

Austin Community Climate Plan

Environmental Board | February 18, 2015



CITY OF AUSTIN



TRANSPORTATION DEPARTMENT



Agenda

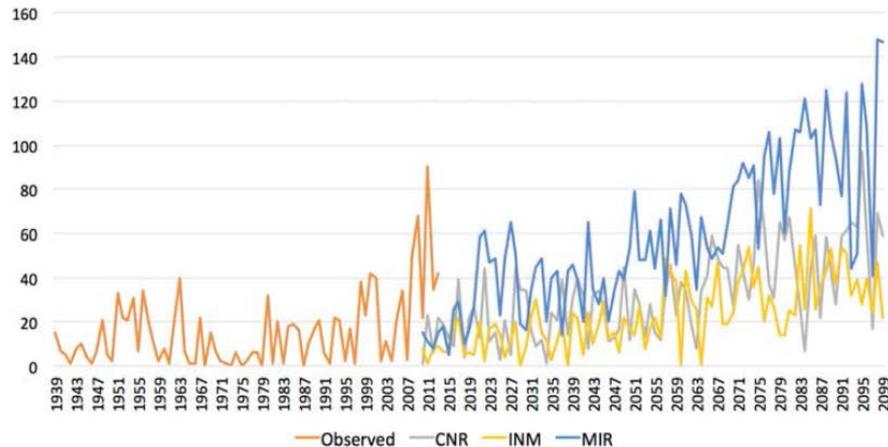
1. Why Develop a Community Climate Plan?
2. Our Approach and the Plan Development Process
3. Climate Plan Summary
4. Next Steps

Why Develop a Community Climate Plan?

Today

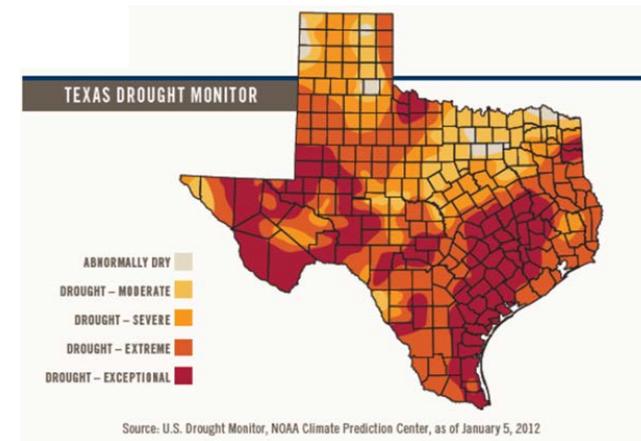


Tomorrow



Source: Geos Institute

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



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Why Develop a Community Climate Plan?

