Planning Commission Workshop

City of Ukiah

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City of Ukiah
Climate Action Plan

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Agenda

- Climate Action Plan Overview Presentation (30 minutes)
  - What is a “Climate Action Plan?”
  - Climate Change and greenhouse gases
  - Why plan for future greenhouse gas emissions reductions?
  - What are Ukiah’s emissions now and where do they need to be?
  - What kinds of emission reduction strategies is Ukiah considering?
  - Instructions for Breakout Session
- Community Feedback: We Want to Hear from You! (30-45 minutes)
  - Breakout stations for Energy, Transportation, Water, and Solid Waste:
  - What steps can the City take to reduce greenhouse gas emissions?
  - What are the challenges and barriers to reducing greenhouse gas emissions?
  - What programs or policies would help overcome these challenges and barriers?
- Breakout Results and Concluding Remarks (15 minutes)

What is a Climate Action Plan?

- A Climate Action Plan identifies policies and programs that a public agency will use to address climate change and reduce greenhouse gas emissions that are within its jurisdiction.
- A Climate Action Plan will typically include an inventory of existing greenhouse gas emissions within the plan area, projected emission levels, a reduction target, policies and programs to achieve those reductions, implementation and monitoring mechanisms, and strategies to address climate change impacts.

What is a Climate Action Plan?

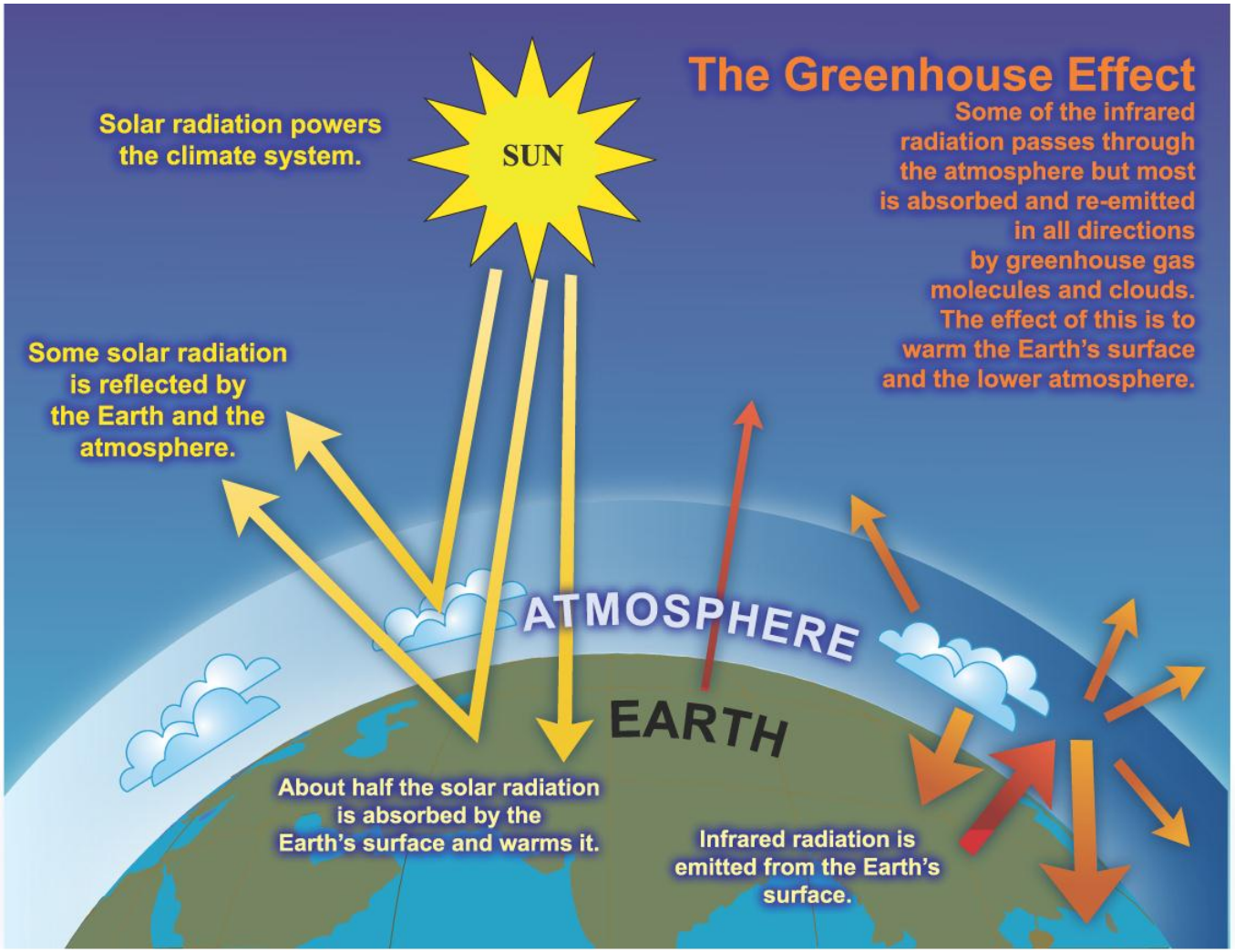
- Relationship to the General Plan: most jurisdictions have developed "stand alone" plans which act as an implementing tool of the General Plan, although some jurisdictions have incorporated a climate action plan into the general plan. In order to be effective, a climate action plan should be consistent and build upon general plan policies.
- Relationship to CEQA: Under the CEQA Guidelines, the review of individual projects may be more efficient (and more effective) when the lead agency has adopted a plan for the reduction of greenhouse gas emissions (see CEQA Guidelines § 15183.5).

