



Food Policy Board

November 14, 2016

Austin

COMMUNITY
2015
CLIMATE PLAN



AUSTIN TRANSPORTATION DEPARTMENT





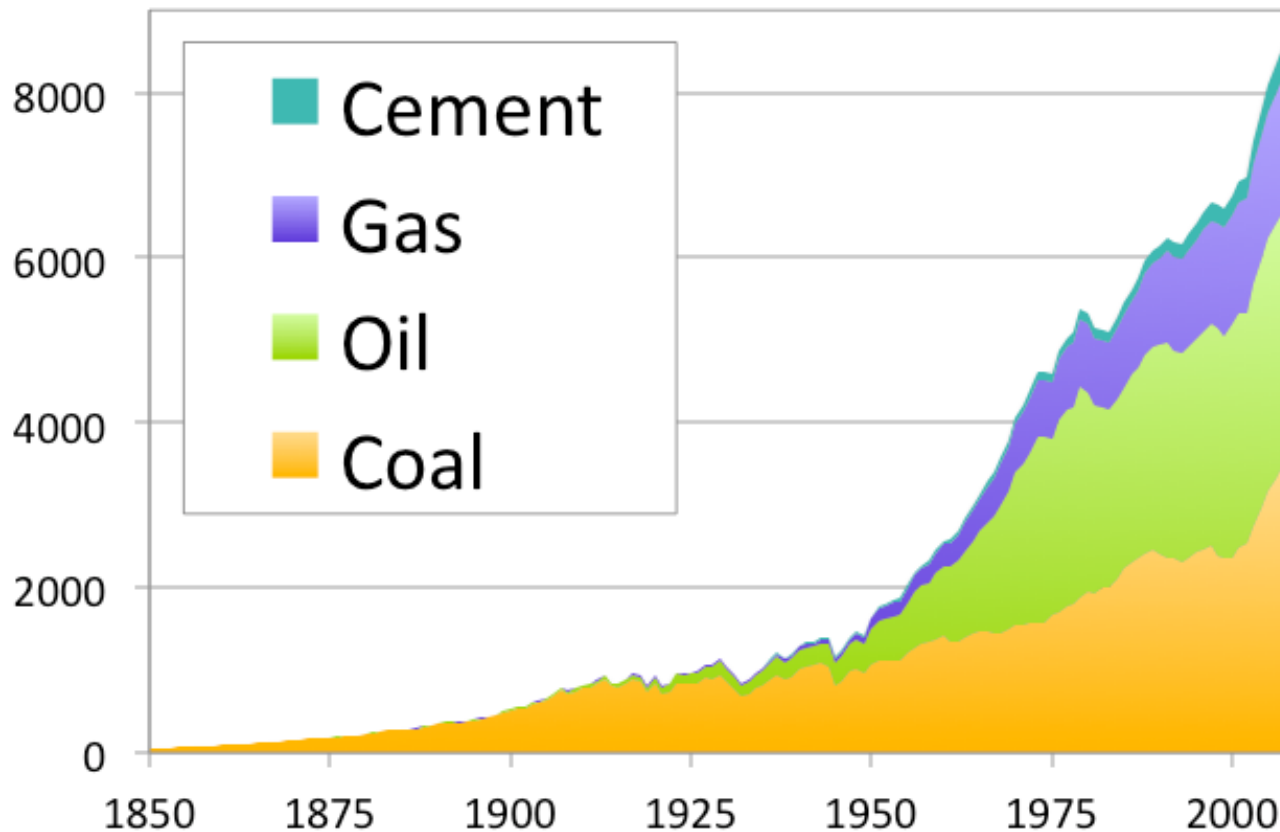
Agenda

1. Climate Change Background
2. City Plans and Resolutions
3. Ideas to think about
4. Way Forward



Humans have emitted billions of tons of additional CO2 into atmosphere

Carbon Emissions (million metric tons)