Council Resolutions

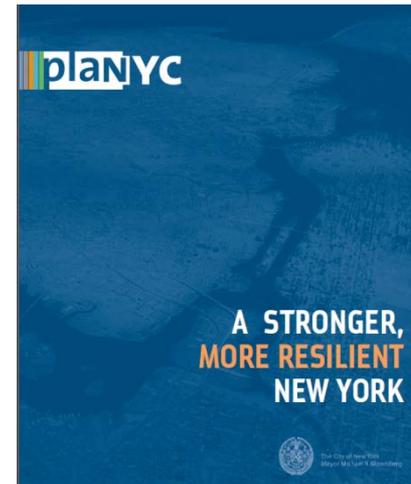
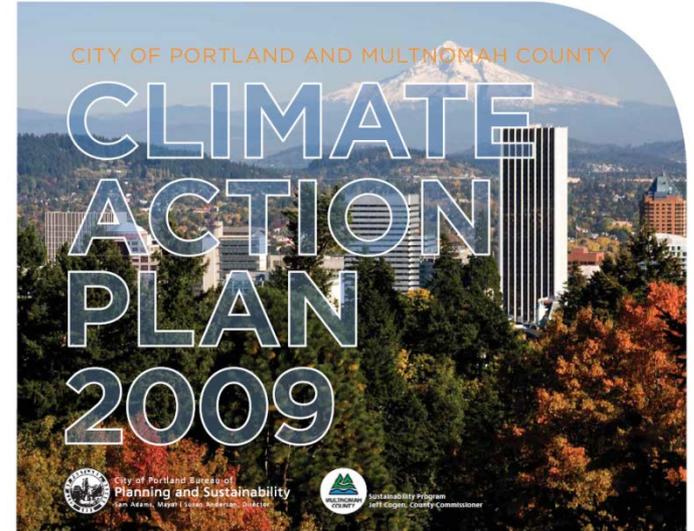
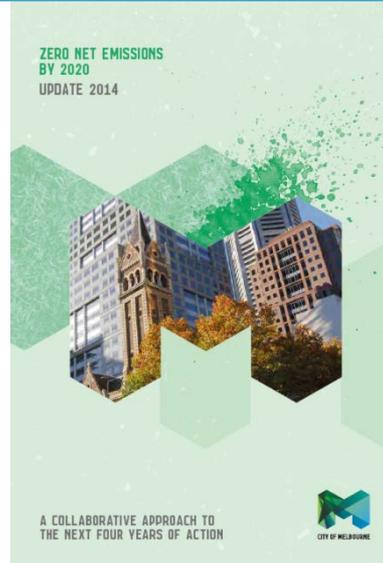
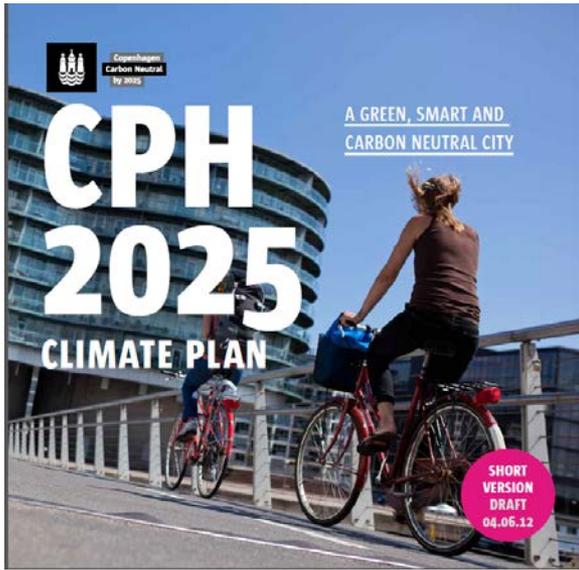
The 2007 Climate Protection Plan included five key goals:

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

On April 10, 2014, Austin City Council passed Resolution 20140410-024 that established a new long-term goal of reaching net zero community-wide greenhouse gas emissions by 2050, or earlier if feasible.



