

# Austin Community Climate Plan

RMC and EUC | February 2015



OFFICE OF  
SUSTAINABILITY

CITY OF AUSTIN



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TRANSPORTATION DEPARTMENT



1. Why Develop a Community Climate Plan?
2. Our Approach and the Plan Development Process
3. Plan Summary and Electricity and Natural Gas Strategies
4. Next Steps



# Why Develop a Community Climate Plan?

Item 11

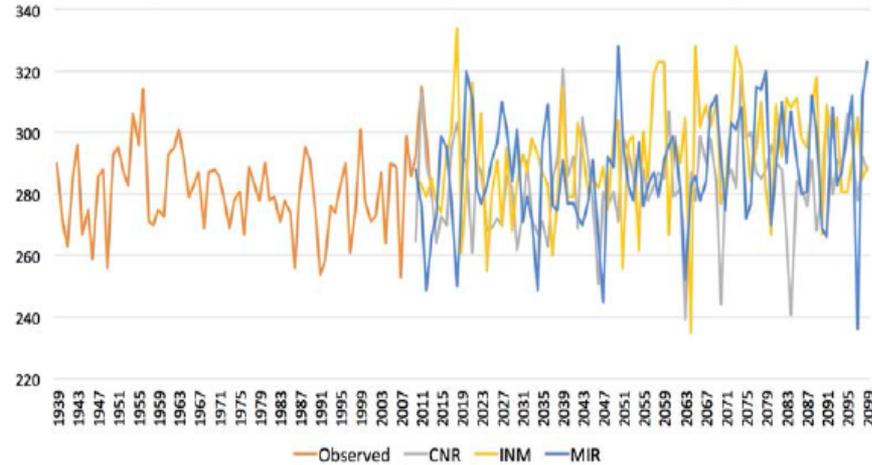


Figure 10. The number of days per year with precipitation below 0.01 inches at the Camp Mabry weather station in Austin, TX.

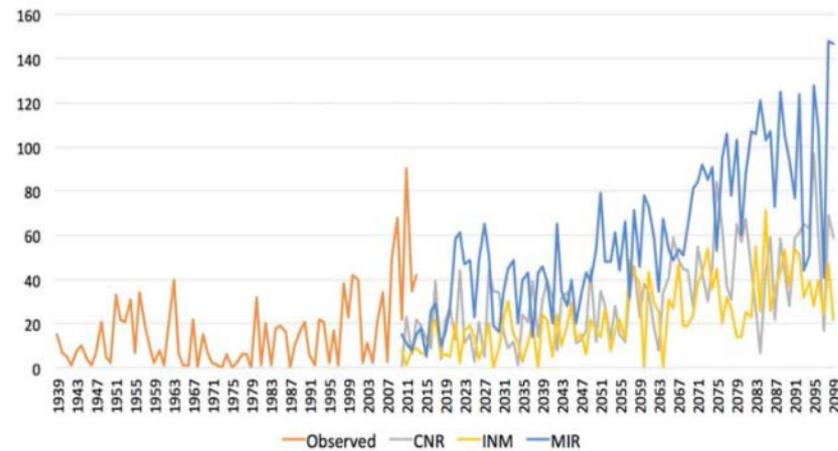


Figure 7. The number of days per year with temperatures above 100°F at the Camp Mabry weather station in Austin, TX.

# Why Develop a Community Climate Plan? Item 11

## Council Resolutions

The 2007 Climate Protection Plan included five key goals:

1. Municipal operations
2. Utility generation mix
3. Homes and buildings
- 4. Community planning**
5. Carbon Neutral Programs and Assistance