Source: K. Hayhoe for 2014 U.S. National Climate Assessment

Greenhouse Gases are building up in the atmosphere

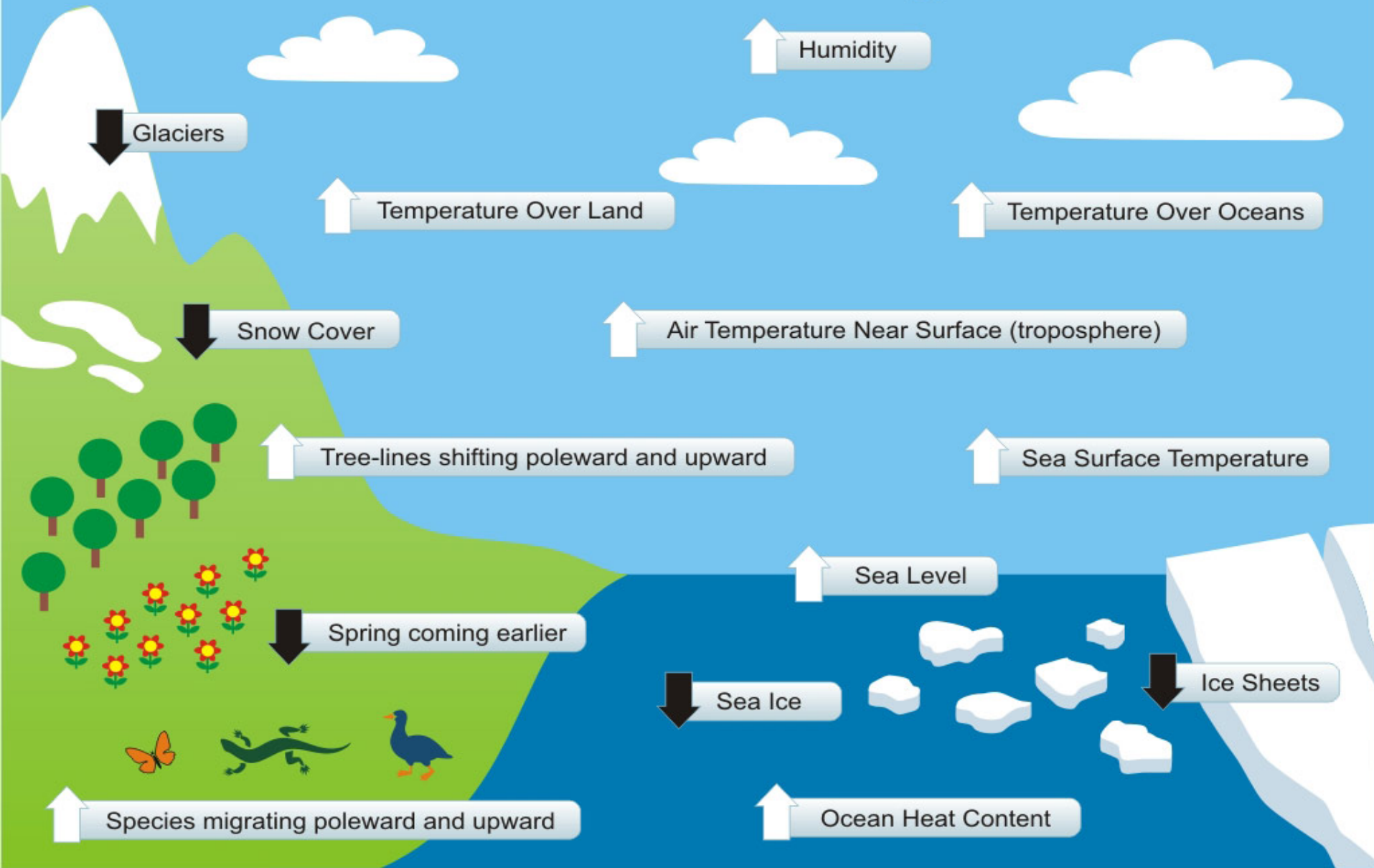