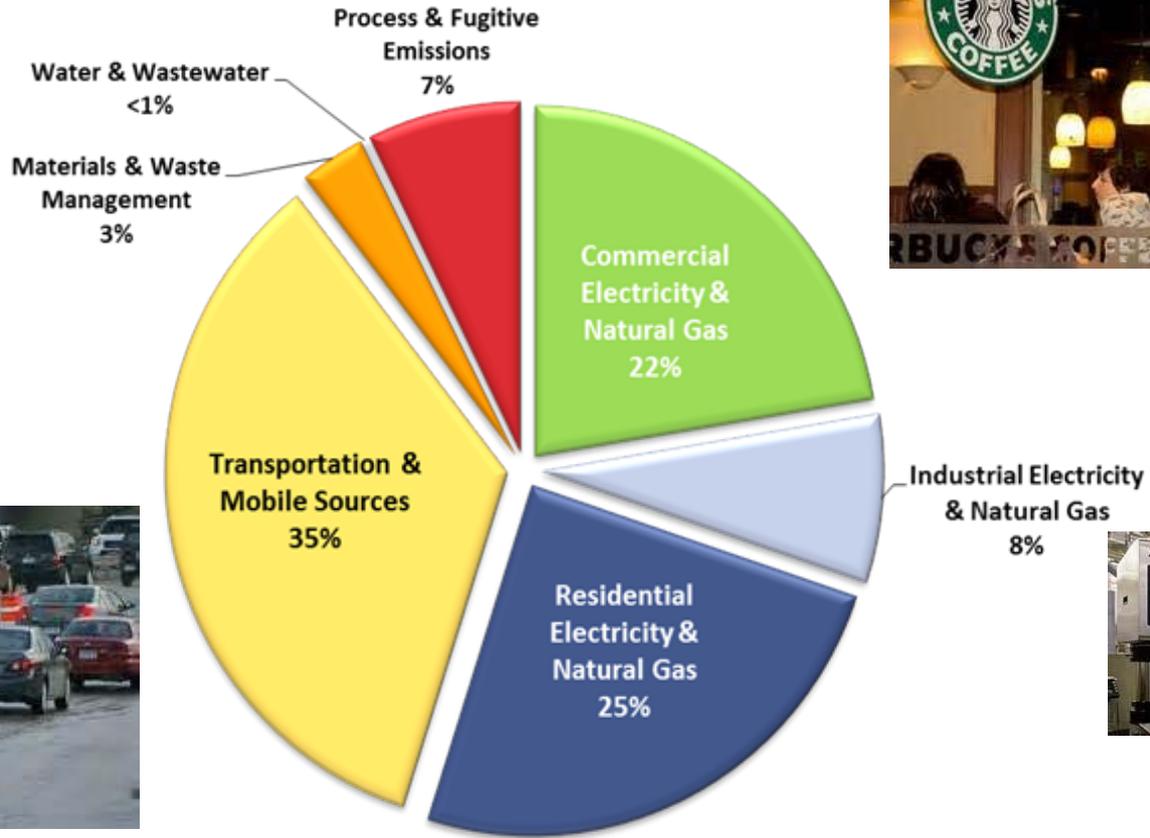
Our Approach



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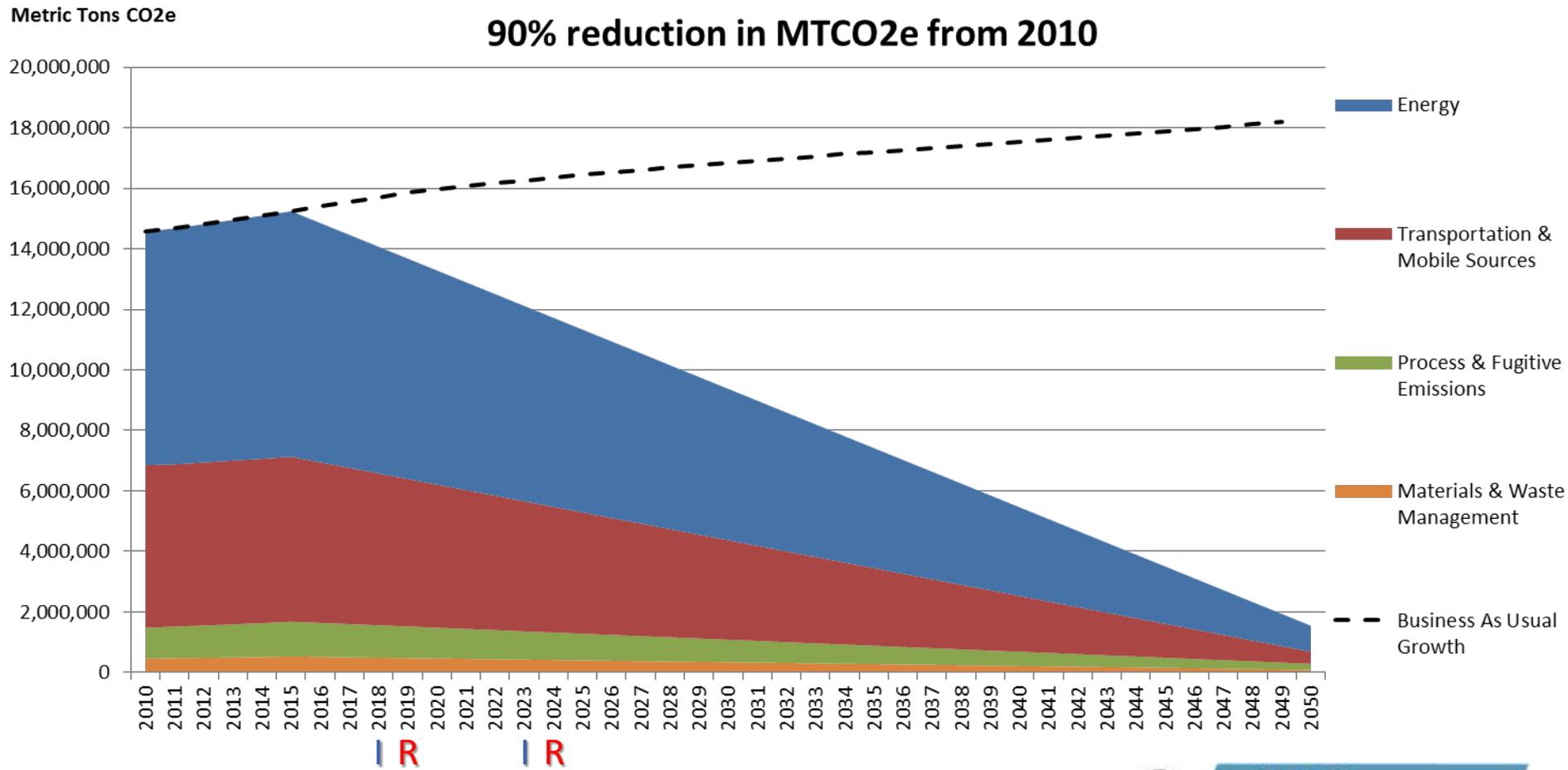
Our Approach