Climate Change – the time to act is now

A global problem that requires local action

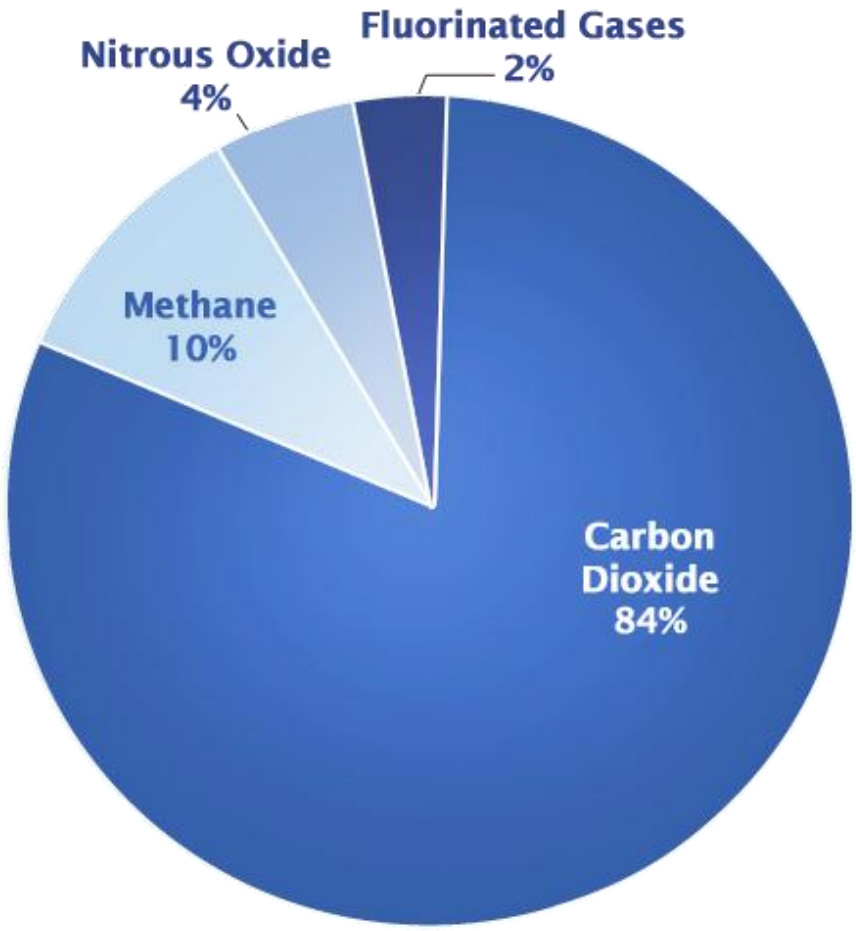
- Changes already experienced; big challenges ahead
- Not just an environmental issue: an economic, social and political issue.
- Local governments – where meaningful action is possible
- Both mitigation and adaptation are needed

The Greenhouse Effect



Source: IPCC, 2007

Greenhouse Gases (GHGs)



U.S. Greenhouse Gas Emissions in 2010

Source: EPA

Primary Sources of GHGs:

Carbon Dioxide

- Fossil fuel combustion

Methane

- Production of coal, natural gas, and oil
- Livestock & agricultural practices
- Decay of organic waste (landfills)

