Shasta Regional Climate Action Plan
Community Workshop

May 11, 2011

Presentation Overview

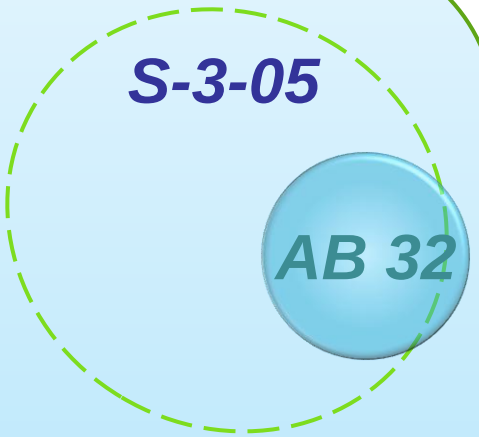
- Turning State Mandates into Regional and Local Opportunities
- The Big Picture (Regional Baseline GHG Inventory)
  - Jurisdictional inventories
  - City and county comparisons
- Understanding the Largest Sources of GHG Emissions
  - Energy Sector
  - Transportation Sector
  - Waste / Water Sector
- Future GHG Emission Projections (2020 and 2035)

Turning State Mandates into Regional and Local Opportunities

State Mandate → Regional and Local Opportunities

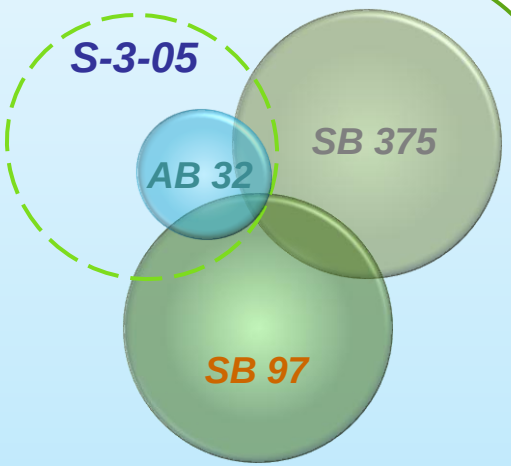
California Legislation

- **Executive Order S-3-05 (2005)**
  Reduce GHGs to:
  - 80% below 1990 levels by 2050
- **AB 32 Global Warming Solutions Act (2006)**
  Reduce GHGs to:
  - 1990 levels by 2020



State Mandate → Regional and Local Opportunities

California Legislation



- **Local governments role:**
  - State recommends 15% below current levels by 2020
  - Demonstrate trajectory toward 2050 target

- **Senate Bill 375 (2008)**
  - State sets regional vehicle emissions targets (*0% growth*)
  - Land use and transportation
  - Transportation funding and consistency with regional plan

- **Senate Bill 97 (2008)**
  - Jurisdiction can use Climate Action Plan to reduce impacts of individual projects

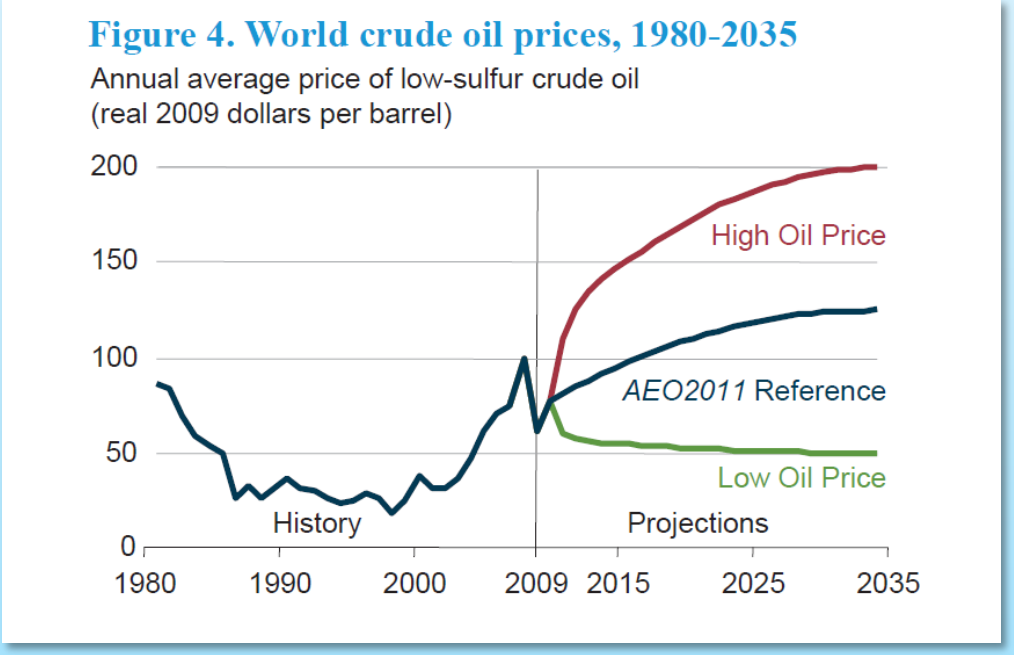
State Mandate → Regional and Local Opportunities