2010 Travis County GHG Emissions 14 Million Metric Tons CO₂e



Our Approach

What does net-zero in 2050 mean?



Our Approach



College Students



Central City
Individuals and Families



Suburban
Individuals and Families



Retired Individuals and Couples



Small Businesses / Nonprofits



Large Companies / Employers



Tourists and Visitors



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Plan Development Process

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



Climate Plan Summary

Electricity and Natural Gas

Behavior Change and Education
Resource Technologies
Buildings and Integrated
Efficiency
Utility Business Model

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



Climate Plan Summary

Qualitative and quantitative analysis of all proposed actions

51 actions in Phase 1

- 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**

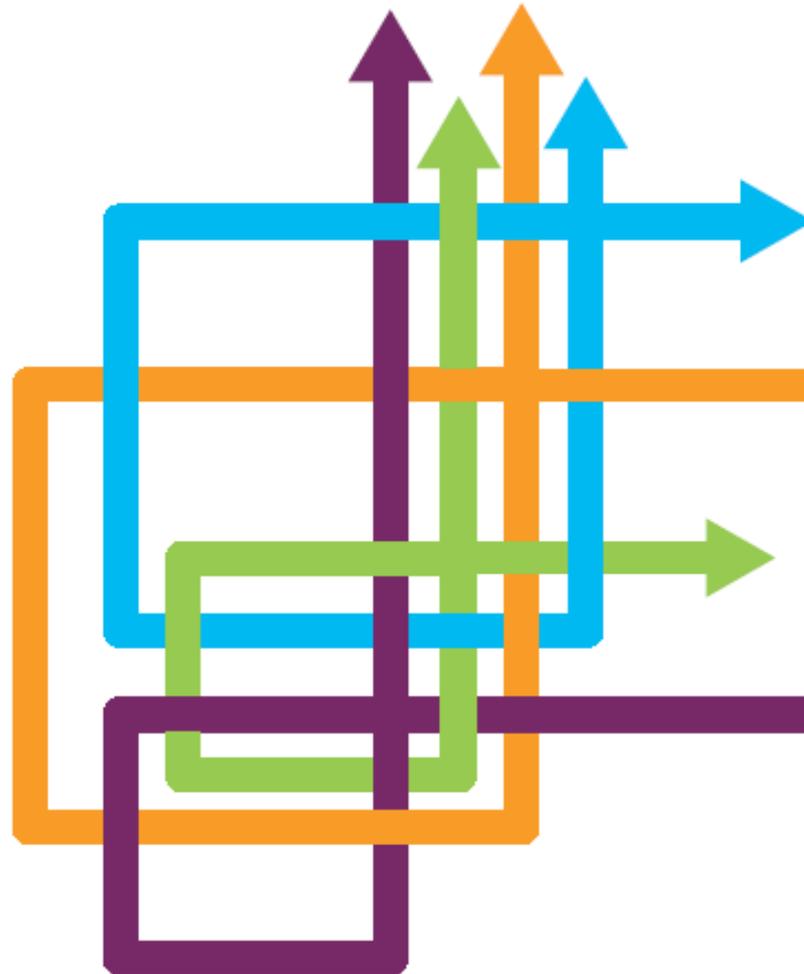
82 actions in Phase 2

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



Climate Plan Summary

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



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Source:
Adapted from Seattle's Climate Action Plan

Climate Plan Summary



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

1. Pending Council Adoption:

- Commit to moving forward with a short list (1-3) of the new Phase 1 actions from each TAG
- Develop an implementation plan for the remainder of new Phase 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