**THE NATURAL
GREENHOUSE EFFECT**



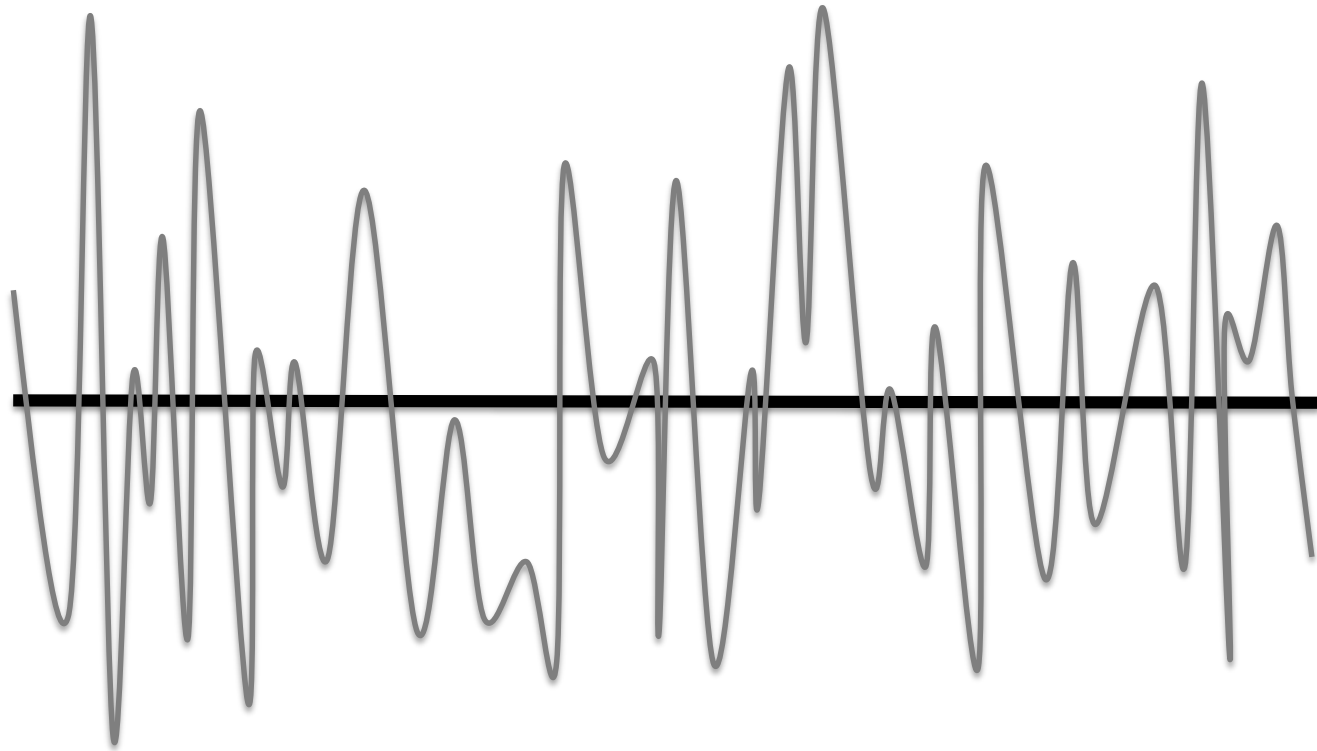
**THE ARTIFICIAL HUMAN
GREENHOUSE EFFECT**