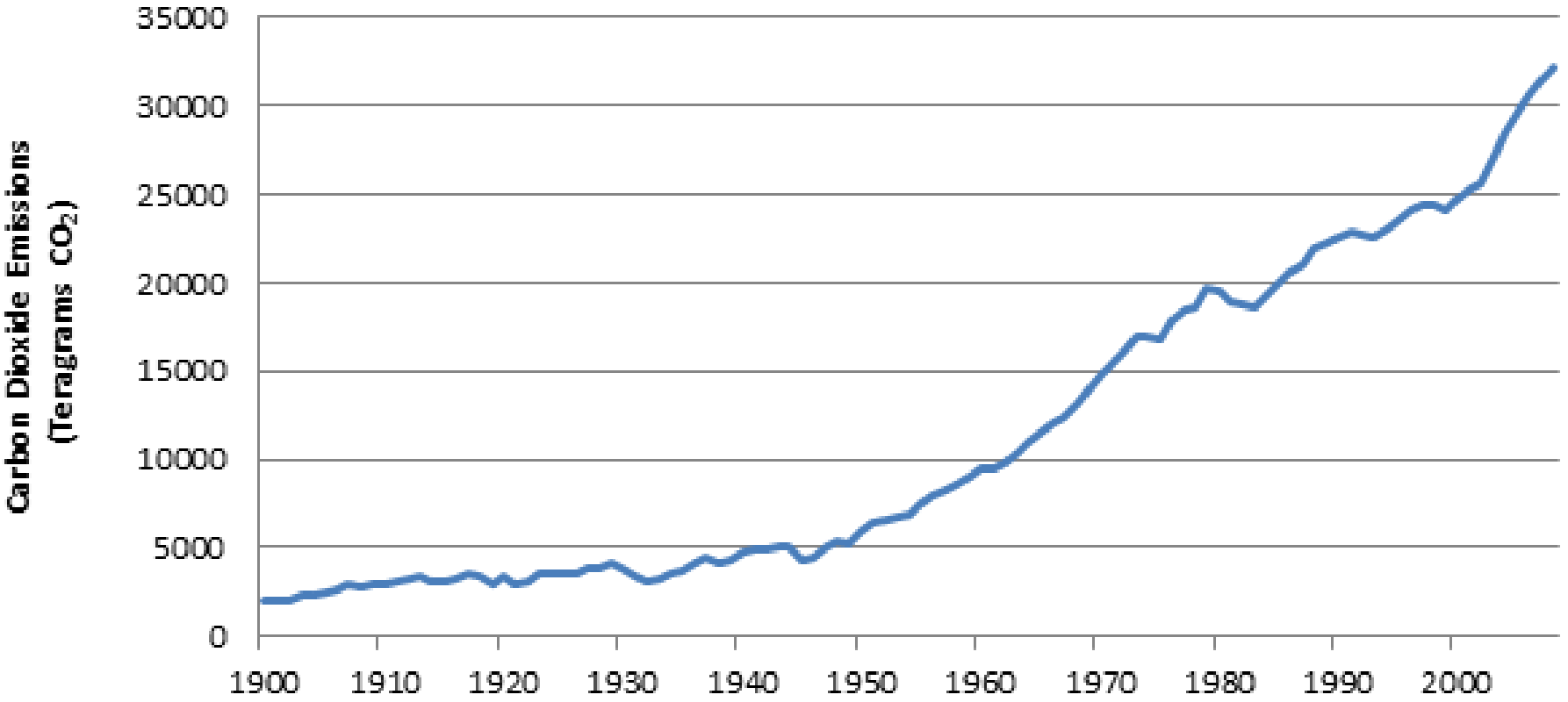
Nitrous Oxide

- Agricultural and industrial activities
- Fossil fuel combustion

Fluorinated gases

- Industrial processes

CO2 Emissions Rapidly Increasing



Global Carbon Dioxide (CO_2) emissions from fossil-fuels 1990-2008

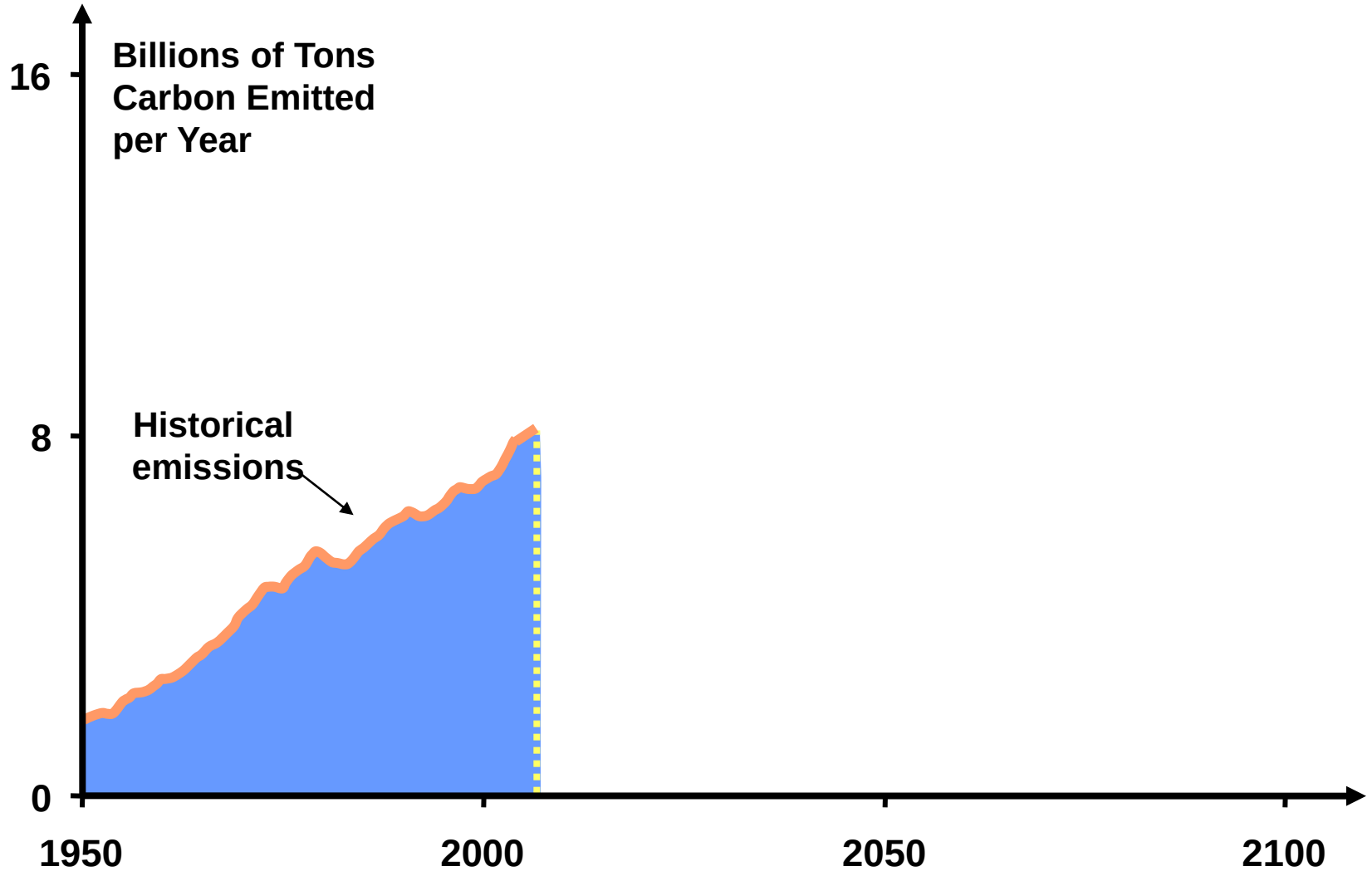
Source: EPA

Climate Change in California

- Reduced snow pack
- More drought
- Impacts to agriculture
- Rising sea level
- Increased risk of wildfire
- More extreme weather events
  - Heat waves
  - Severe storms
  - Floods
- Loss of biodiversity
- Air pollution; human health

