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# **The New Carbon Challenge: A Pathway to Carbon Neutral and Net Positive Communities**

**March 21, 2015**

**Local Government Commission  
24<sup>th</sup> Annual Ahwahnee Conference**



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# Agenda



- History and Early Innovations
- Climate Data
- Net Zero Goal
- Early Actions
- Path to Net Zero-4 Focus Areas
  - Energy
  - Transportation
  - Consumption
  - Community Engagement
- Challenges and Next Steps



# History and Early Innovations



## Energy

- Title 24 – origins in Davis
- PVUSA – 1<sup>st</sup> Utility Scale grid-tied Solar PV Plant

## Transportation

- Bikes!
- Bike lanes - 1967
- Unitrans - 1968

**UNITRANS**



## Consumption

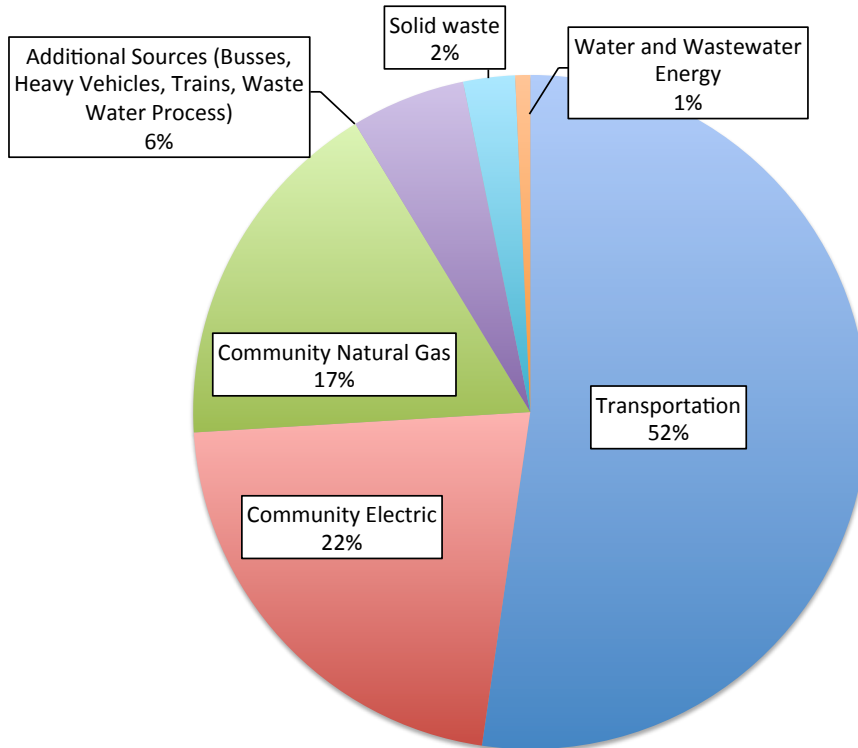
- First curbside recycling in 1970



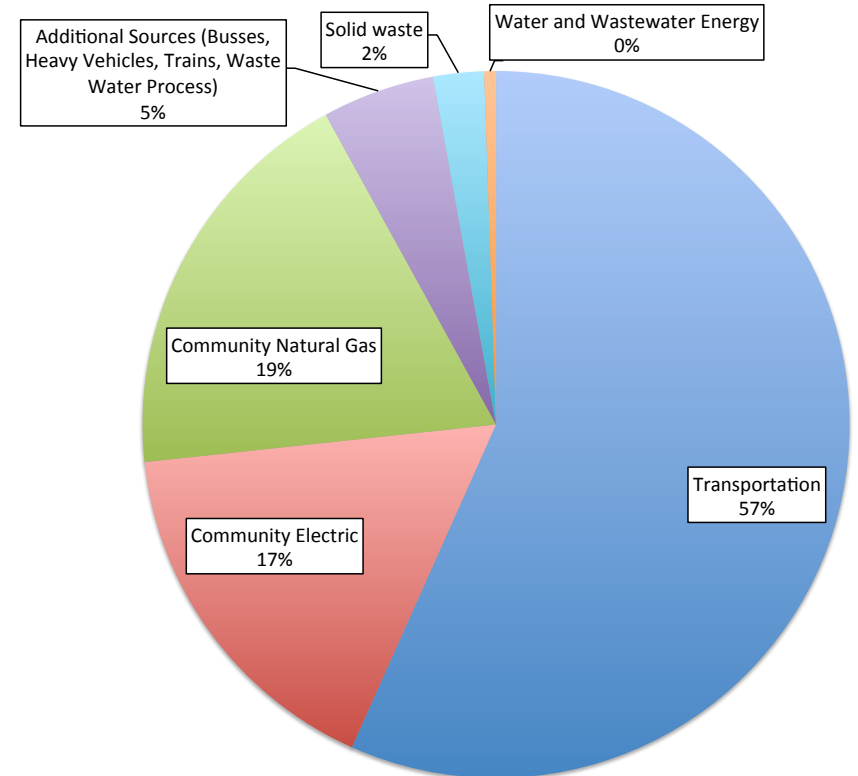
# Community Trends



2007 Annual Greenhouse Gas Emissions (MT CO2e)

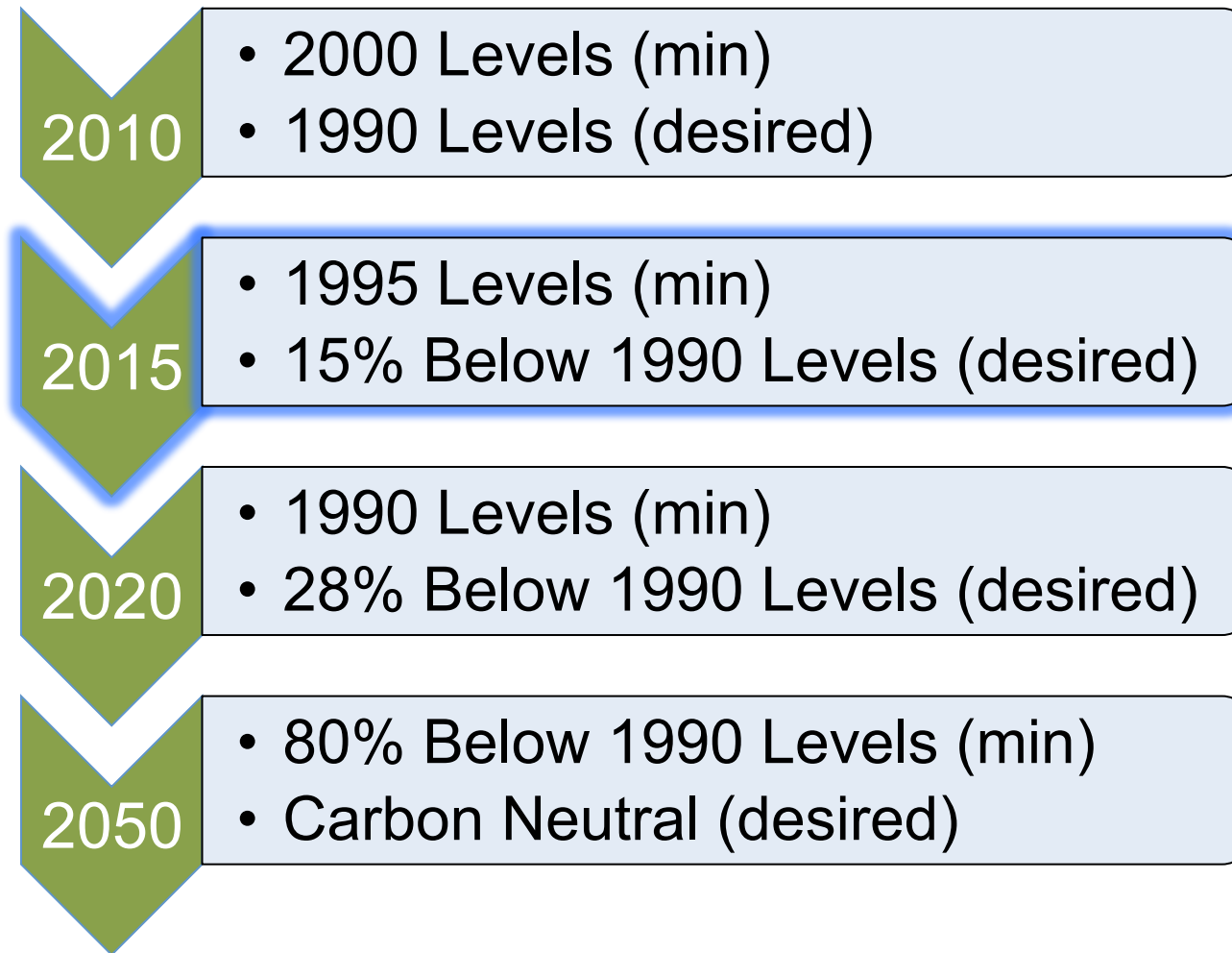


2010 Annual Greenhouse Gas Emissions (MT CO2e)



- Although total emissions have been reduced by 7% between 2007 and 2010, transportation continues to be the major cause of emissions

# Communitywide Goal – Adopted 2008

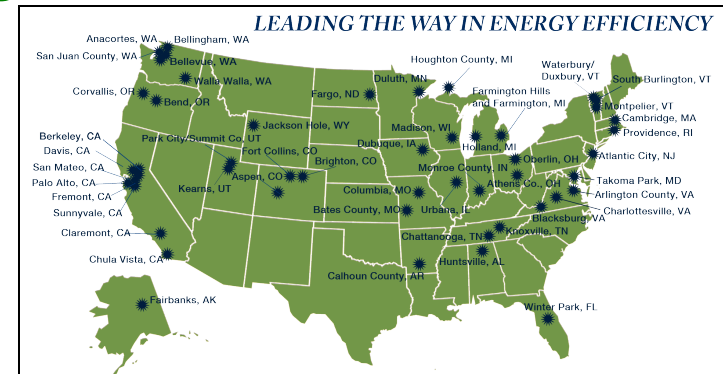