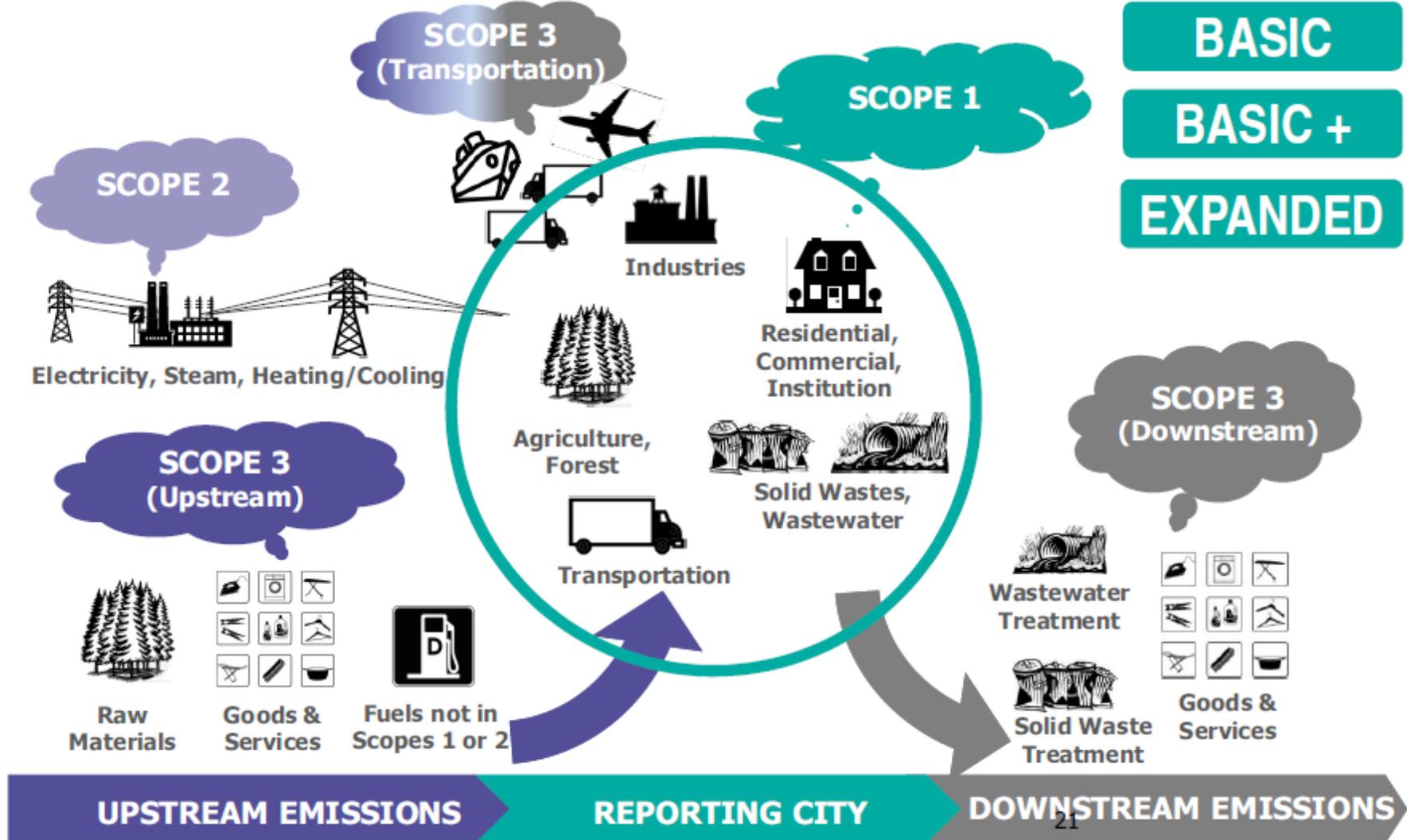
Process Next Steps

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

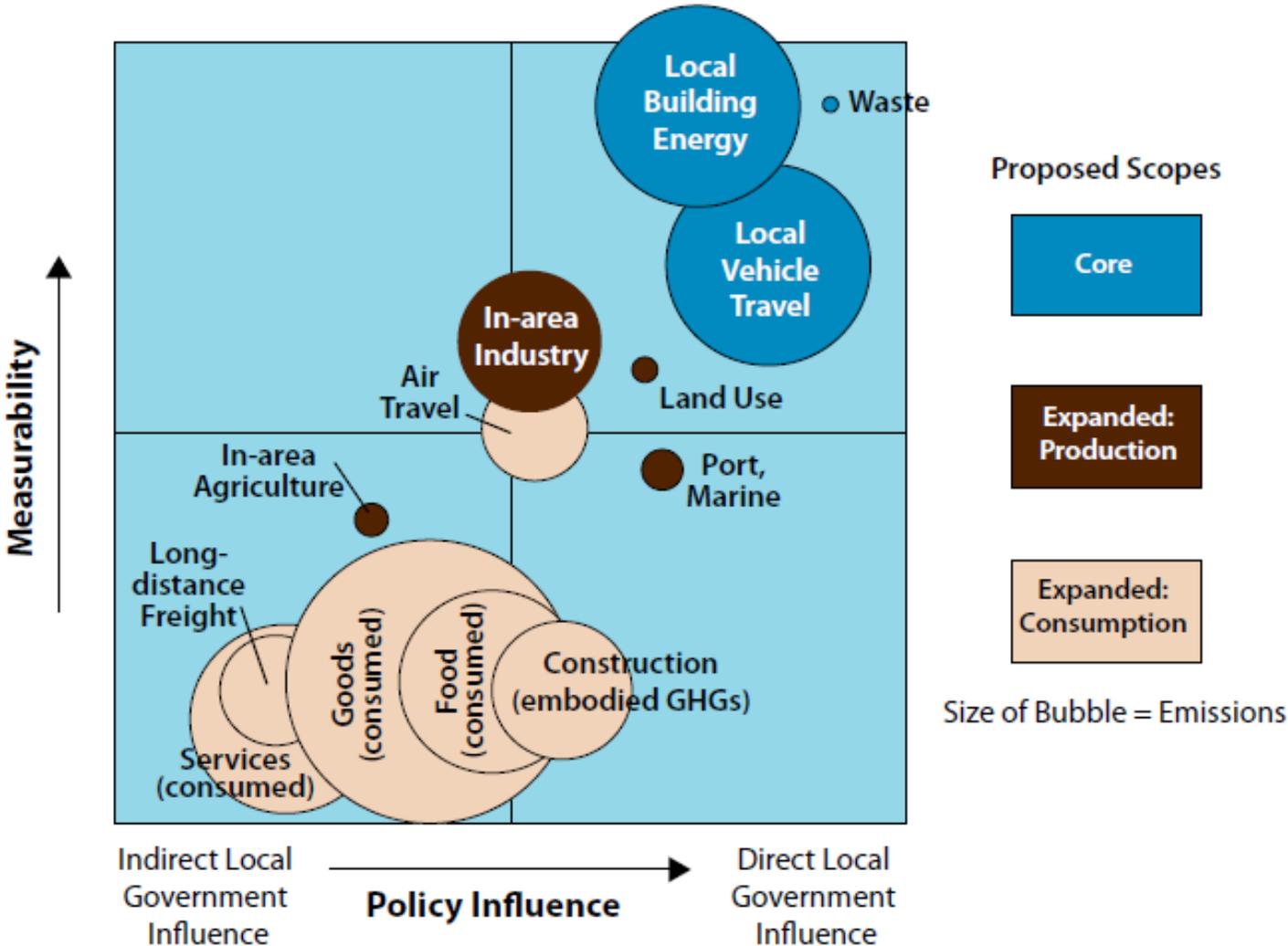
Thoughts, comments, questions?

Additional Slides

Illustration of Reporting Framework



GHG measurability vs Local Government Policy influence



Source: King County, WA

ENGTAG: Strategies & Actions

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



ENGTAG: Strategies & Actions

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



ENGTAG: Strategies & Actions

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

ENGTAG: Strategies & Actions

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



Transportation TAG: Strategies & Actions

Infrastructure and Service

1. Continue planning efforts to complete:
 - Connected network of proven high-capacity transit (intra- and inter-city)
 - Support projects identified in the Austin Strategic Mobility Plan and Project Connect
2. Increase mobility and safety:
 - Synchronizing/retiming traffic signals along arterials
 - Adjusting speed limits
 - Adding more volume-count stations
 - Installing more roundabouts
 - Using enhanced bicycle signal detection technologies
 - Installing Pedestrian Hybrid Beacons
3. Expand/extend transit service to suburban areas while:
 - Providing more service interconnections
 - Exploring additional transit centers/park-and-rides
 - Transit vehicle amenities (**New**)