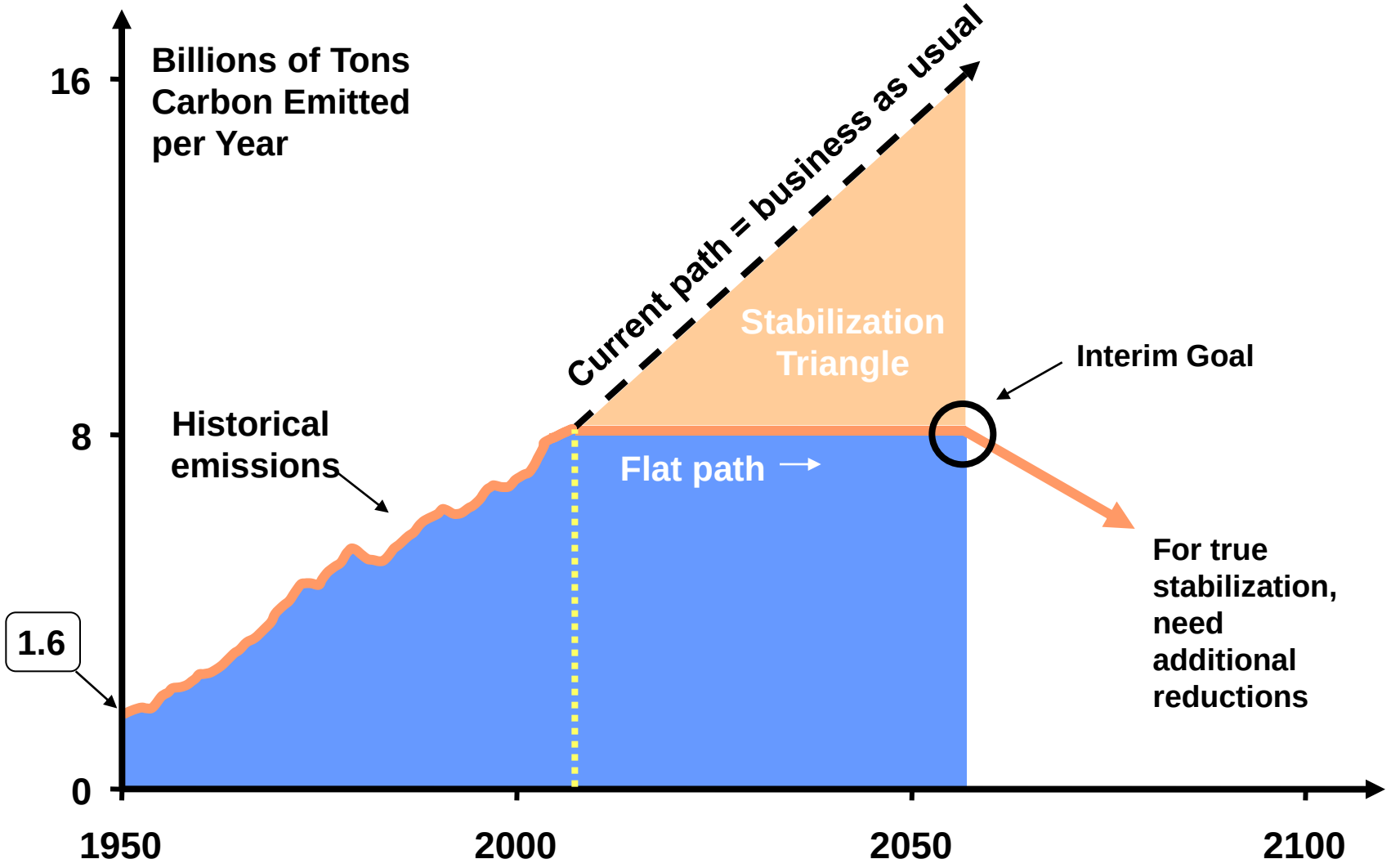
California Department of Forestry & Fire Protection