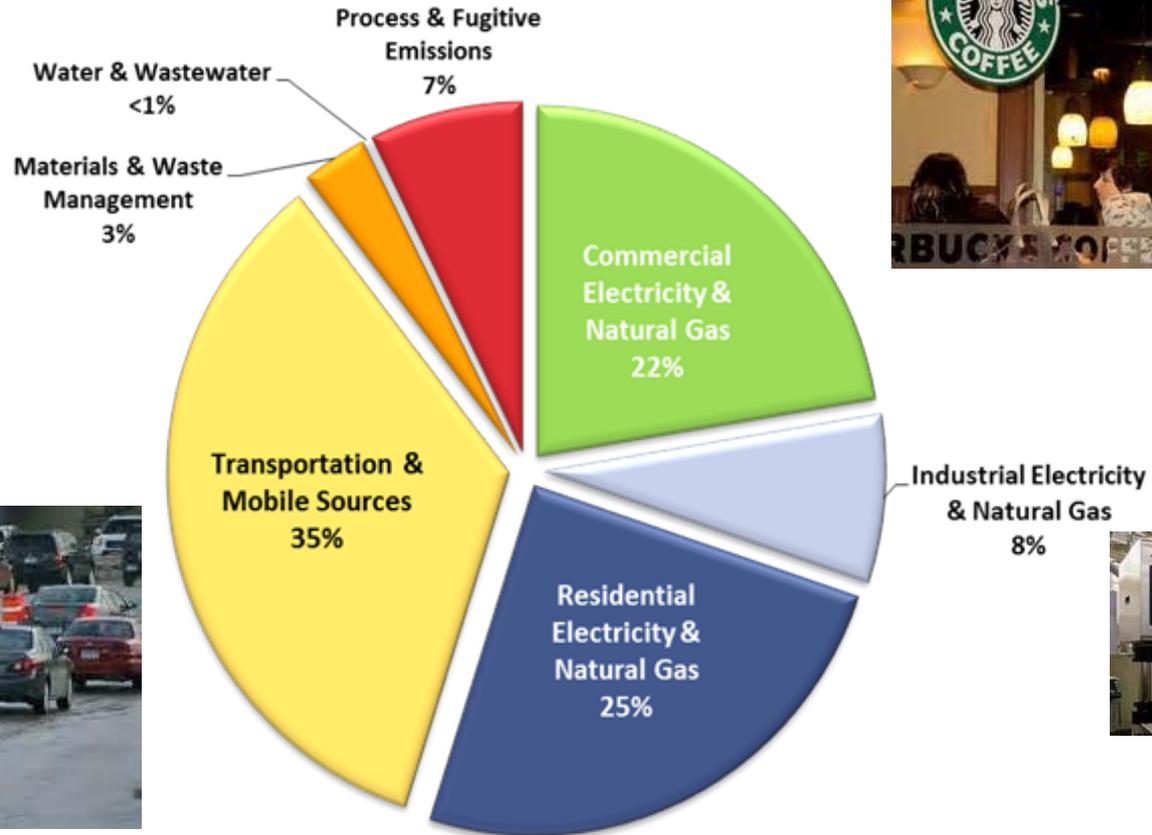
April 10, 2014: Council passed Resolution 20140410-024 which established a long term community wide goal:

**Net zero community-wide greenhouse gas emissions by 2050**

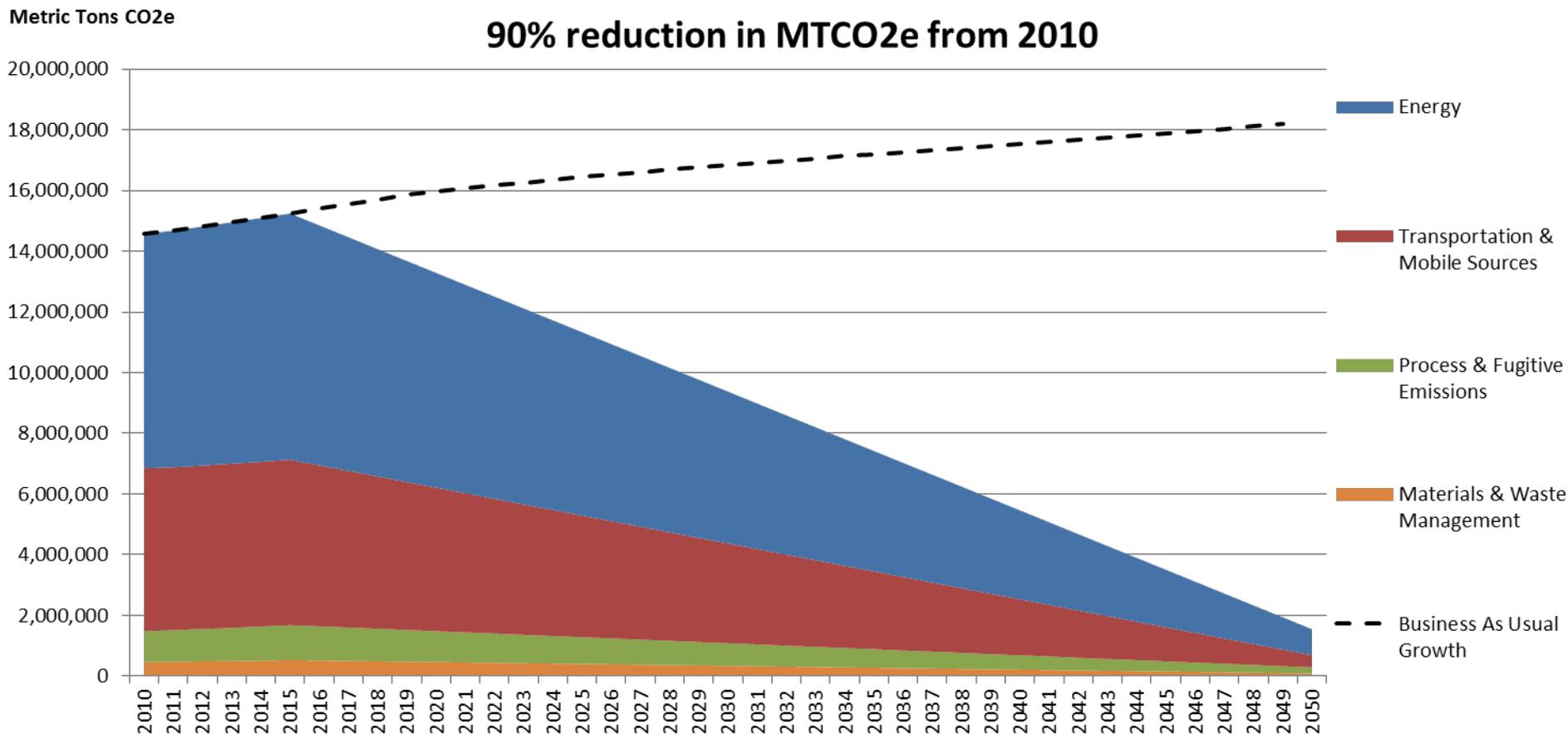


# Our Approach

## 2010 Travis County GHG Emissions 14 Million Metric Tons CO<sub>2</sub>e



## What does net-zero in 2050 mean?



I - New Inventory  
 R - Full Plan Revision

# Plan Development Process

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June 2014, the Office of Sustainability formed a Community Climate Steering Committee and four Technical Advisory Groups (TAGs):

- Electricity and Natural Gas
- Transportation
- Materials Management
- Industrial Process



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# Plan Development Process

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## Steering Committee

Name	Organization
Roger Duncan	Energy Institute, University of Texas
Mike Blackhurst	UT School of Engineering Professor
Joep Meijer	Climate Buddies
Al Armendariz	Sierra Club Senior Campaign Representative
David Cortez	Austin Interfaith Network
Kaiba White	Public Citizen
Pam Reed	Texas Climate & Carbon Exchange
Mary Dodd	Community Advancement Network, Executive Director
Mitch Jacobsen	ATI Clean Energy Incubator, Co-Director
Francois Levy	American Institute of Architects
Tim Mohin	AMD Director of Corporate Responsibility
Jere Locke	Texas Drought Project
Kevin Tuerff	EnviroMedia, President
Todd Hemingson	Capital Metro VP of Strategic Planning & Development
Jim Marston	EDF, VP of Energy
Tamala Barksdale	Enviromedia and AISD board member
Jeremy Martin	Greater Austin Chamber of Commerce, Senior VP Government Relations