Indicators of a Warming World





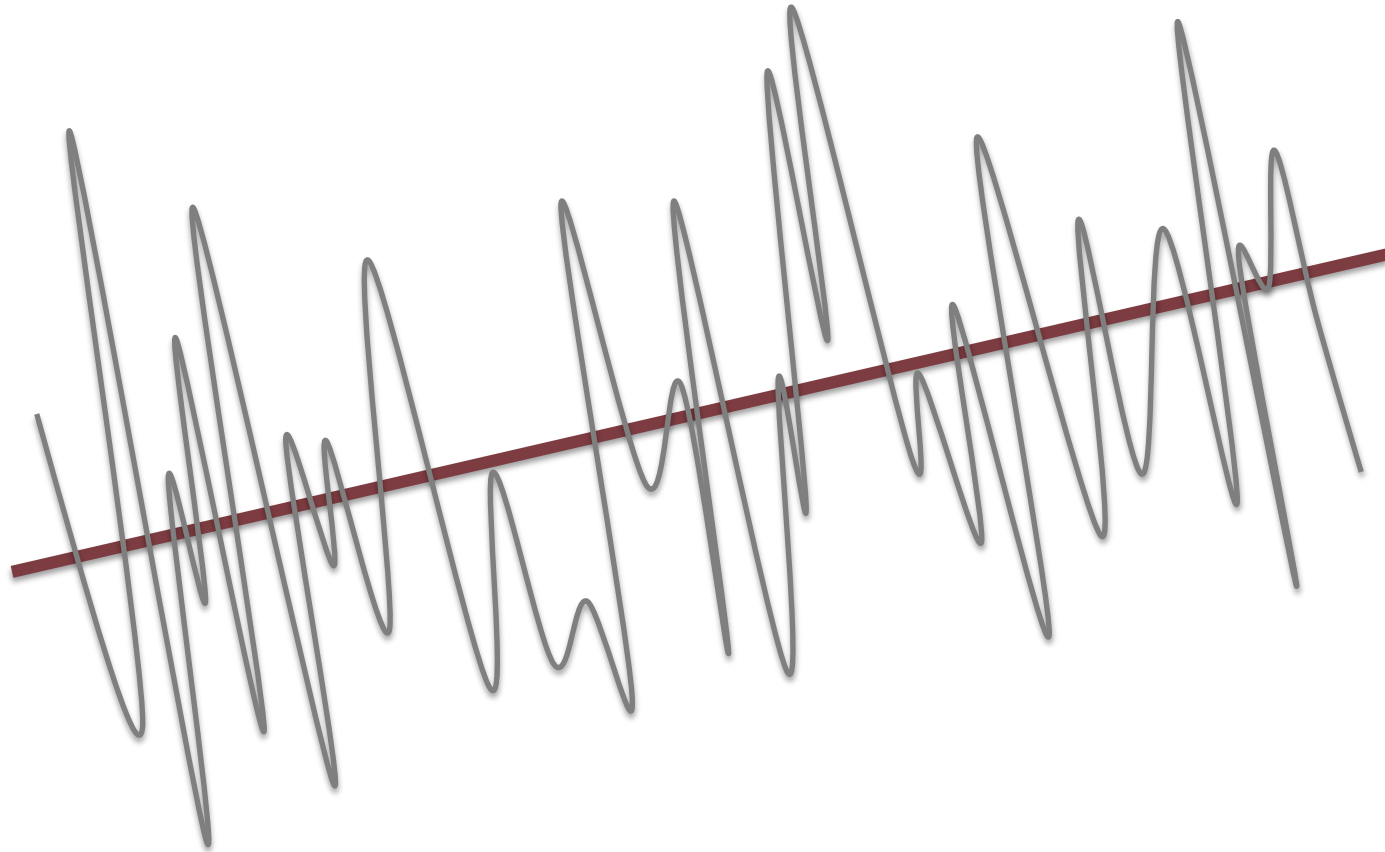
Why is this a problem?
Our civilization is built on a key assumption



A STABLE CLIMATE



What happens if that climate
isn't stable any more?