Climate Stabilization



Adapted from the Carbon Mitigation Initiative, Princeton University

Climate Stabilization



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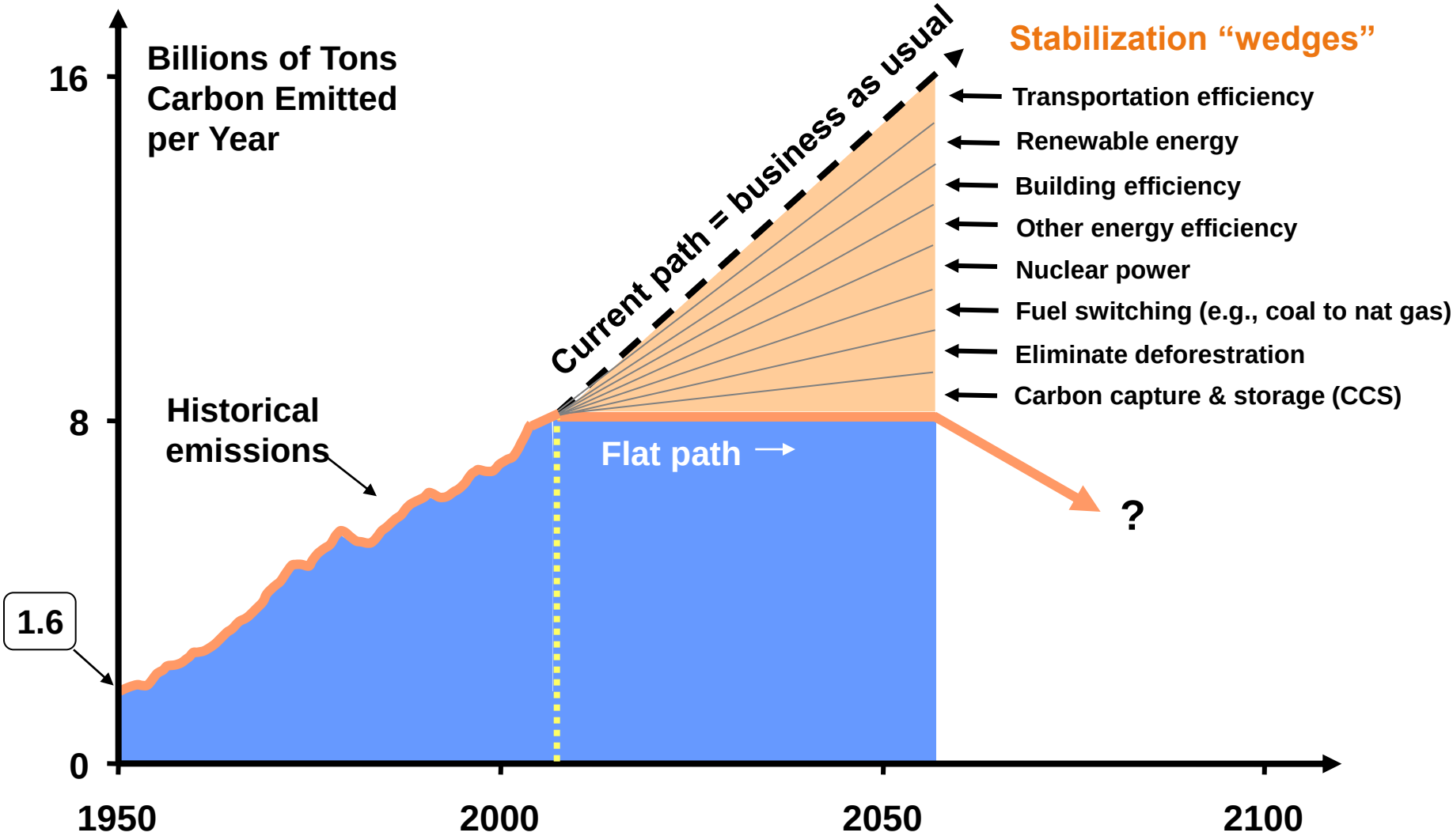
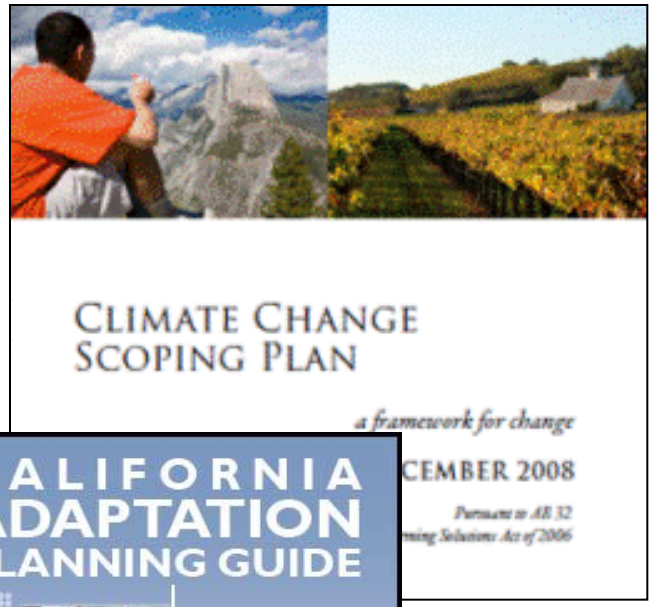


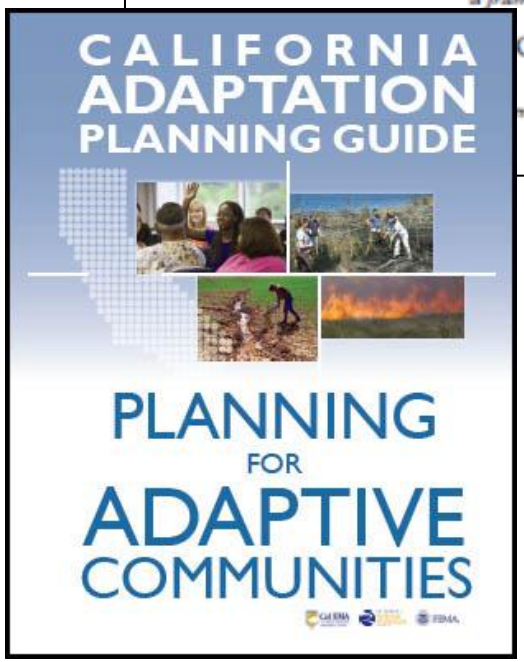
Adapted from the Carbon Mitigation Initiative, Princeton University

California: A Global Leader in the Response to Climate Change

AB 32 and related laws:

- Long term target: 80% below 1990 GHG levels by 2050
- Near term target: 1990 levels by 2020
- More energy from renewables (RPS)
- Emissions cap for large emitters
- Vehicle efficiency standards
- Less sprawl and more transit-oriented development (SB 375)
- Green building code (Title 24)
- Statewide planning for adaptation





Ukiah Climate Action Plan: Provisional Goals

- Reduce GHG emissions to 1990 levels by 2020
- Identify ways to achieve much greater GHG reductions after 2020
- Start preparing now for climate change impacts

What is Ukiah Already Doing to Address Climate Change?