## Electricity and Natural Gas TAG

<b>Doug Lewin (chair)</b>	SPEER
<b>Larry Graham</b>	Manager of Regulatory Affairs, Texas Gas Service
<b>Gurcan Gulen</b>	Researcher, Jackson School at the University of Texas, Austin
<b>John Hoffner</b>	Renewable and Sustainable Design Consultant
<b>Morgan Stinson</b>	Principal at Energy Engineering Associates
<b>Henry Eby</b>	Consultant, Former LCRA Manager of Environmental Affairs
<b>Michelle Van Hyfte</b>	Manager Environmental Stewardship, Seton Healthcare
<b>Peter Pfeiffer</b>	Architect
<b>Blake Beavers</b>	Pedernales Electric Co-op



## **Electricity and Natural Gas**

Behavior Change and Education  
Buildings and Integrated  
Efficiency  
Resource Technologies

## **Materials Management**

Organics Diversion  
Purchasing  
Methane Management  
Recycling  
Reduction Reuse

## **Industrial Process**

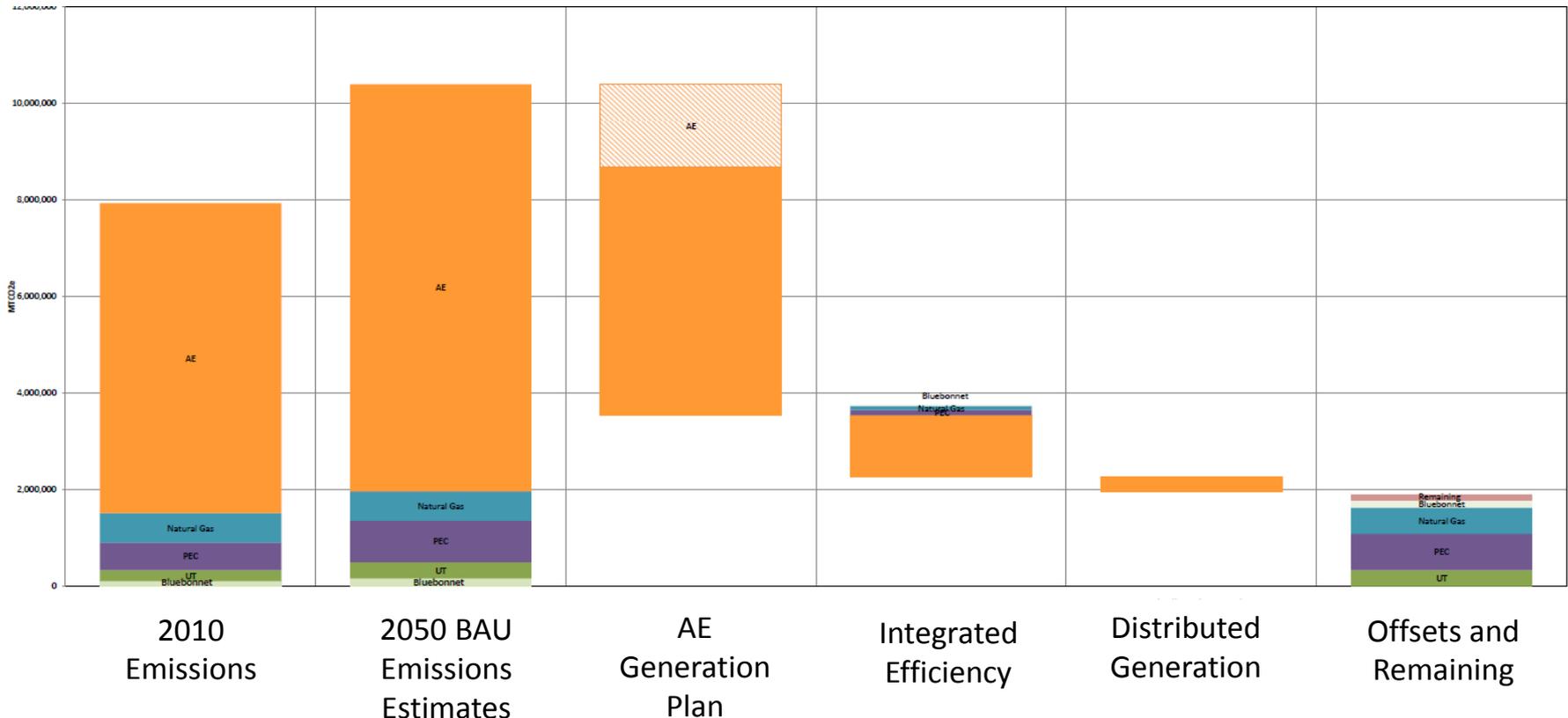
Fuel Switching  
Process Optimization  
Capture and Destruction  
Local Offsets