Transportation TAG: Strategies & Actions

Land Use

1. Prioritize mixed use development integrated with transit and the creation of compact, walkable and bikeable places
2. Promote growth within designated activity centers as identified in Imagine Austin with a focus on density, mixed use development, transit corridors, and infill (**New**)
3. Create pedestrian- and bicycle-friendly districts
 - Connect urban centers and transit stops
 - Develop clearly marked, dedicated, and separated urban trails and bike lanes
 - Implement wayfinding systems (**New**)
4. Ensure that affordable housing and residential neighborhoods are within a quarter mile of existing or funded new transit options. (**New**)

Transportation TAG: Strategies & Actions

Transportation Demand Management

1. Work with large employers and academic institutions to implement and improve trip reduction programs. **(New)**
2. Seek opportunities to prioritize public transit within the network and seek financing to extend public transit service hours and frequency.
3. Increase bicycle and pedestrian mode share safety and performance
 - Through engineering, enforcement, education, and evaluation
 - Use web-based tools/mobile applications/other educational materials
 - Increase the scope and impact of bike promotional events
4. Develop programs that help commuters make first and last mile transit connections. **(New)**



Transportation TAG: Strategies & Actions

Transportation Demand Management

5. Work with major event promoters to establish innovative transportation plans.
6. Perform education and outreach to fleet owners:
 - Conducting business evaluation of fleet usage
 - Operation and right-sizing analysis
 - Identify incentives to replace older, higher-emission vehicles. **(New)**
7. Provide amenities and incentives for programs that support:
 - Active transportation such as showers,
 - Tree shading and community gardens
 - Neighborhood bike ambassadors
 - Mobile bike repair and bike cages.
8. Consider incentive programs that reduce single occupancy vehicle trips:
 - Alternative modes of transportation (e.g. carpool/vanpool, bus/train, bike/walk);
 - Incentives & disincentives to discourage single occupancy vehicles
 - Tax credits for cyclists
 - Time-of-use pricing for electric vehicle owners. **(New)**



Transportation TAG: Strategies & Actions

Policy and Planning

1. Establish intergovernmental agreements between municipalities that include commitments to increase density around Centers. **(New)**

Vehicles and Fuel Efficiency

1. Expand and consider incentives for the purchase of electric/alternative fuel vehicles by individuals and fleet owners, and pursue code options to increase “charger ready” parking. **(New)**

Economic and Pricing Systems

1. Pursue a fair market value for parking through demand-based commodity pricing. **(New)**



Organics Diversion

1. ARR maximizes effectiveness of Universal Recycling Ordinance in diverting organic materials.
2. ARR expands collection of food residuals and other compostable, non-recyclable materials to all residential customers.
3. Austin Water's Hornsby Bend compost operation transitions from yard trimmings to other carbon sources and bulking agents, such as clean lumber and tree trimmings from other City departments and their contractors.
4. Private haulers collect all organics, non-recyclable materials from customers. **(New)**
5. Urban agricultural operations, from community gardens to regional farmers, produce and use compost from local sources. **(New)**



Methane Management

1. ARR refines landfill gas capture and combustion system to destroy methane. Area landfill operators refine landfill gas capture and combustion system to destroy methane at their landfills.
2. With City encouragement, eligible landfills in Travis County participate in EPA landfill methane outreach voluntary programs. **(New)**

Recycling

1. ARR expands materials accepted by curbside recycling service, increasing to weekly collection.
2. ARR increases convenience and efficiency of downtown trash and recycling alley collection service.
3. City adopts Pay-As-You-Throw rate structure to strengthen financial incentives to reduce disposal.
4. ARR maximizes effectiveness of Universal Recycling Ordinance in diverting recyclable materials.



Materials Management TAG: Strategies & Actions

Reduction / Reuse

1. ARR adds four new Reuse Centers, including for hard-to-recycle items.
2. City supports local economic development through the (re)Manufacturing Hub, Austin Materials Marketplace, and reuse enterprises for repairing goods/products.
3. City supports local economic development through the (re)Manufacturing Hub, Austin Materials Marketplace, and reuse enterprises for reuse of production byproducts or general reuse of goods.
4. City implements policies to reduce the use of single-use products in addition to carryout bags.

Purchasing

1. City refines construction and building specifications to increase use of reclaimed materials.
2. City adopts specifications for materials reuse, reduced packaging, materials with recycled content, and locally manufactured products and encourages other agencies to follow suit. **(New)**