1. High % of electricity from renewable sources
2. Energy conservation programs
3. Bike- and pedestrian-friendly development
4. Diverting solid waste from landfills
5. Conserving water
6. Developing this Climate Action Plan!

Steps to Climate Action Planning

1. Establish a GHG emissions baseline (2005) and forecast future emissions
2. Set emission reduction targets (AB32)
3. Develop & quantify GHG reduction measures
4. Prioritize & implement the measures
5. Monitor the results (e.g., 2015, 2020) and adjust the plan

Ukiah Climate Action Plan: Co-benefits

1. Reduce air pollution
2. Save on energy costs
3. Help develop energy self-reliance
4. Reduce waste of all types
5. Help create green jobs & sustainable economy
6. Increase resilience and protect public health
7. Comply with State regulations

What's in a GHG Inventory?

Community-wide sources

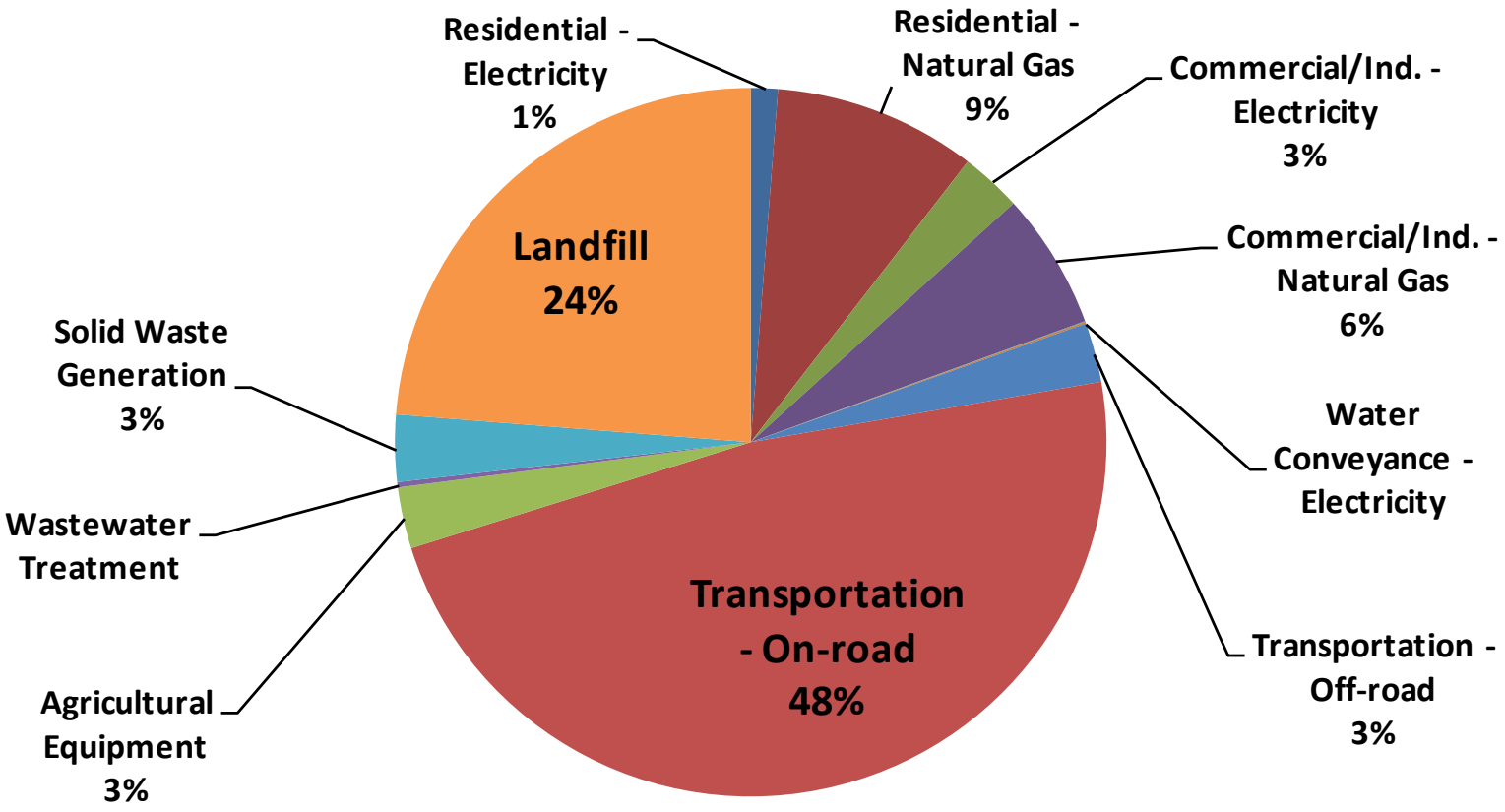
- Energy use
  - electricity, natural gas and industrial fuels
- Vehicle emissions
- Solid waste (landfill methane)
- Water supply (energy)
- Wastewater (energy and process emissions)
- Agriculture (fertilizer and dairy waste)

