to be completed in 2019 and power 25% of the city's energy needs.
- Office of Environment and Sustainability director Larry Falkin's office estimates it can place solar panels on the Center Hill field. This former landfill could produce about 10,200,000 kilowatt hours per year. That would offset the emissions from more than 800 homes using natural gas or 1,100 homes for electricity-only use.

Building Efficiency



- The City of Cincinnati has entered half of its government owned buildings in ENERGY STAR Portfolio Manager. The buildings represent 50%-60% of the city's total square footage.
- Additionally, the City of Cincinnati has completed over \$22 million in efficiency improvements through performance contracting and retro commissioning. The improvements have impacted over 50% of public buildings.
- Building efficiency improvements at municipal facilities have saved roughly 150,000 metric tons of CO₂e between 2006 and 2015.
- Cincinnati also offers property tax abatements for residential and commercial buildings constructed or renovated to meet LEED certification standards. The incentive is available for any building in city limits.

Electric Vehicles



- The All-Electric Vehicle Incentive Program offers free parking to all-electric vehicles at all City parking meters and one City-owned garage located in the Downtown area, as well as free parking for all-electric vehicles at any parking meter within the Cincinnati city limits.
- Oggo is a service that uses electric cars to move people around downtown Cincinnati, Newport, and Covington, Kentucky. The service launched in October, 2018 with five electric cars and 12 drivers, and Oggo makes their money from advertisements placed on the vehicles.
- **EV Charging:** Cincinnati has 95 public charging station ports (Level 2 and Level 3). 66% of the ports are Level 2 charging ports and 57% of the ports offer free charges for electric cars.

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ELPC CLIMATE CITIES INITIATIVE

Cleveland, Ohio (Population: 385,525)

Climate Action Commitment

Cleveland became the 82nd city in the nation to pledge to move to 100% renewable energy in its electricity sector. This is part of a wider plan to reduce the community's carbon emissions by 80% by 2050, to transform the former center of heavy industry into a "green city on a blue lake."

Key Strategies

Renewable Energy

Using the municipal tool of community choice aggregation, the city has already purchased enough renewable energy credits to move to 100% renewable electricity for 50,000 residents and 5,000 small businesses in First Energy's service area. The City also plans to create a Clean Energy Equity plan to support low-income households and small organizations in purchasing renewables.



- **Wind:** Cuyahoga County executed a contract with Cleveland Public Power (CPP) in December 2017 to purchase 4 megawatts (MW) of solar PV electricity and 1.8 MW of wind power through the Lake Erie Energy Development Corporation (LEEDCo) for 16 County-owned buildings.
- The proposed Icebreaker Wind farm will be a six-turbine, wind-powered electric generation facility in Lake Erie, approximately 8-10 miles off the shore of Cleveland. The project will create over 500 jobs and is projected to have a \$168 million local economic impact over the project's 25-year life.
- **Solar:** Cuyahoga County has only 15 MW of total installed solar. Cleveland is looking to make the most of its landfills and brownfields, and also shift the electricity procurement of its utilities by building solar for city power generation.

Building Efficiency



- In 2012, the City of Cleveland joined the Cleveland 2030 District and the Better Buildings Challenge. As part of the Challenge, the City of Cleveland has committed to reducing its building energy usage 20% by 2020, using a 2010 baseline.
- In 2013, the City of Cleveland adopted a Sustainable Municipal Building Policy which yields savings by managing energy, water, waste, and stormwater at City facilities, while improving the employee and visitor experience. The policy requires that green building practices are incorporated into the siting, design, construction, remodeling, repair, maintenance, operation, and deconstruction of all City facilities.

Electric Vehicles



- Cuyahoga County will be purchasing five electric vehicles in 2019, and the city of Cleveland committed to purchase EVs in 2019 as well.
- As part of the Climate Mayors Electric Vehicle Purchasing Collaborative, Cuyahoga County is allowing municipalities access to competitively bid on electric vehicles and charging infrastructure. The collaborative will help lower the costs of a green municipal fleet and leverage participants collective buying power to accelerate electric vehicle adoption.
- **EV Charging:** Cleveland has 53 public charging station ports (Level 2 and Level 3). 96% of the ports are Level 2 charging ports, and 43% of the ports offer free charges for electric cars.