## **Transportation**

Infrastructure and Service  
Land Use  
Demand Management  
Policy and Planning  
Vehicles and Fuel Efficiency  
Economic and Pricing Systems

## Quantitative analysis

- Waterfall chart below shows current sector footprint, BAU growth in emissions, and how the strategies would reduce emissions through cleaner energy production and reduced energy demand, inclusive of offsets



## Qualitative analysis of proposed actions

### 19 Tier 1 actions

- New action or currently in an adopted city plan
- Fewer barriers or limiting factors in the way
- Large potential to avoid emissions
- Additional benefits identified
- **Will be considered for implementation upon plan adoption or part of the implementation planning effort over the next year**

### 9 Tier 2 actions

- Mostly actions in 2020-2050 timeframe
- Have current barriers related to policy, funding, or technology



## Buildings and Integrated Efficiency

The City of Austin will continue to be a national leader in energy efficiency and reduced demand programs.

1. Explore financing mechanisms to enable energy efficiency, demand response, distributed generation and energy storage.
2. Increase funding for energy efficiency rebates within constraints of rate affordability goals, and emphasize and market offerings or higher amounts that may attract new customers
3. Identify high energy users in all sectors and target incentives and initiatives to those users to maximize impact
4. Promote specific high-impact strategies including envelope improvements, lighting retrofits, HVAC improvements, water heating efficiency, and plug load reduction
5. Implement programs to reduce energy use and carbon intensity associated with water consumption



## Buildings and Integrated Efficiency

6. Expand the availability and use of automated demand response to more and new technologies
7. Increase meter reading frequency and use the information to identify opportunities for utility action and to promote customer conservation and demand response
8. Educate designers, builders, code inspectors, and plan reviewers to gain higher compliance with new energy codes as they are implemented every 3 years



## Resource Technologies

Making generation resource decisions to minimize greenhouse gas emissions while remaining within the affordability limits set by the City Council.

1. Begin a coordinated effort to prioritize strategic development and evolution of Smart Grid/Intelligent Energy Management Systems, within constraints of rate affordability goals, to further enable intermittent resources and use of electric vehicles for storage/demand shift
2. Prioritize investment in zero carbon resources at utility and/or customer scale, with consideration of affordability goals:
  - Utility-scale and distributed solar, including concentrating solar and community solar;
  - Utility-scale wind (inland and coastal)
3. Routinely evaluate resource technologies for opportunities to incrementally improve carbon intensity including storage, distributed chilled water, biomass, geothermal, and nuclear

