

# The Ann Arbor Climate Proposal

Doing our share to fight climate change and build a vibrant,  
sustainable community

prepared by representatives of  
the City of Ann Arbor Energy Commission,  
the City of Ann Arbor Environmental Commission,  
and the Ann Arbor Climate Partnership

# Climate Change, Dirty Energy are City Problems Right Now

More Floods, Wasted Money

## **WEATHER: MORE EXTREME**

- According to the University of Michigan Climate Center, precipitation levels have increased by 44.8% in Ann Arbor over levels 30 years ago.
- The incidence of 100-year storms have increased by 41.2% in that 30-year time period.

## **LOCAL ECONOMY: DOLLARS WASTED**

- Ann Arbor residents and businesses spend \$150M/year on electricity and \$88M/year on natural gas.
- Low-cost energy efficiency improvements would keep \$24M/year in the community.



# Local Governments Will Lead on Climate

Even Before the Recent Election, Locals Took the Lead

## GLOBAL AND FEDERAL COMMITMENTS NOT ENOUGH

- Paris treaty only “binds” countries to voluntary pledges at 80% GHG reduction levels.
- Federal Clean Power Plan would only reduce CO2 emissions by 25% by 2028.

## TRUMP ELECTION THREATENS FEDERAL COMMITMENTS

## WHAT ARE COMMUNITIES DOING

- Climate solutions are overwhelmingly implemented by cities, counties, and states.
- C40 Cities Climate Leadership Group links world’s largest cities in leading action to address climate change.
- Rockefeller Foundation’s Resilient Cities Initiative supports 100 cities prioritizing climate adaptation action.
- Boulder funds a \$1.8M annual climate action program with a climate tax. Minneapolis funds climate action through a 10-year agreement with its two investor-owned utilities.



## UNDER2 COALITION

The Under2 Coalition brings together sub-national governments in formal agreements to carry out the goals of the Paris climate treaty.

## COMPACT OF MAYORS

The Compact of Mayors brings together 605 cities – including Ann Arbor – that serve as home to more than 440 million residents. Cities pledge to accelerate more ambitious, collaborative, and sustainable local climate action.

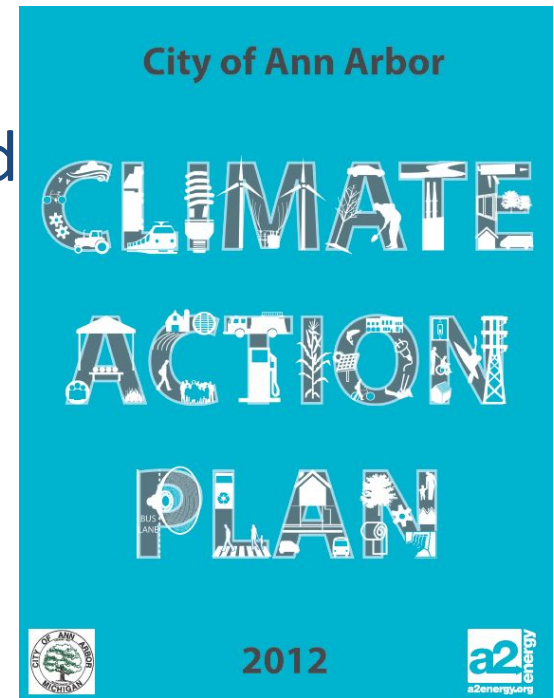
# Ann Arbor Has Long Been a Leader- but Our Climate & Energy Progress has Slowed

## TRACK RECORD

- Since the 1970s, Ann Arbor has been a national leader among cities through weatherization programs, adoption of energy efficiency and green building standards for municipal buildings, and the use of LED lighting.
- In 2012, Ann Arbor become one of the first cities in the U.S. to adopt a climate action plan, setting a 25% emission reduction goal for 2025.

