

Dane County's Climate Action Plan

Dane County Environment, Agriculture & Natural Resources Committee
June 11, 2020



Landfill Gas Facility Exemplifies Our Leadership



- \$29 million facility
- Converts landfill gas to renewable natural gas (RNG)
- County heavy-duty vehicles (e.g. snow plows) can run on RNG
- Reduced fuel costs, reduced emissions
- Facility pays for itself in just 4 years
- Also processes gas from farm digesters



100% Solar Power for County Operations in 2021



- 16 existing solar projects totaling 0.7 MW on various county facilities
- 9 MW solar project at Dane County airport, under construction now
- 18 MW solar project east of landfill, announced in April 2020



Actively Adapting to a Changing Climate



- Dredging projects increase water flow through our chain of lakes
- Strategic land purchases protect and restore wetlands
- \$2.5M in grants to promote continuous cover crops



The Climate Action Plan



Dane County Council on Climate Change 38 organizations with diverse perspectives

- 7 governments
- 3 utilities
- 7 businesses
- 2 agriculture organizations
- 4 community equity/justice organizations
- 6 environmental groups
- 3 UW-Madison groups
- 1 chamber of commerce
- Labor & law entities



CAP: Pragmatic, Based in Science

Guiding Principles

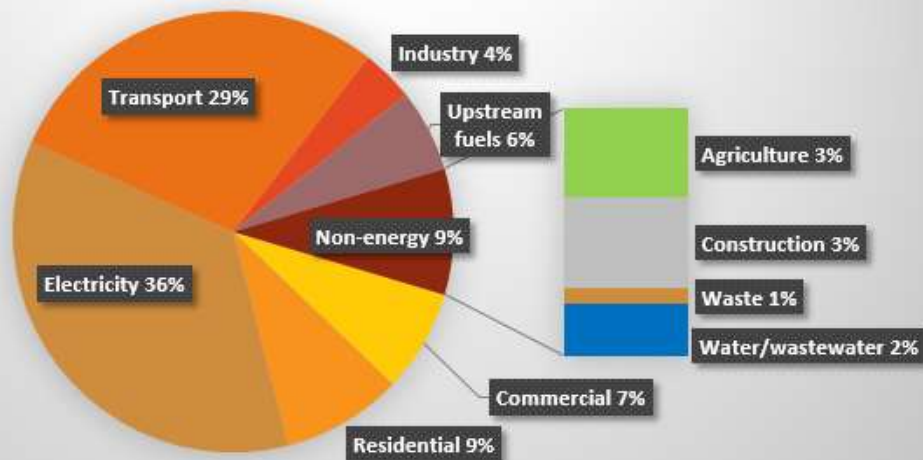
- Equity & Justice
- Economic Benefits
- Health Benefits
- Adaptation & Resiliency
- Bridging the Rural & Urban Divide
- Ecosystem Benefits

Look at the **art of the possible**... Identify where we want to be and **figure out how to get there**... Win-win solutions should be the focus... **Look at data, find solutions.**

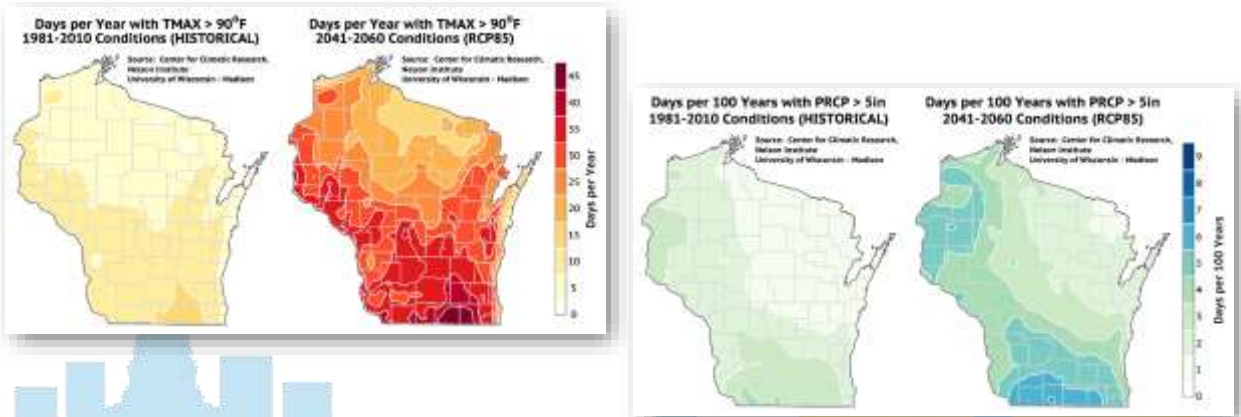
County Exec Joe Parisi, 1st Council Mtg

County-Wide Emissions (2016) – 7.5MMtons

Base Year Dane County Emissions (CO₂-equiv)



WICCI: Dane County Will Get Hotter, Wetter



Subject-Matter Working Groups

- Buildings
- Energy Efficiency
- Energy Generation / Renewables / Energy Storage
- Transportation and Land Use
- Agriculture & Forestry / Food
- Waste Materials
- Water
- Adaptation
- Modeling
- Financing
- Public Engagement

Climate Action Plan: 100+ Recommendations

- County-wide sustainability program
- Recognition and guidelines for commercial buildings
- New solar and wind installations
- Bio-CNG (RNG) & bio-digesters
- Electric & RNG vehicles
- Public transit and land-use planning
- Water & waste reductions
- Regenerative ag & afforestation
- Adaptation efforts
- R&D

Deep Decarbonization...