Regional and Local Opportunities

- Energy Cost Savings
- Transportation Cost Savings
- Water Supply Protection
- Energy Security
- Air Quality Improvements
- Public Health Improvements

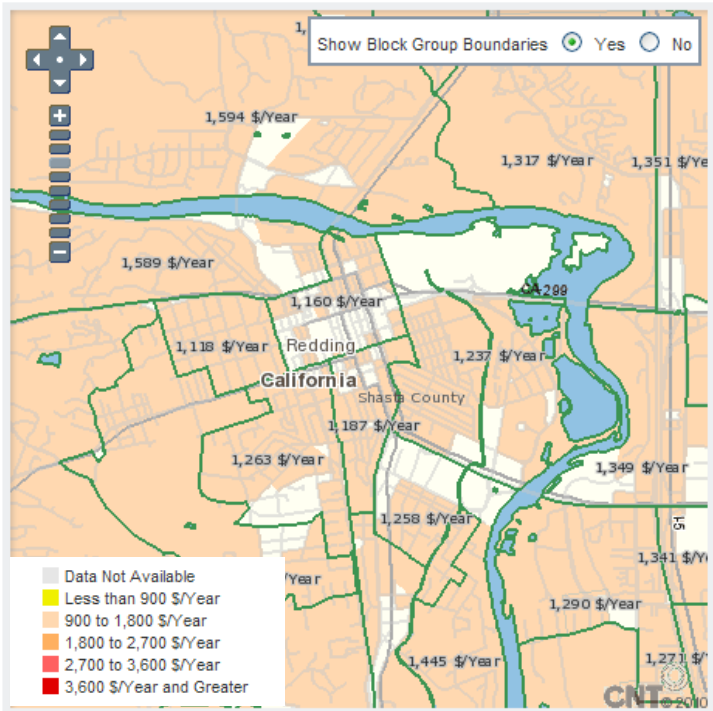
State Mandate → Regional and Local Opportunities