Climate Change mitigation & resilience

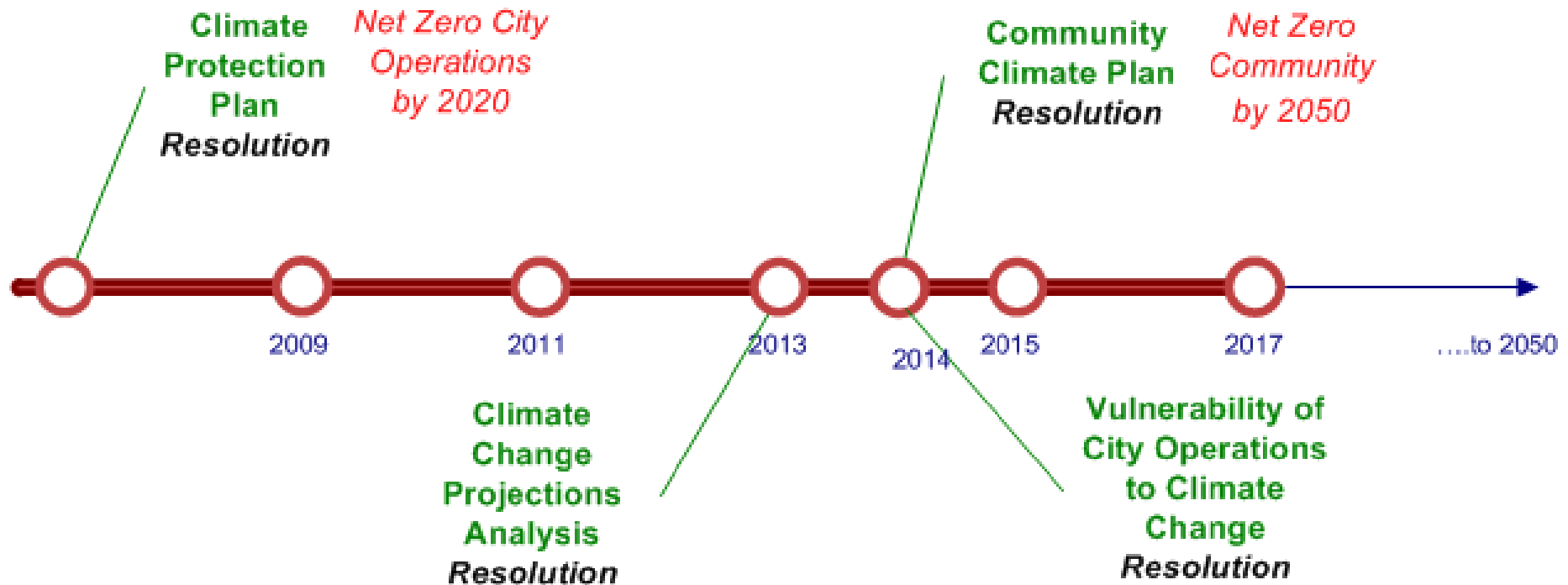
Mitigation

- Actions that limit the magnitude and / or rate of climate change
 - Energy conservation
 - Renewable energy
 - Sustainable transportation
 - Reforestation
 - Methane capture and use