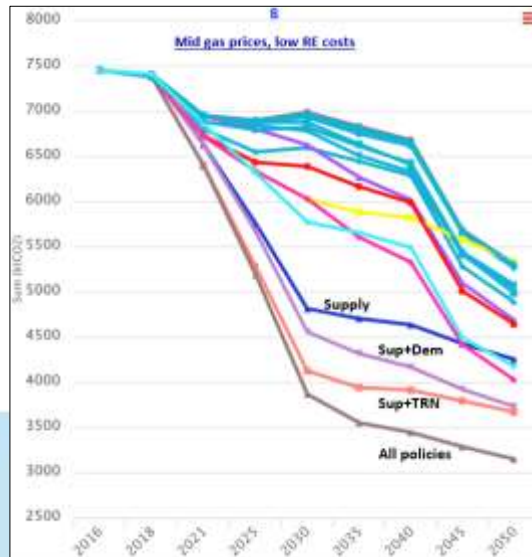
- ✓ Include everyone
- ✓ Be efficient
- ✓ Electrify everything
- ✓ Clean electricity

CAP Outcomes

Policy	Name	Near-term Policy Goals	2050 Policy Goals
1	VMT	15% reduction in VMT by 2050 (Low projection)	Same
2	EVs	EVs have 57% sales share by 2040	Same
3	Biogas	60% heavy vehicle fleet to biogas over 2019 to 2026. 50% of transit buses are converted to ELC by 2035	Same, BIOGAS emissions accounting adjusted to be full methane combustion emissions. Methane destruction now accounted for separately.
4	Solar	1200 MW by 2030	Combined in RE Elec policy: 2030 solar and wind targets, plus 100% of load is met by <u>wind+solar</u> by 2045
5	Wind	Wind meets half of Dane County load by 2030	
6	Water	Decrease per capita water demand by 20%	and 30% by 2040
7	EE	Reduce energy usage by 2% annually per capita by 2030	and 3% by 2035, 4% by 2040 (existing COM buildings only after 2030)
8	Bldgs	Improve performance of new COM buildings starting in 2025	Savings ramp up to all new buildings having 75% less consumption by 2040.
9	HP	Convert half of LPG and oil heat to heat pumps by 2030	and all LPG & oil to heat pumps by 2045, and all new residential construction with heat pumps by 2040 .
10	Digesters	Half of all manure is processed in anaerobic digesters by 2030	All manure is processed in digesters by 2050. Results in reduction of 27% of Ag methane and 25% of N2O.

Combining the policies leads to deep emissions reductions

Energy-related GHG Emissions (Thousand metric tons CO₂-equivalent)



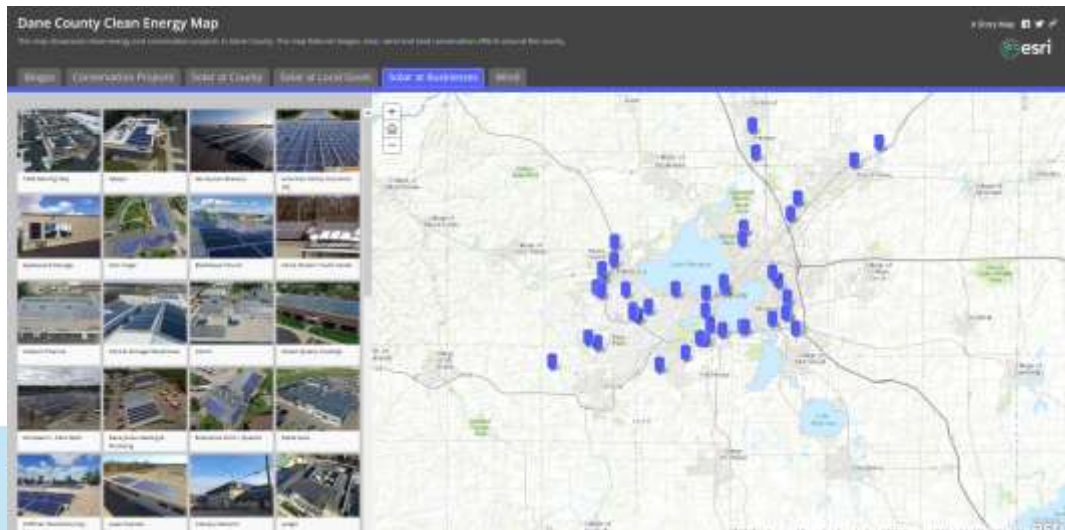
Supply: Wind + Solar
Demand: EE + Bldgs + HP
Transport: VMT + EVs + Biogas

The CAP is just the beginning...

- Engage everyone
 - We are all part of the solution
 - Together we'll create a stronger Dane County
- Implement CAP recommendations
- Monitor progress
- Identify new initiatives to tackle remaining emissions



Power of Positive Reinforcement



Questions? Comments?

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