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ELPC CLIMATE CITIES INITIATIVE

Bloomington, Indiana (Population: 85,071)

Climate Action Commitment

Bloomington's 2018 Sustainable Action Plan calls for the city to reduce community greenhouse gas emissions (GHGs) by 11% by 2023, relative to a baseline of 1.3 million metric tons of GHG emissions in 2016.

Key Strategies

Renewable Energy



- **Wind:** In 2012, researchers estimated Indiana had the potential to generate 377,000 gigawatt hours/year of electricity from wind, while the total energy consumed in Indiana in 2011 was 359,788 gigawatt hours.
- **Solar:** In January of 2017, the Bloomington launched an effort to diversify the energy supply at its own facilities and invited city and county residents to do the same with a group-buy discount through the Solarize Bloomington Initiative. Over 500 interested residents attended information sessions led by the Solar Indiana Renewable Energy Network in 2017 and 2018. To date, 184 homeowners have installed over 1.2 MW of solar capacity.
- Bloomington has also installed solar PV systems at 30 locations, estimated to provide 2.8 MW of solar capacity for municipal operations.

Building Efficiency



- Bloomington will reduce building energy use in the Bloomington community 20% by 2023, relative to a baseline usage of 9.4 million MMBTUs in 2016.
- The 2009 Green Building Program: requires that all new construction and major renovation of occupiable City buildings be designed, contracted, and built to achieve, at minimum, the U.S. Green Building Council's LEED® Silver level of certification. The City will also evaluate existing building stock and develop a schedule for retrofitting existing and subsequently-acquired buildings within ten years.
- **Green infrastructure:** Bloomington is also looking to encourage low-mow lawns and low-maintenance native trees with high capacity for carbon dioxide absorption, restore native habitats on City properties to sequester carbon dioxide emissions (2020), and create/implement a Green Infrastructure Plan for City government buildings (2023).

Electric Vehicles



- **EVs:** The City of Bloomington will reduce non-renewable City fleet vehicle fuel use 5% by 2023, relative to a baseline usage of 40,540 MMBTUs in 2015.
- Bloomington has a no-idle policy in all departments, a 2005 biodiesel-only purchasing policy for new diesel vehicles, and is planning the purchase of electric vehicles for their municipal fleet.
- **EV Charging:** Bloomington has 10 public charging station ports. 100% of the ports are level 2 charging ports and 10% of the ports offer free charges for electric cars. The two main charging networks in operation are Blink and ChargePoint

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ELPC CLIMATE CITIES INITIATIVE

Evansville, Indiana (Population: 118,930)

Climate Action Commitment

In March of 2019, the Evansville City Council adopted a resolution to shift 100% renewable energy for city government operations by 2050.

Key Strategies

Renewable Energy



- **Solar:** Vectren customers are now receiving energy from two recently completed solar power projects in Vanderburgh County. The projects' combined 4 megawatts of electricity will supply enough renewable energy to power more than 800 homes a year.
- Each of the 2-megawatt solar arrays consists of approximately 8,000 ground-mounted, fixed-tilt solar panels on 15-acre sites. That facility also includes battery storage with the ability to discharge one megawatt of power per hour over a four-hour period. One of the sites is located near the northwest corner of Oak Hill Cemetery on Morgan Avenue. Through a partnership with the City of Evansville, the energy company will lease the city's land.
- The 4 MW's of solar and the planned 50-MW facility, which should be fully operational in the fall of 2020, are expected to generate enough power to meet the needs of more than 12,000 households per year.

Building Efficiency



- **The Sustainable Evansville Area Coalition (SEAC)** is a consortium of local organizations and government agencies working together to develop a regional plan for sustainable development for residents within the tri-county area of Henderson, Vanderburgh, and Warrick counties. The emphasis of this plan will be to establish a vision for the region's continued growth and development that minimizes wasted resources while meeting the needs of a diverse population
- This three-year project was funded through the HUD Sustainable Communities Regional Planning Grant Program. The program was created to support metropolitan and multi-jurisdictional planning efforts that integrate housing, land use, economic and workforce development, transportation, and infrastructure investments.