Regional and Local Opportunities

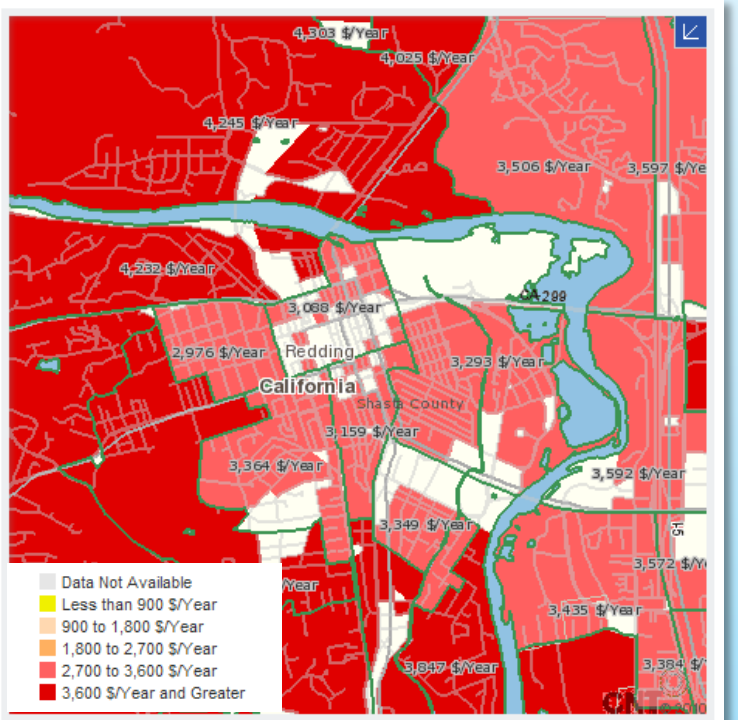


State Mandate → Regional and Local Opportunities

Annual Household Gasoline Expenses

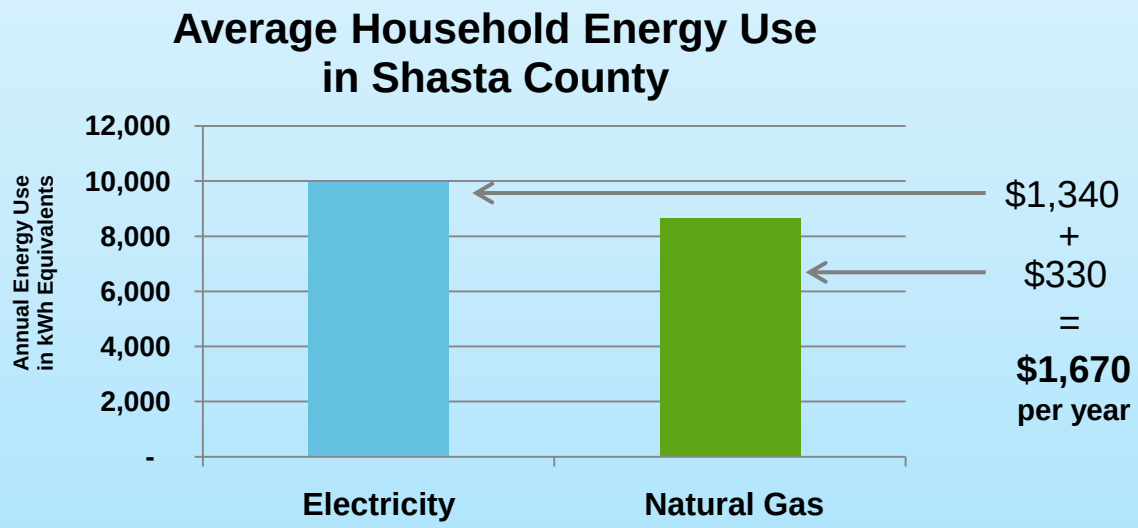


2000 Gas Prices

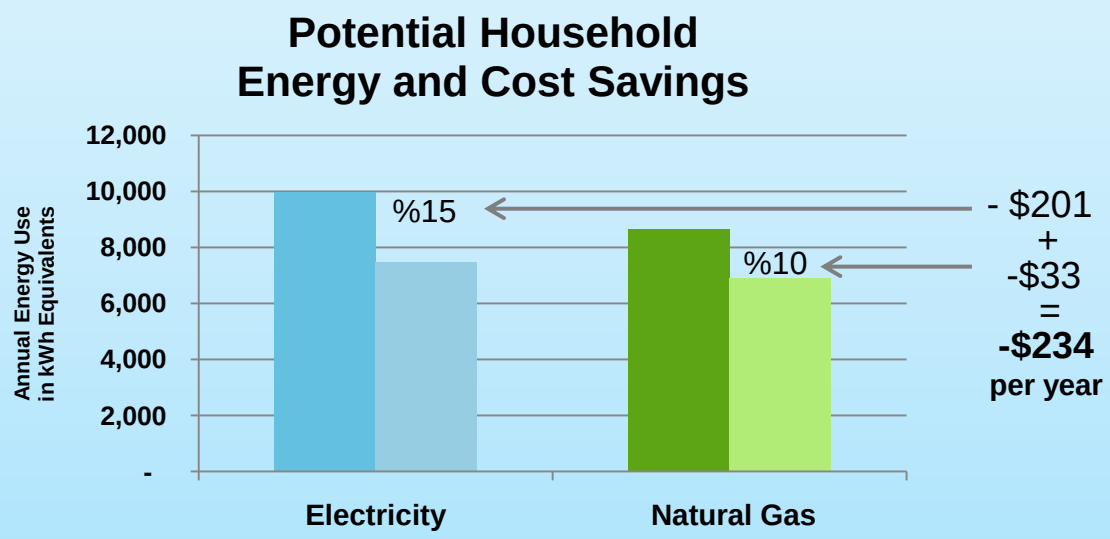


2008 Gas Prices

State Mandate → Regional and Local Opportunities



State Mandate → Regional and Local Opportunities



The Big Picture

What is a Greenhouse Gas Inventory?

Calculation of a community's greenhouse gas emissions for a single year based on emissions generating activities.

Sectors
Building Energy
Transportation
Solid Waste
Water Consumption
Wastewater Treatment
Stationary Sources (Industrial)
Agriculture
Forestry
Off-Road Vehicle Operation
Recreation (e.g., boating)

Example

8,845 million gallons of water used in Redding resulted in 8,208 metric tons of emissions in 2008.

Results of the Regional GHG Inventory

Countywide Greenhouse Gas Emissions Inventory		
	Total Baseline 2008 Emissions	
	MT CO_2e	***Percentage***
Energy Consumption	647,618	24%
Transportation	969,924	35%
Solid Waste	102,083	4%
Water Consumption	17,817	1%
Wastewater Treatment	22,898	1%
Stationary Sources (Industrial)	562,428	21%
Agriculture	132,234	5%
Forestry	156,538	6%
Off-Road Vehicles/Equipment	75,330	3%
Recreation	53,005	2%
Total	**2,739,875**	

Operational Inventory –