## Behavior Change and Education

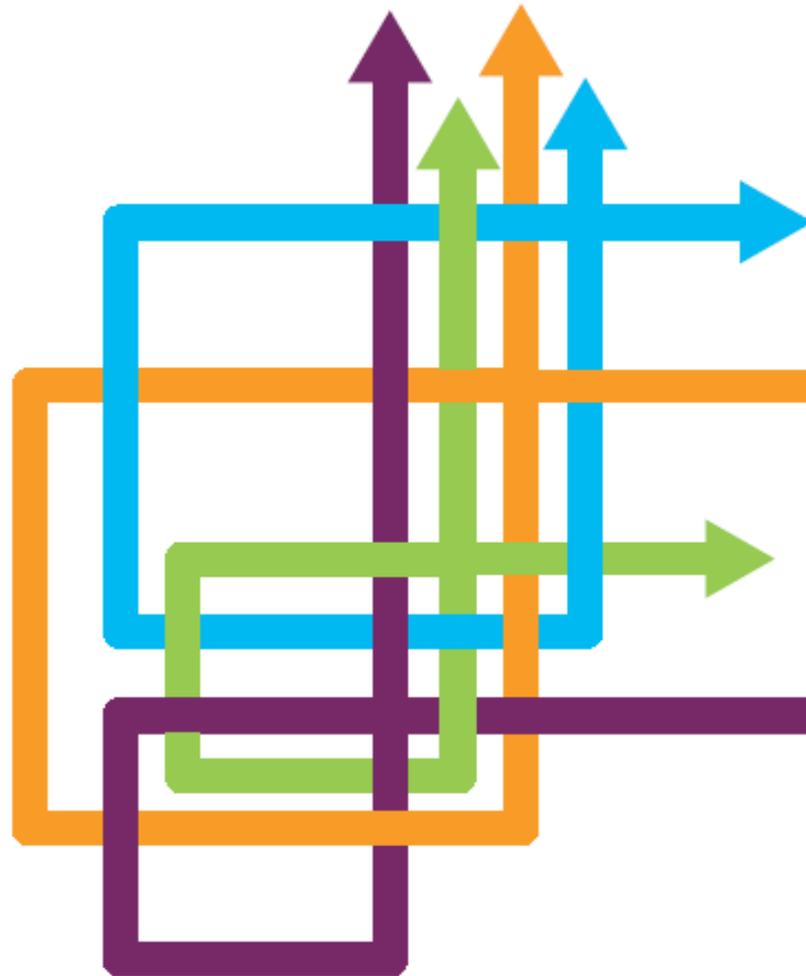
Consumer preferences and willingness to pay upfront for actions that result in lower energy use over time, and concurrently support zero and low-greenhouse gas resources, are key to the extent to which strategies and actions can be effective.

1. Increase efforts to engage customers to drive energy efficiency and demand response: increase transparency of energy costs in multi-family and commercial buildings; evaluate feasibility of neighborhood wide energy efficiency challenges
2. Implement time of use / dynamic rates, including user educational efforts, supported by advanced metering and other technologies
3. Expand educational efforts through social media, applications, competitions
4. Utilize meter reads and bill format/presentation to influence behavior



# Coordinating to Reach Common Goals Item 11

## Austin Community Climate Plan



### TRANSPORTATION & LAND USE PLANS

Imagine Austin  
2014 Austin Strategic Mobility Plan  
Austin Bicycle Master Plan  
Urban Trails Master Plan  
CAMPO 2035 Regional Transportation Plan

### BUILDING ENERGY PLANS

Austin Energy Generation Plan  
City of Austin Building Codes

### WASTE PLANS

Austin Resource Recovery Master Plan  
ARR Zero Waste Plan

### PREPARING FOR CLIMATE CHANGE-RELATED PLANS

City of Austin Hazard Mitigation Plan  
Watershed Protection Ordinance  
Office of Sustainability Climate Resilience Efforts

Source:  
Adapted from Seattle's Climate Action Plan



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# Coordinating to Reach Common Goals



Reduced energy costs



Improved energy security and reliability



Decreased risk of energy shortages or outages



Diminished water consumption by power plants



Reduced pollution



Improved air quality



Improved public health



Thriving local economy and increased consumer spending



Expanded local jobs creation



Enhanced transit system



Reduced traffic congestion



Safer streets



Improved disaster preparedness



Protected and enhanced ecosystems



Greater affordability for all

# Climate Plan Next Steps

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1. Pending Council Adoption:
  - Commit to moving forward with a short list (1-3) of the new Tier 1 actions from each TAG
  - Develop an implementation plan for the remainder of new Tier 1 actions within one year of adoption (prioritization and budget requirements)
2. Determine feasibility of a sustainability impact statement for major city council decisions (CIP and major expenditures)
3. Continue climate resilience planning efforts

- Present to other organizations and B&Cs
- Finalize plan document with feedback
- Potential presentation to Council in March

**Thoughts, comments, questions?**