Local Government Operations sources

- buildings, fleets, operations

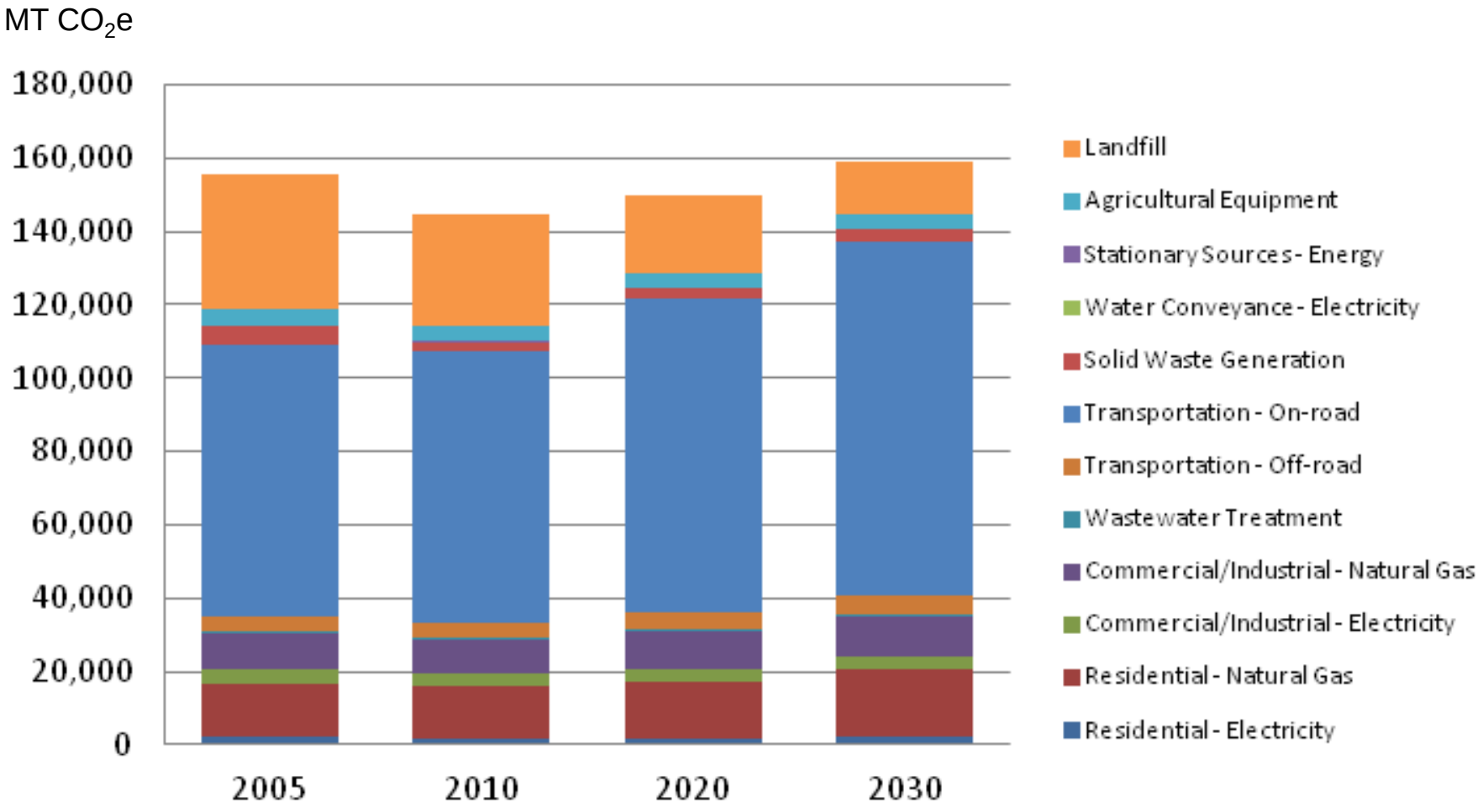
City of Ukiah
Baseline Community GHG Inventory (2005)