Emissions that the cities and county have control over

Countywide Greenhouse Gas Emissions Inventory		
	Operational Baseline 2008 Emissions	
	MT CO_2e	***Percentage***
Energy Consumption	647,618	30%
Transportation	969,924	45%
Solid Waste	102,083	5%
Water Consumption	17,817	1%
Wastewater Treatment	22,898	1%
Agriculture	132,234	6%
Forestry	156,538	7%
Off-Road Vehicles/Equipment	75,330	3%
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Total	**2,177,447**	

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Comparison of Cities and County

Greenhouse Gas Emissions Inventory by Jurisdiction								
	Baseline 2008 Emissions (MT CO_2e/Year)							
	Anderson		*Redding*		*Shasta Lake*		*Unincorporated County*	
Energy Consumption	25,113	21%	333,253	32%	82,943	57%	206,309	24%
Transportation	80,176	67%	593,319	57%	50,302	34%	246,128	29%
Solid Waste	5,057	4%	63,653	6%	4,139	3%	29,233	3%
Water Consumption	661	1%	8,208	1%	946	1%	8,001	1%
Wastewater	3,495	3%	11,735	1%	3,327	2%	4,340	1%
Agriculture	0	0%	0	0%	0	0%	132,234	15%
Forestry	0	0%	0	0%	0	0%	156,538	18%
Off-Road	4,372	4%	37,407	4%	4,249	3%	29,302	3%
Recreation	247	0%	2,117	0%	240	0%	50,401	6%
Total	**119,121**		**1,049,692**		**146,146**		**862,486**	

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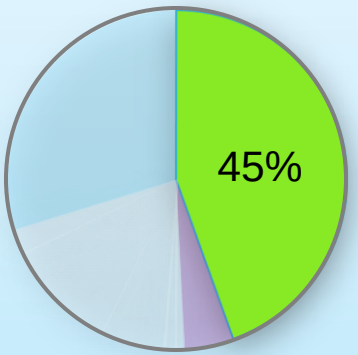
Understanding the Largest Sources of Emissions