# Path to Net Zero – Energy



## Focus on Efficiency and Renewables

- Davis Future Renewable Energy and Efficiency (FREE) (CEC grant \$)
  - Plan for City Net Zero Energy
- Georgetown Energy Prize (semi-finalist)
  - Motivate Community Action
- Community Choice Energy (CCE)
  - Community Scale Energy Program
- PVUSA Expansion (Currently 1MW)
  - Meet 10% of community electricity needs
  - want to expand to 20 MW (100 acres)





# Path to Net Zero – Transportation



- EV Readiness Award 2014 (Bay Area Climate Collaborative)
  - Planning for community-wide EV charging network



- EV Charging Grant (CEC)
  - Infrastructure to support electrification of transportation system

- Various Mode Shares
  - Plan to increase to 50% by 2035



2035 Goal: 30% biking 10% transit 10% walking
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- Beyond Platinum
  - One of 4 Platinum communities in US since 2013
  - Achieve “Diamond” level by 2020

- Unitrans/YoloBus/Capitol Corridor
  - Continued support of shared transit



# Path to Net Zero – Consumption



- Solid Waste Reduction Goals
- Complete Organics Composting
  - Implementation in 2015
- WaterSmart
  - Build on 25% water use reduction from 2014
  - Water consumption history on bills
- BioDigester
  - Support local efforts
  - Collaboration with Yolo County
  - Collaboration with **UC DAVIS**  
UNIVERSITY OF CALIFORNIA



Clean World Partners – UC Davis



# Path to Net Zero – Community Engagement



- Cool Davis – collaborative non-profit structure
- Cool CA Challenge Award
  - Communitywide Behavior Shift
  - Coolest California City - 2013



CA Air Resources Board Award



The Average Davis Household is responsible for 40.8 tons CO<sub>2</sub>/yr

To reach sustainable levels:

Households must work to reduce their footprint to 2 tons CO<sub>2</sub> /yr.

# Challenges and Next Steps



## Budgeting for Activities to Achieve Goals

- Sustainability Department or sustainability in every department? Need for resources - \$\$\$
- Creative ways to get the work done

## Statewide Support & Need for Program Evolution

- CPUC & CEC programs measure energy reductions → evolve to new metrics? e.g. measuring GHG reductions
- e.g. traffic analysis- currently Level of Service (LOS) → evolve to reductions in VMT

## Going Beyond

- Data availability & consistency to enable decision-making and monitoring based on what will “move the needle”
- What happens after the low hanging fruit is gone?