Total = 155,480 metric tons CO_2e

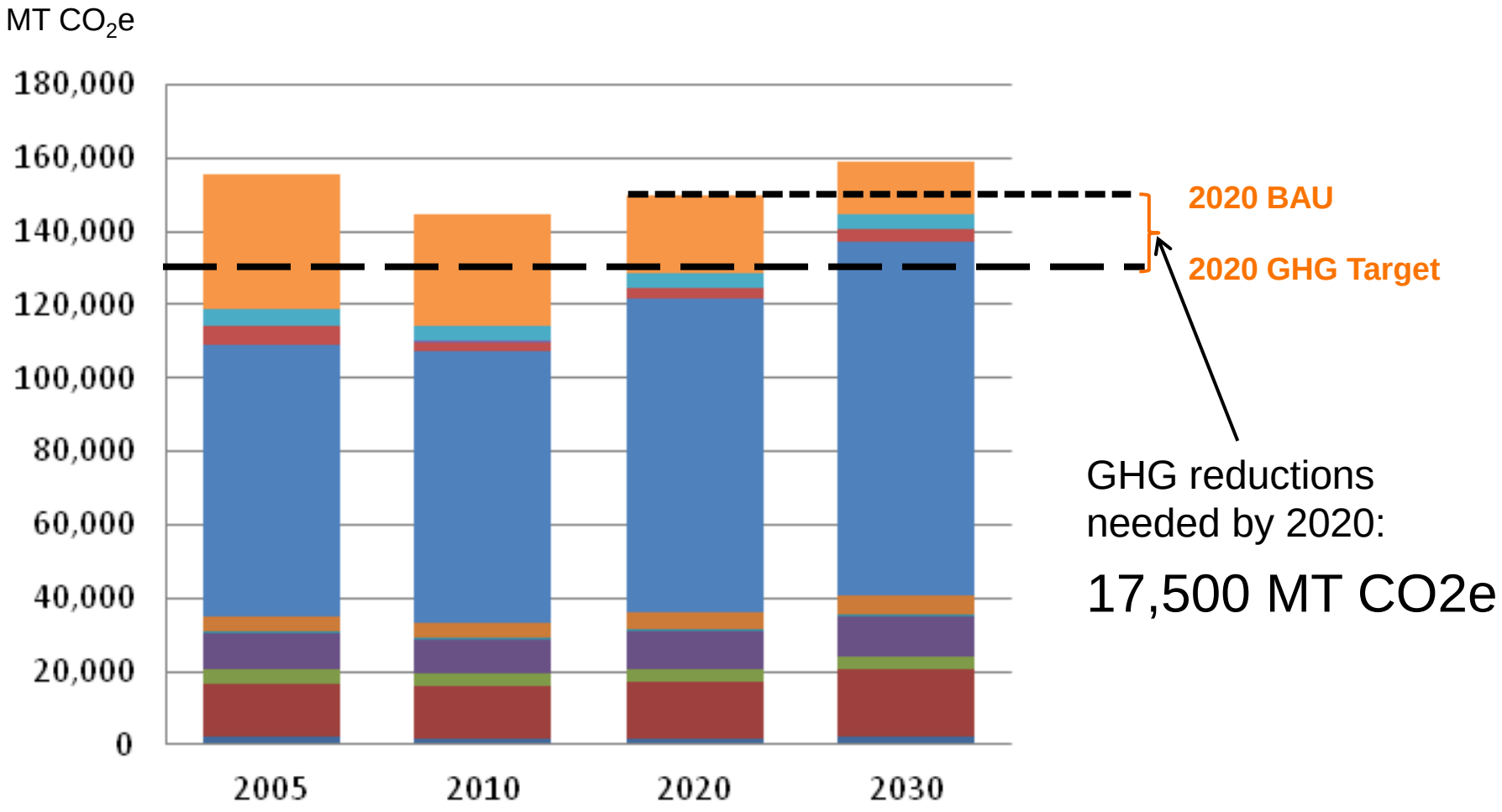


Ukiah GHG Emissions Forecast

Business-as-usual scenario



2020 GHG Target = 1990 levels = 15% below 2005



Where Will GHG Reductions Come From?

Majority from Statewide Measures

- Vehicle Efficiency Standards (Pavley law)
- RPS (lower carbon energy)
- Title 24 (Green Building)
- Mandatory Commercial Recycling
- Low Carbon Fuel Standard

Where Will GHG Reductions Come From?

The Rest from Local Actions

Green Building Codes (new buildings & retrofits)

Energy Efficiency (existing buildings)

Land Use and Transportation – Reduce vehicle trips

Water Conservation & Reuse

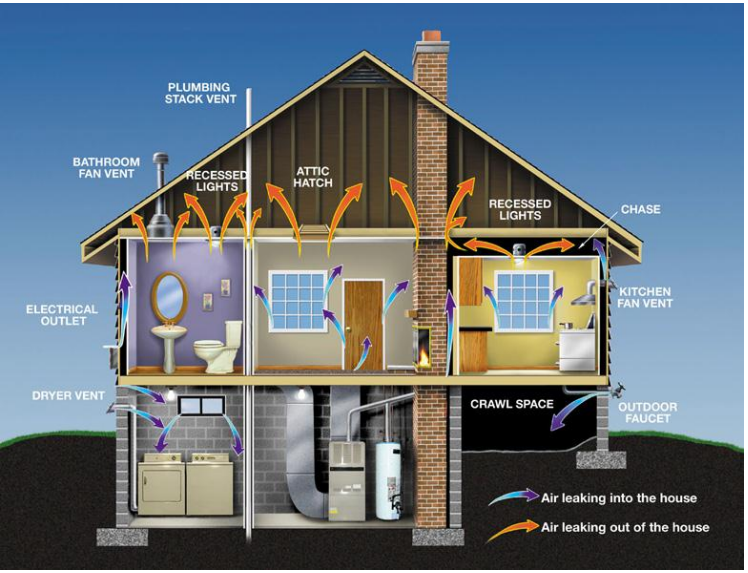
Solid Waste Diversion

The CAP Will Target Four GHG Categories

1. Energy
2. Transportation & Land Use
3. Waste
4. Water
5. + Adaptation

Reducing GHG Emissions:

Energy Use in Buildings



- Renewable energy (i.e., solar)
- Existing buildings:
  - Energy audits
  - Efficiency measures: heating, cooling & lighting
  - Smart meters; price signaling; demand response
- New buildings: design standards
  - LEED
  - EnergyStar
  - City/County programs & codes
- Community Choice/Green Power purchase agreements

Reducing GHG Emissions:

Transportation and Land Use

- Increase automobile alternatives
  - Bike, pedestrian friendly
  - Public transport
- Denser development, mixed use
- Infrastructure for alternative vehicles & fuels
- Commute programs/ride share/car share

Reducing GHG Emissions:

Energy Use in Infrastructure

- High efficiency streetlights & traffic signals
- More efficient water & wastewater systems
- Water conservation
- Support local sustainable agriculture

Reducing GHG Emissions:

Waste and Materials

- Recycling
- Divert organics from landfills, composting
- Landfill methane capture for energy
- Green Purchasing/ Packaging Programs

Preparing for Climate Change

- **Engage and educate the community** about the expected impacts and need for better planning.
- **Vulnerability analysis** to assess potential local impacts to infrastructure, economy, vulnerable communities and natural systems.
- **Develop Local Adaptation Plan** and/or amend General Plan and Hazard Mitigation Plan – objectives, policies, and specific measures
- **Inherent Uncertainty** – *the Climate Action Plan itself must be adaptable*

2020 Target is just a start…

How can we achieve deep cuts in GHGs?
Can we avoid chaos and conflict over resources?
Can we envision a carbon neutral future?

- A transformed economy?
- “Progress” redefined?
- Less material consumption?
- Less travel?
- Are we dependent on governments and technology to save us?