Transportation Sector

Transportation emissions composes nearly one half of total emissions in Shasta County

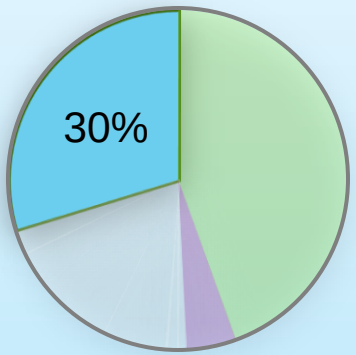


Vehicle Miles Traveled per Household per Day

Anderson	Redding	Shasta Lake	Unincorporated
20.9	33.0	17.4	30.8

Energy Sector

Building energy use generates almost a third of total emissions in Shasta County



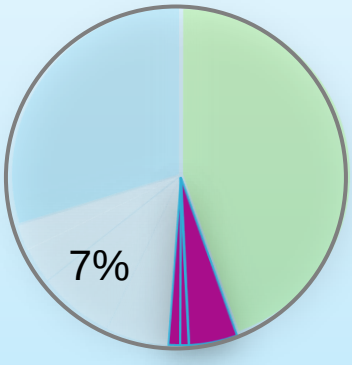
Electricity Consumption (kWh) per Household per Year

Anderson	Redding	Shasta Lake	Unincorporated
8,090	10,690	10,080	10,700

Waste, Wastewater, Water Sectors

Solid waste generates 5% of total emissions in Shasta County

Water consumption and wastewater treatment combined generate 2% of total emissions