Electric Vehicles



- **Hybrid and electric vehicles,** Indiana saw huge job growth in the hybrid & electric vehicle industry last year. The number of people working in that sector in Indiana jumped 18%.
- Integral Technologies Inc., headquartered in Evansville, produces conductive ElectriPlast-brand polymers. These products are finding their way into vehicles as the global auto industry embraces electric vehicles – popular for their lightweight nature and ability to be both electrically and thermally conductive.
- **EV Charging:** Evansville has 7 public charging station ports within 15km. All chargers are level 2 and 6 of the ports offer free charges. The main charging network in operation is ChargePoint.

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ELPC CLIMATE CITIES INITIATIVE

Goshen, Indiana (Population: 33,220)

Climate Action Commitment

In April of 2019, the Goshen City Council voted to approve a resolution outlining environmentally-conscious actions. The most ambitious goals include achieving carbon neutrality by 2035, penning an emissions management plan, implementing a climate action plan by 2021, and creating a new City Office of Sustainability.

Key Strategies

Renewable Energy



- **Wind:** In 2013, Goshen College President Jim Brenneman announced that the college would begin purchasing 100% of their electricity from renewable energy sources, such as wind and solar. This action would eventually reduce the college's carbon footprint by 45%.
- **Solar:** The City of Goshen has been awarded a Gold Designation from SolSmart, a program funded by the U.S. Department of Energy SunShot Initiative, for taking the important first steps to encourage solar energy growth.
- The City of Goshen worked with the Michiana Area Council of Governments (MACOG) and SolSmart Technical Advisor Leah Thill, as well as council members, City staff, and residents to receive the SolSmart designation.
- To make solar even more affordable, Goshen is organizing a community group-purchasing initiative summer of 2019 that would harness the buying power of multiple residents and businesses to receive a discount on the installations. As part of this effort, the City will also provide educational workshops to explain the benefits of the technology and how to go solar.

Building Efficiency



- As part of the city's 2019 environmental resolution, land planning and efficiency goals included increasing the city's tree canopy to 45% by 2045, pursue greenhouse gas assessment, and storm water management programs.
- **Goshen college** has been implementing energy efficiency efforts for decades. They have successfully reduced electrical consumption by 10% and natural gas consumption by 30% since 1992, despite 60% growth for the college overall. In 2016, the college gained honors as a "Tree Campus USA," a "Bike Friendly University," and one of the Sierra Club & Princeton Review's "greenest colleges."



Electric Vehicles

- **EV Charging:** Goshen has 4 public charging station port within 15km. All of the ports are Level 2 charging ports.

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ELPC CLIMATE CITIES INITIATIVE

Indianapolis, Indiana (Population: 872,680)

Climate Action Commitment

In March of 2017, the City of Indianapolis pledged to achieve carbon neutrality by the year 2050.

Key Strategies

Renewable Energy

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- **Wind:** In 2012, researchers estimated Indiana had the potential to generate 377,000 GWh/yr of electricity from wind, more than the 359,788 GWh consumed by the state in 2011.
 - While the city does not currently have any wind projects, the state has installed significant capacity over the past decade. Between 2008 and 2017 net wind generation increased from 238.35 thousand MWh to 5,089.39 thousand MWh, making up roughly 5.25% of the electric grid mix in Indiana.
 - **Solar:** Indianapolis ranks fourth in the U.S. for installed solar capacity per capita according to a recent 2018 report. Indianapolis ranks ahead of Burlington, Vermont, and just behind San Jose, California, for megawatts of solar energy per capita as of year-end 2017. The report also ranks Indianapolis first in the North Central region for solar per capita and eighth in total amount of solar installed nationally.
 - Indy Solar II was completed in 2013. This project has the capacity to generate 10.1 MW of electricity - enough to power over 1,177 Indiana homes.
 - Marion is a ~5 MW solar farm located in Marion County, IN. The project utilizes solar panels from Jinko Solar. All of the green electricity generated at Marion is sold under a long-term power purchase agreement with Indiana Power and Light Company.
 - Indianapolis also has one of the world's largest airport-based solar installations at Indianapolis International Airport.