## ANN ARBOR CLIMATE ACTION PLAN (CAP)

- Unanimously adopted by City Council in December 2012
- “In order to reach the 2025 GHG reduction target ... almost all of the actions ... need to be implemented.” – A2 CAP
- City Council added small amounts of funding to each of last three years’ budget for “community-facing energy programs.”
- Those modest efforts have moved the City forward (see box at right), but we need more than temporary staffing and contracted support to approach our goals.



## RECENT ACHIEVEMENTS

- 43% increase in transit service funded by new millage
- Start-up of Arbor Bike bikeshare program
- Start-up of PACE clean energy program for businesses
- Clean energy initiative within Ann Arbor Housing Commission properties
- Green Infrastructure

Ann Arbor's medium-term climate emissions reduction goal is 25% by 2025

What's needed?

525,000 fewer tons of GHGs emitted

Here's how we begin to get there:

# The Ann Arbor Climate Proposal

Key Steps to Prepare Our Community for the Impacts of Climate Change, and to Reduce our Carbon Footprint

# Rain Ready Ann Arbor

## An Integrated Climate Adaptation Program

### DESCRIPTION

- Practical and affordable improvements to minimize flood losses for residential properties and neighborhoods.
- The Voluntary Home Program provides property assessments, guidance on implementation, oversight and inspection of work, and monitoring and support. Rain Ready provides a pool of qualified contractors, prioritizes investments, and provides guidance in selecting the right contractors.
- The Neighborhood Program engages neighborhood residents in high flood risk areas to improve localized water management. The emphasis is upon neighborhood-risk mapping, and implementation of low-cost flood reduction and mitigation solutions.
- The initiative is modeled on the Center for Neighborhood Technology's Rain Ready program. *CNT is interested in working with Ann Arbor.*

### SUSTAINABILITY BENEFITS

- Addresses water or sewage backup in homes, seepage or moisture in basements, and flooding or standing water in yards to prepare for a wetter future.
- Flood mitigation upgrades in Chicago area have been **100% successful** for preventing the type of flooding associated with the upgrade
- Results can be added to the Stormwater model to quantify reductions in flooding.
- Improve relationships with aggrieved homeowners

### EASE OF IMPLEMENTATION

- Established program with high efficacy.
- Training and support from Rain Ready staff allows for rapid start up.
- High priority neighborhoods/residences mapped in Ann Arbor's stormwater model.



Rain garden at Ann Arbor home



Cost: \$100k-\$165K/yr

# “EnergySmart” Ann Arbor

Electricity Is Expensive. Caulk Is Cheap.

## DESCRIPTION

- Reduce energy consumption in residential and commercial buildings (Modeled off [Energy Smart Program in Boulder County](#)).
- Low-cost energy audits (subsidized) guide improvement decisions.
- Energy advisors guide owners through energy audit results, and navigate available tax credit and state/local incentives.
- Certified financing options simplify process.
- Provide access to rebate incentives.
- Use “Time of Marketing” energy audits to help buyers.
- Develop building energy benchmarking system to inform owners and public.

## SUSTAINABILITY BENEFITS

- Reduce heating, cooling, and lighting energy consumption & GHGs.
- Increase locally disposable income to improve economy.
- Improve comfort and increase resiliency of buildings.
- Low-cost energy efficiency improvements could keep \$24M/year in the community, investment payback is often very fast and utility rebates could increase savings further.

## EASE OF IMPLEMENTATION

- Two-year ramp up.
- Initially a voluntary program that can be paired with related ordinances.
- Make mandatory with new ordinances (benchmarking, time-of-sale audits).



## SIMILAR PROGRAM

In Boulder County, EnergySmart Advisors are available to answer questions, help prioritize projects, and connect citizens with qualified contractors. The program has served 14,700 homes and 3,700 businesses.

## METRICS:

**35,800 tons/yr**

CO<sub>2</sub>e emissions reductions.  
(55% of CAP 9-year goal)

**\$250-\$480**

Annual homeowner savings

Cost: \$400-\$700K/yr



# A2 Solar for All

## DESCRIPTION

This program provides two ways to give solar access to all Ann Arbor residents, regardless of limiting factors, such as home ownership and solar potential.