Resilience

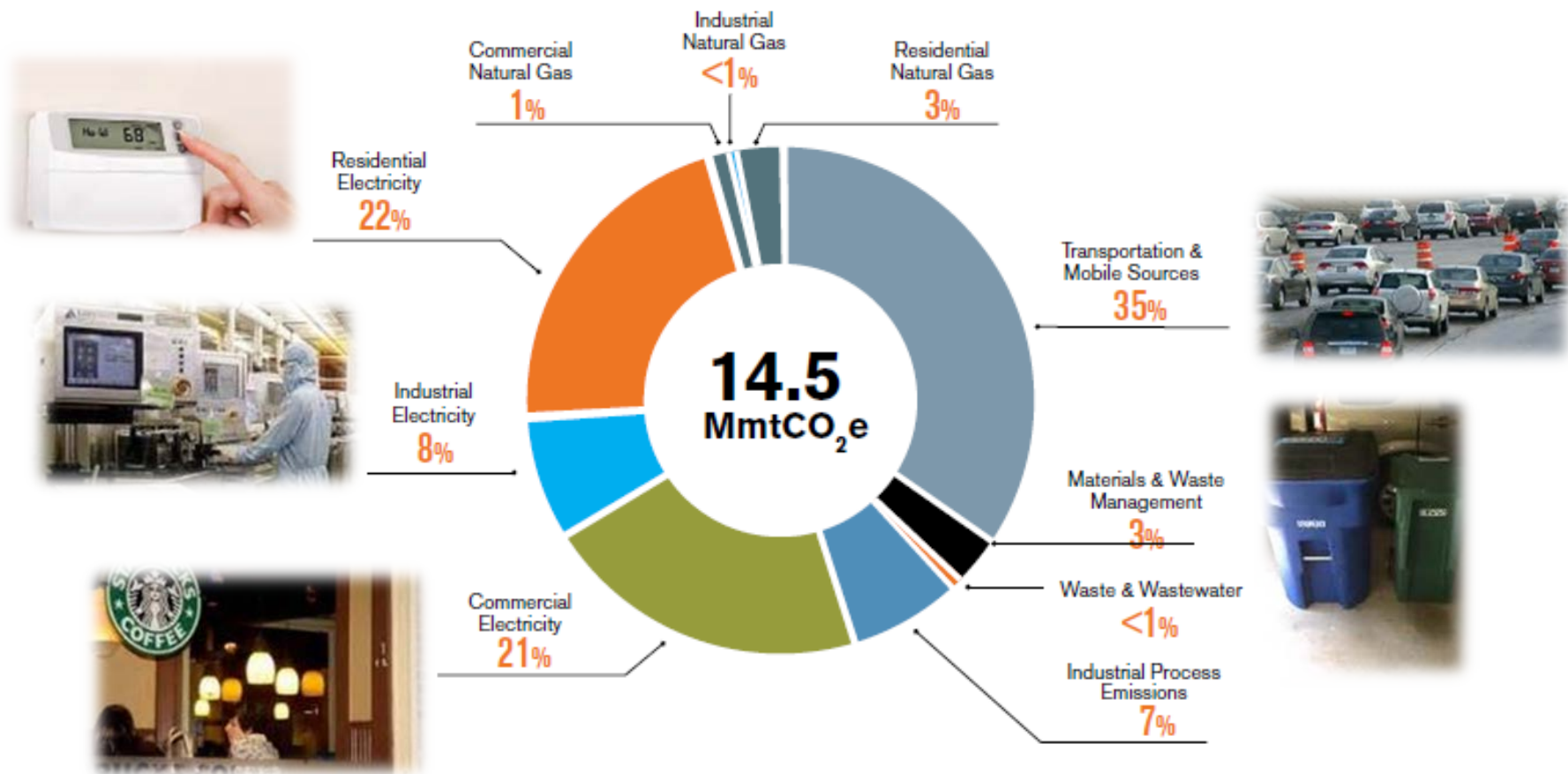
- Actions taken to manage the unavoidable impacts of climate change
 - Infrastructure protection
 - Flood mitigation
 - Wildfire preparation
 - Emergency response
 - Business continuity plans