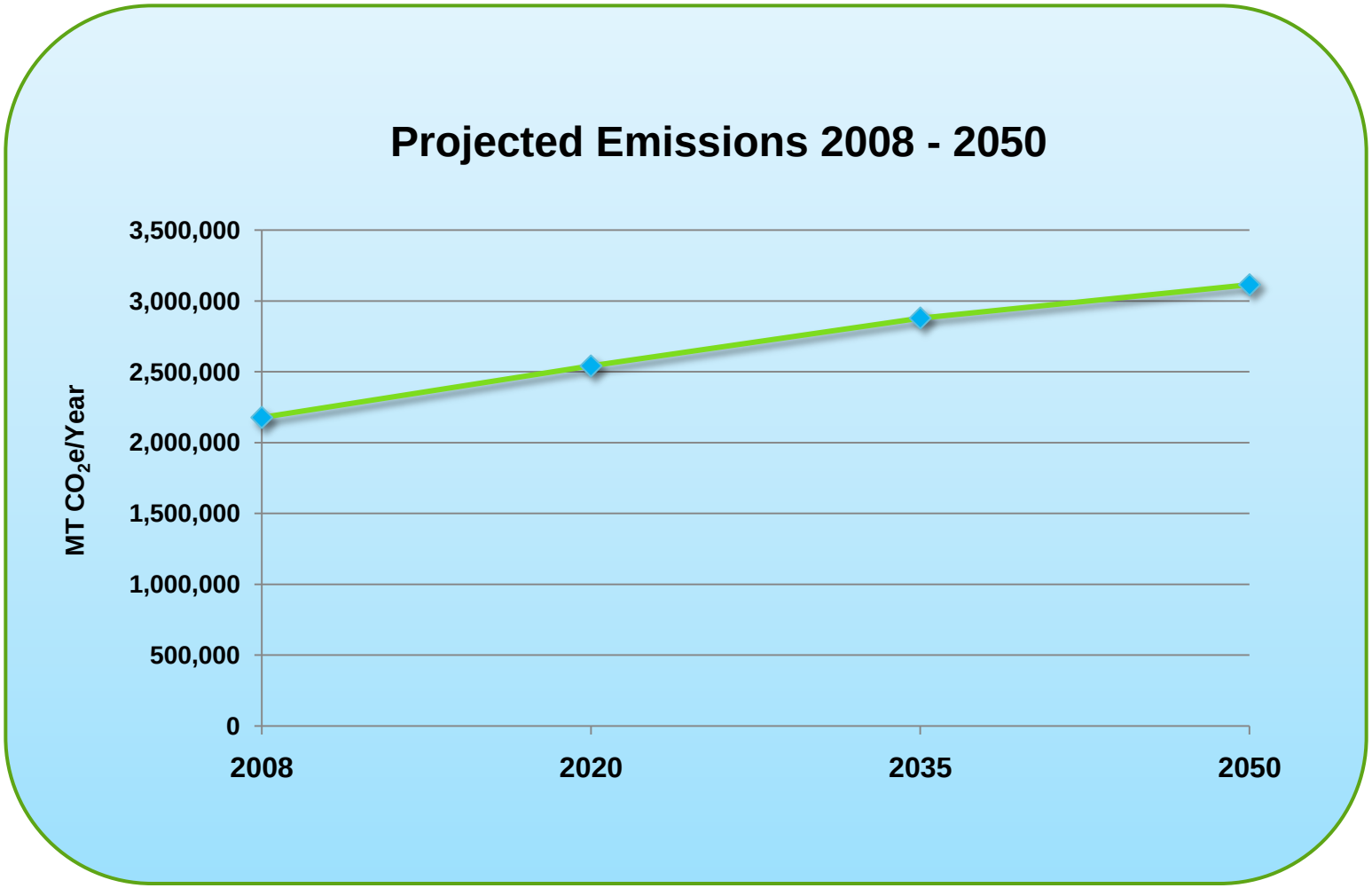


Annual Metric Tons of Waste to Landfills

Anderson	Redding	Shasta Lake	Unincorporated
5,413	79,015	3,964	33,538

Projections (2020, 2035, 2050)