- Group solar purchases, which make solar purchases cheaper, easier, and more effective for residents and businesses.
  - Provides discounted solar products through Geostellar and its pre-qualified local solar installer and distributor partners.
  - Streamlines process, including bids, financing, and permitting.
- Community Solar offers residents (including renters) and businesses the chance to purchase affordable shares in third-party solar arrays.
  - Residents can buy into the program for as little as \$300.
  - The value of produced energy is credited against DTE bills.

## SUSTAINABILITY BENEFITS

- Reduce local GHGs emissions.
- Money remains in the local economy..
- Stimulates local entrepreneurial solar energy businesses.

## EASE OF IMPLEMENTATION

- Energy Office can manage the program; not contingent on MPSC or DTE.
- \$150,000/year for the next two fiscal years. The Energy Office would manage Group and Community Solar program vendors managed by local NGO's.



## SUCCESS STORY

In October 2014, Solarize Cleveland and Geostellar launched a similar bulk solar discount program. To date, approximately 174 customers have installed 1079 kW of solar.

## METRICS

**2,079 tons/yr**

CO<sub>2</sub>e emissions reductions.  
(3.1% of 2025 Goal)

**~10%**

Property owner discounts.

Cost: \$150,000/yr

# Charge Up Ann Arbor!

Sparking the transition to cleaner transportation.

## DESCRIPTION

- Gradually convert city fleet to electric – covering cost differential with new city capital funds, VW settlement dollars, other funds.
- Develop EV charging infrastructure, through:
  - network of workplace-based charging stations – with funds in matching amounts from property owners and city fund (and exploring best match terms for properties with solar PV)
  - incentivizing EV charging stations at multi-family housing locations
  - additional charging stations at publicly owned parking facilities
- Promote electric vehicles purchases, e.g. in bulk purchase programs

## SUSTAINABILITY BENEFITS

- Reduces GHG emissions – even with current electricity fuel mix
- Incentive to potential buyers to purchase electric vehicles (easier to re-fuel)
- Makes Ann Arbor even more appealing to automaker innovations and mobility experiments designed around electric vehicle deployment
- EV friendly cities attract tech savvy professionals, businesses and commerce

## EASE OF IMPLEMENTATION

- No institutional/utility barriers to implement
- Could be phased in quickly
- VW settlement \$\$ could helpful provide funding



## SUCCESS STORIES

Atlanta has established subsidies and carpool lane access, and its EV sales are more than 8 times the U.S. average. Portland, with the most extensive electric charging network, is seeing 3 times the average U.S. EV sales, without subsidies.

## METRICS

**1,600 tons/yr**

CO2e emissions reductions.  
2.4% of CAP 9-year goal.

**8%**  
% EV vehicles by 2030.

Cost: \$50-\$125K/year

# A2 Green Grants

Good ideas are everywhere in our community.

## DESCRIPTION

- Applications for community-driven projects that enhance and strengthen neighborhoods and further the goals of [The Sustainability Framework](#). Up to \$5,000 awarded per ward.
- Modeled on Seattle Neighborhood grants and SustainIndy Community Grants.
- Every award must be matched by volunteer labor, donated materials, donated professional services, or cash.
- Projects might include community rain or food gardens, neighborhood emergency preparedness, revitalize public spaces with native plants.
- Consultants/Commission/Staff to review applications and award grants for community building, achievable outcomes, resources and readiness.
- AAACF to potentially oversee and distribute funds.

## SUSTAINABILITY BENEFITS

- Collaboration between City and neighborhoods; community building; projects that benefit neighborhoods in each ward.
- Community engagement, enhances and strengthens neighborhoods, furthers goals of the sustainability framework.

## EASE OF IMPLEMENTATION

- Program needs publicity, staff time to review applications, and agreement between AAACF and City



## SUCCESS STORIES

Seattle's Neighborhood Matching Fund was created in 1988 to provide neighborhood groups with resources to strengthen their own neighborhoods. It's distributed \$49M to over 4,000 groups.