City Council Climate Resolutions



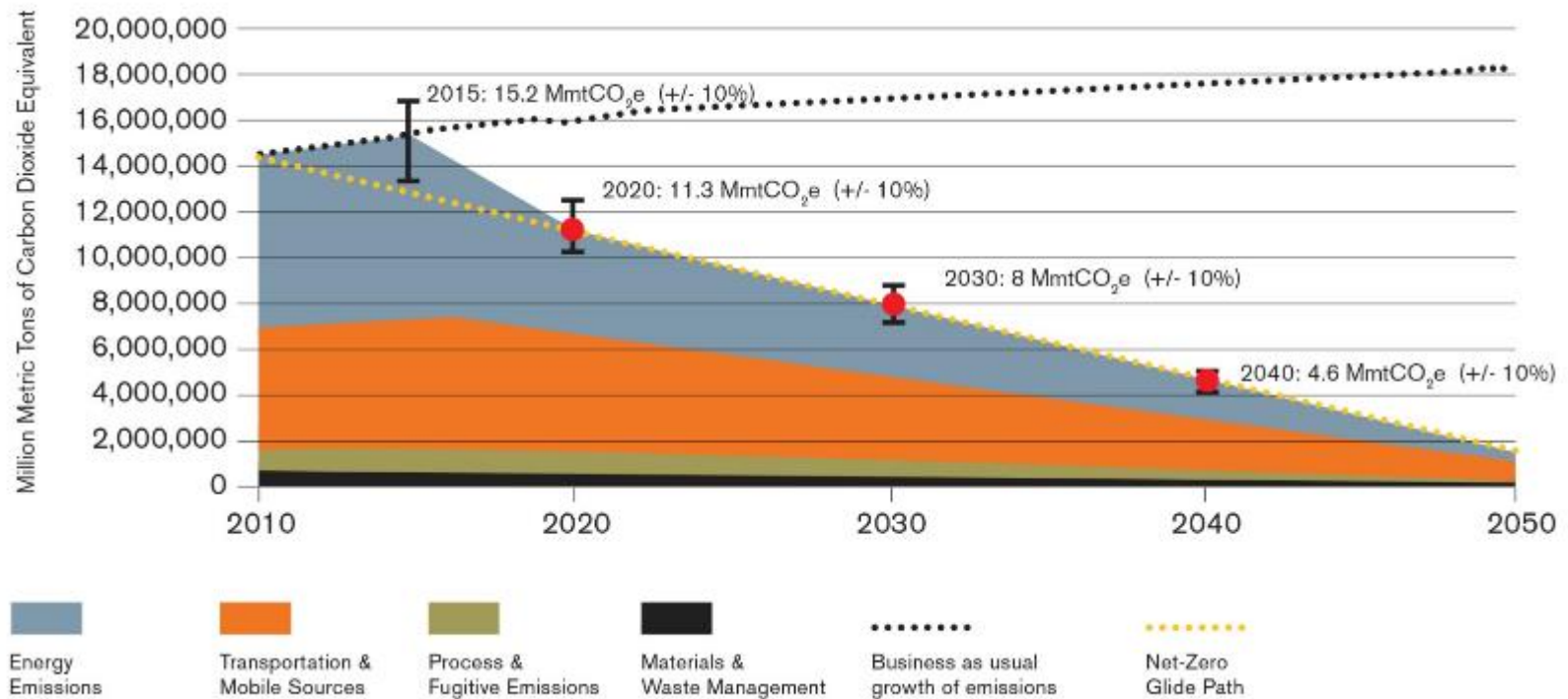


2010 Estimated Travis County Greenhouse Gas Inventory





What does net-zero in 2050 mean?





Technical Advisory Group Strategies

Electricity and Natural Gas

- Buildings and Integrated Efficiency
- Promote Behavior Change
- Resource Technologies

Transportation and Land Use

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

Materials and Waste Management

- Organics Diversion
- Purchasing
- Methane Management
- Recycle / Reduce / Reuse

Industrial Process

- Fuel Switching
- Process Optimization
- Capture and Destruction
- Local Offsets