Building Efficiency

The 2019 Thrive Indianapolis Plan calls for:

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- Systematically integrating climate change projections into all future capital projects by 2020.
 - Developing an energy benchmarking and disclosure policy for municipal and commercial buildings with the first-year disclosure completed by the end of 2020.
 - Establishing low-interest loans for energy efficiency and renewable energy improvements in new and existing buildings, sustained by a loan fund from a combination of financing sources.

Electric Vehicles

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- The 2019 Thrive Indianapolis Plan calls for:
 - > Requiring all new commercial construction to meet electric vehicle (EV) readiness requirements for 20% of parking spaces by 2020, with the goal of significantly increasing charging infrastructure at businesses and workplaces.
 - > Increasing EV ownership 300% by 2025 from the 2017 baseline of 760 vehicles.
 - **EV Charging:** Indianapolis has 57 public charging station ports. 66.7% of the ports are Level 2 charging ports and 17.5% of the ports offer free charges for electric cars. The two main charging networks in operation are GreenLots and Blink.

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ELPC CLIMATE CITIES INITIATIVE

South Bend, Indiana (Population: 102,245)

Climate Action Commitment

Mayor Pete Buttigieg has pledged a transition to 100% renewable energy. On April 22, 2019 city officials voted to support a new climate change action plan to be completed by Fall 2019.

Key Strategies

Renewable Energy



- **Wind:** In 2012, researchers estimated Indiana had the potential to generate 377,000 GWh/yr of electricity from wind, more than the 359,788 GWh consumed by the state in 2011.
- **Solar:** Indiana Michigan (IM) Power operates solar generation plants just south of Marion, Indiana; near Mishawaka and New Carlisle in the South Bend area, and in Watervliet, Michigan. They generate nearly 15 MW of electricity, enough to power 2,000 homes annually. IM Solar allows customers to retire Renewable Energy Certificates created by the solar generation. They're planning to power 400,000 homes with renewable energy in South Bend within the next 20 years.
- The City of South Bend is also adopting more solar energy. Century Center installed 90 solar panels on its roof. Six South Bend congregations received grants to install solar panels on their houses of worship. Transpo added solar to its rooftop. South Bend Mutual Homes, a new cooperative housing development on the city's near west side, received a grant to add solar panels to four of its homes. IM Power is also planning four new solar plants in its coverage area.

Building Efficiency



- In 2018 the St. Joseph City Council approved \$10.2 million to make the county's buildings more energy efficient. The council unanimously approved the project, which calls for upgrades at 11 buildings and 7 highway garages, as well as replacing streetlights.
- Buildings include the Juvenile Justice Center (\$4 million), county jail (\$2.4 million) and County-City Building (\$1.3 million). Bonds issued by the county for the project will be paid off in 15 years with utility and maintenance savings. After the payback period is over, consultants estimate the county will realize more than \$1 million in annual energy savings.

Electric Vehicles



- **EVs:** In May 2018, Indiana Governor Eric Holcomb and St. Joseph County officials welcomed officials from SF Motors. The company announced plans to establish manufacturing operations in the city, with goals to accelerate the EV industry. They acquired AM General's commercial plant in Mishawaka with plans to create up to 467 new jobs by 2020, and they intend to hire workers displaced from the former facility.
- SF Motors will invest more than \$160 million, including the acquisition, to renovate and equip a 675,500-square-foot manufacturing facility, which served as the former AM General commercial assembly plant. Pending approval from the Indiana Economic Development Corporation (IEDC) Board of Directors, the IEDC will offer SF Motors Inc. up to \$3.847 million in conditional tax credits and up to \$500,000 in training grants based on the company's job creation plans.
- **EV Charging:** South Bend in Indiana has 20 public charging station ports. 70% of the ports are Level 2 charging ports and 35% of the ports offer free charges for your electric car. The two main charging networks in operation are Tesla and ChargePoint.

*This information is accurate, to the best of our ability, as of May 2019. Please notify us of errors or updates at climatecities@elpc.org

ELPC CLIMATE CITIES INITIATIVE

City Commitment References

Ann Arbor

<https://www.a2gov.org/a2energy/be-informed/pages/climate-partners.aspx>

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Cleveland

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South Bend

<https://www.sierraclub.org/ready-for-100/mayors-for-clean-energy>

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