In Indianapolis, the SustainIndy Community Grant Program awards grants of up to \$10K to support local projects for economic development, environmental integrity, and cultural vibrancy.

Cost: \$25K/yr

# Annual Costs and Benefits

TOPIC	EXPENSES*	CO2 REDUCTIONS	CO-BENEFITS
Rain Ready Ann Arbor	\$100,000-- \$165,000	N/A	Significant reduction in flood risk for participating households, neighborhoods
Energy Smart Ann Arbor	\$400,000 - \$700,000	35,800 tpy CO2e reduction (55% of CAP target)	\$250-\$480 average saving for participating property owners
A2 Solar for All	\$150,000	2,079 tpy CO2e reductions (3.1% of CAP target)	10% average savings for participants
Charge Up Ann Arbor!	\$50,000 - \$125,000	1,600 tpy CO2e reductions (2.4% of CAP target)	Target of 8% EV ownership
Neighborhood Grants Program	\$25,000	N/A	Community enhancement and neighborhood-based innovation
<b>TOTAL</b>	<b>\$725,000 - \$1,165,000</b> (* incl. new and/or reassigned staff)		

# Measurable Outcomes, Complementary Policy

TOPIC	MEASURABLE OUTCOMES	COMPLEMENTARY POLICIES	LEGISLATIVE AGENDA
Rain Ready Ann Arbor	# homes outreach, # assessments, # implementation	Time of sale audits. Stormwater credits	Strengthen flood insurance program
Energy Smart Ann Arbor	# of participants	Time of sale energy audits. Periodic rental housing energy efficiency inspections.	Expand PACE law to residential sector. Allow energy financing through water utility.
A2 Solar for All	# MW installed solar capacity per year	Streamlining solar zoning and permitting. Harmonizing solar planning and tree planting program. Mitigate solar tax assessment	End tax assessment for solar installations. Create DTE Comm. Solar program thru MPSC rate case.
Charge Up Ann Arbor!	# of City EVs # of charging stations	Charging station requirements for new developments	VW settlement funds could defray City costs
Neighborhood Grants Program	# of applications # of completed projects	N/A	N/A

# Potential Funding Sources

TOPIC	NOTES
<b>Rain Ready Ann Arbor</b>	<p>A Rain Ready franchise is available with program creator, Chicago-based Center for Neighborhood Technology.</p> <p>This program could be funded through stormwater fees.</p>
<b>Energy Smart Ann Arbor</b>	<p>The EnergySmart program is modeled on a highly successful Boulder (CO) program with the same name.</p> <p>Some funds for downtown applications of the program could potentially be funded through the DDA, which has previously supported clean energy work.</p> <p>** Cross-trained staff could share . . .</p>
<b>A2 Solar for All</b>	<p>Multifaceted program, including Community Solar, Bulk Purchase initiatives</p>
<b>Charge Up Ann Arbor!</b>	<p>The University of Michigan may be a highly interested partner.</p> <p>Funding for this work can be supplemented by the Volkswagen settlement agreement, funds from which are now being disbursed through the State of Michigan in two cycles</p> <p>The DDA has already provided some support for charging stations downtown.</p>
<b>Neighborhood Grants Program</b>	<p>While this is a relatively low-cost program, some staff time will be needed.</p> <p>The City could manage this program itself, or look to collaborate with the Ann Arbor Area Community Foundation.</p>

# The Time to Act is Now

- The current programs are not achieving the CAP goals
- Since the CAP was enacted GHG levels have risen substantially and climate effects have gotten more pronounced
- GHGs are cumulative: The speed at which you achieve the goals affects the outcome. Time is not on our side
- The Synergistic Effect: Education across projects will improve their overall effectiveness.
- Critical Mass: A larger, multidimensional program will have a greater impact because of its increased exposure

# Thank you for your interest!

For more information, please contact:

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