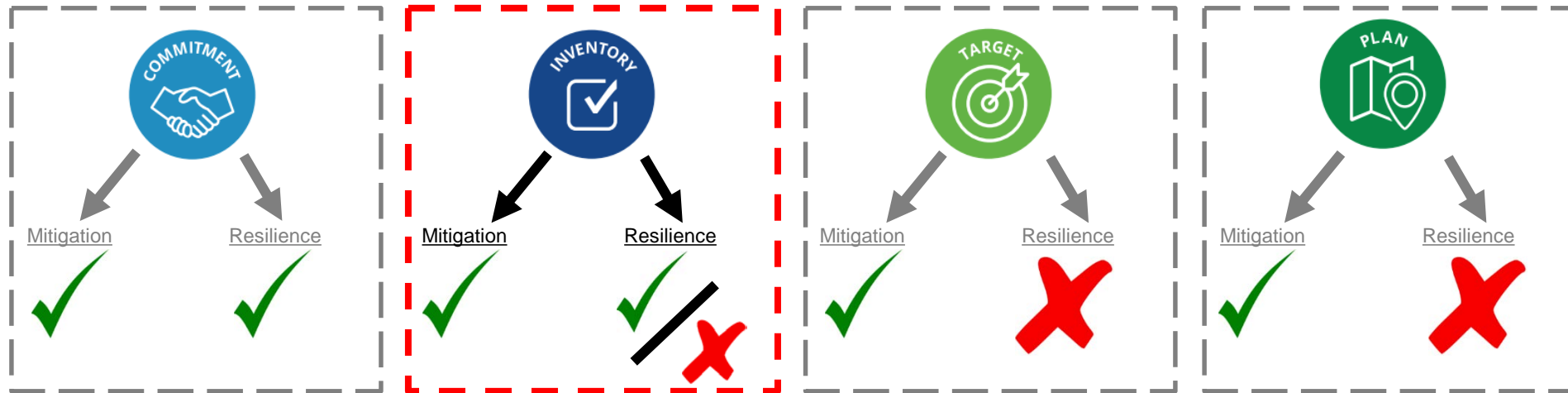
Compact of Mayors

Mayors and city officials commit to:

- Reduce GHG
- Track progress
- Prepare for climate change



COMPACT
of MAYORS



Climate Hazards

- a) Climate Projections
- b) Current impacts
 - Extreme Heat
 - Drought
 - Flood



Vulnerability Assessment

- a) Infrastructure System Vulnerability Framework
- b) Human System Vulnerability Framework








Climate Resiliency Actions

Goals/Targets

- a) Develop action plan(s)
- b) Implement and Monitor

Impacts of Future Climate Change on our City

(Interdepartmental meeting Nov. 2011)

Transportation & Land use		Energy	Water	Resource management	Health & Food	
						
Emergency routes affected	Increase chance of fires	Increase in brown outs and black outs	Concentrations of toxins in the water system	Access to medicine, beds, blankets, tarps, building materials	Weather related deaths and injury	Decreased access to potable water
Increase repair/upkeep on vehicles	Loss of tree cover	Higher energy bills (equity)	Increase erosion from flooding and dead vegetation	Debris removal and disposal	Increase in crime	Stressed local agriculture
Drying clay affects roads and infrastructure	Increase heat Island	Consistently stressed grid	Decreasing field operations	Increased material breakdown from UV	Insufficient AC for vulnerable communities	
					Increase rate of vector, water and air-borne diseases (asthma)	

What are we missing?

- Natural Systems issues are not addressed fully
 - Data and quantitative analysis are challenging
 - Boundaries are challenging (trees, soil, compost, food)
- Mitigation – reducing the environmental and fossil fuel impact of food production, access, use, waste
- Resilience – The climate is changing and that will have huge implications for food production in Austin and elsewhere

Where could we go from here?

- More Study?
 - Define boundaries: geography, natural systems, value chain, included / excluded
 - Benchmark with others
 - Feasibility of quantifying emissions and sequestration
 - Design a framework
- Each working group chair could consider priorities through a climate change lens?
- Start a new working group - Climate Plan Addendum?
 - Introduction to the issue
 - Challenges and Opportunities
 - Existing Plans and Initiatives
 - Strategies and Actions
 - Quantitative Analysis
 - Next Steps



Discussion



OFFICE OF
SUSTAINABILITY

CITY OF AUSTIN