Projected Countywide Emissions

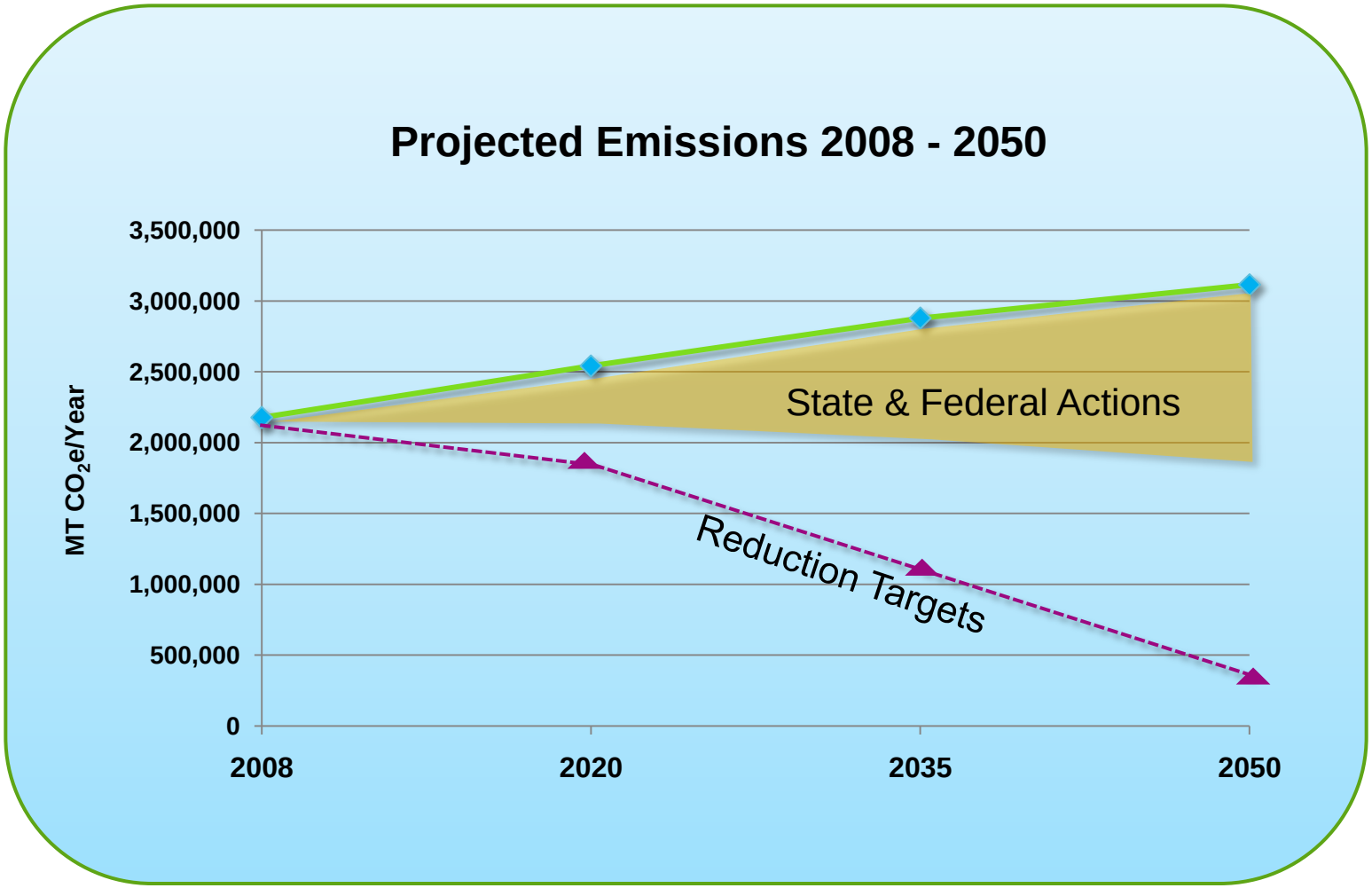


Projected Countywide Emissions

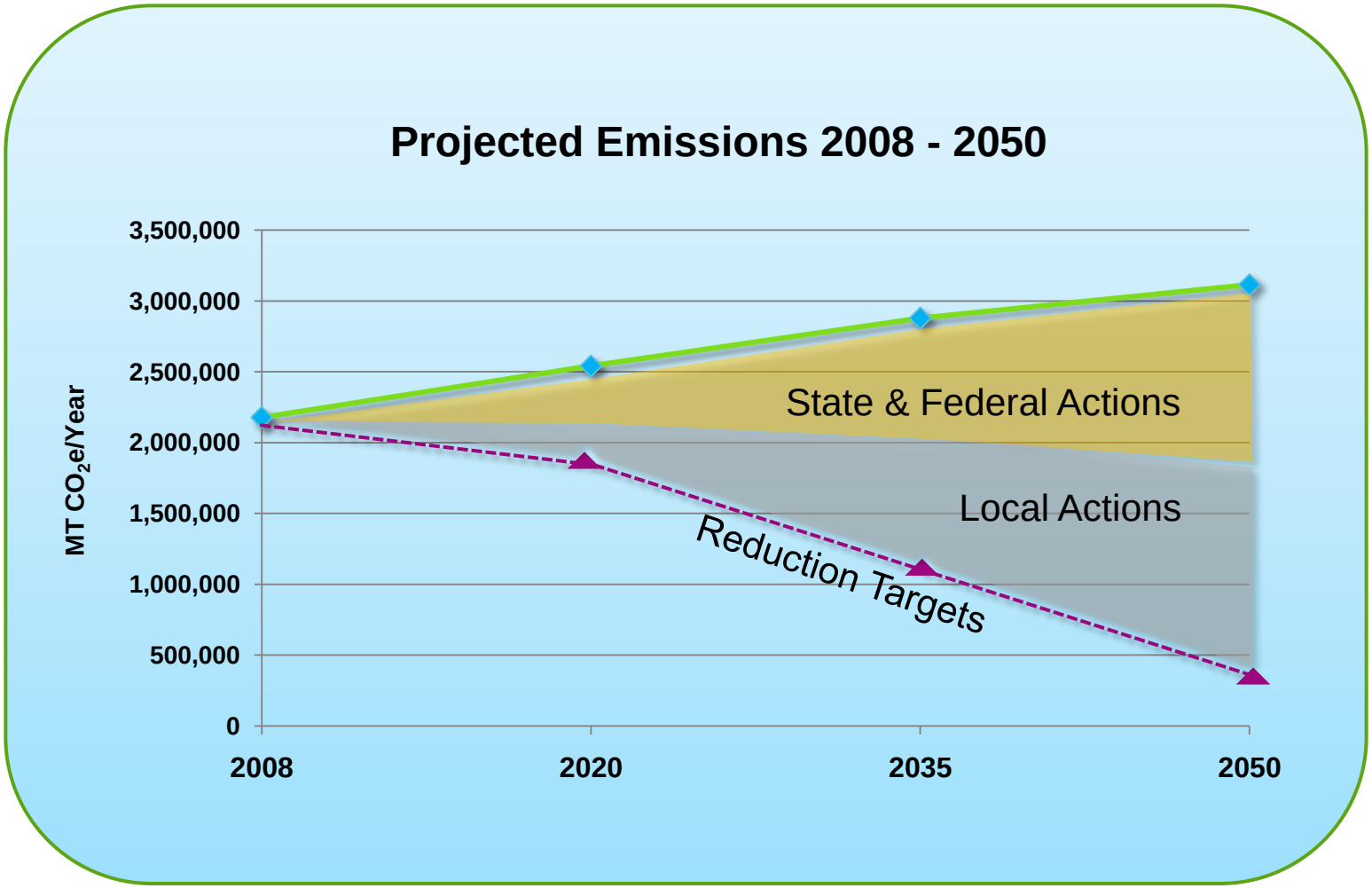
Countywide Greenhouse Gas Projected Emissions					
	Operational GHG Emissions 2008 - 2050				
	2008	***2020***	***2035***	***2050***	***% Change 2008 - 2050***
Energy	647,618	709,844	842,476	995,450	54%
Transportation	969,924	1,215,028	1,298,257	1,298,257	34%
Solid Waste	102,083	111,892	132,799	156,912	54%
Water	17,817	19,529	23,178	27,386	54%
Wastewater	22,898	25,098	29,788	35,196	54%
Agriculture	132,234	132,234	132,234	132,234	0%
Forestry	156,538	156,538	156,538	156,538	0%
Off-Road Vehicles	75,330	95,197	131,650	148,351	97%
Recreation	53,005	76,364	131,943	163,874	209%
Total	**2,177,447**	**2,543,744**	**2,880,898**	**3,116,248**	**43%**

Statewide Reductions

Statewide and Federal Actions



Local Actions



What’s to be done about it…

What is the plan?

Develop Greenhouse Gas Inventory & Forecasts

↓

Develop Preliminary Measures

↓

Conduct Measure Cost Effectiveness Analysis

↓

Develop Final Measures

↓

Prepare Draft Climate Action Plan

↓

Prepare Final Climate Action Plan and CEQA

Working Group

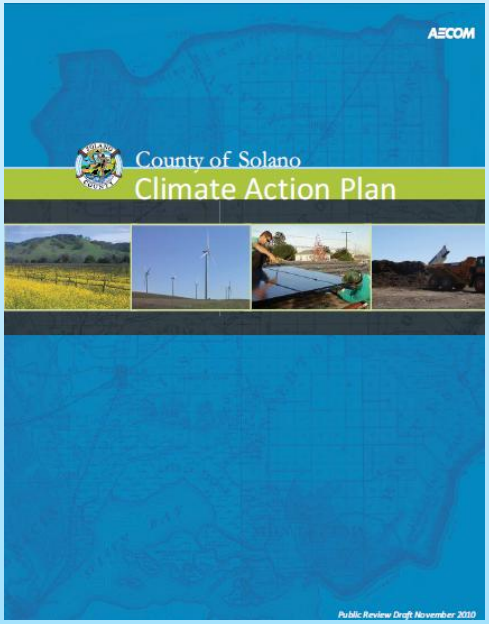
Working Group Members

- City of Anderson
- City of Redding
- City of Shasta Lake
- Lehigh Cement
- Redding Electric Utility
- Shasta Builder’s Exchange
- Shasta County Cattleman's Association
- Shasta County Dept of Resource Management
- Shasta County Public Health (observational member)
- Shasta County Regional Transportation Planning Agency
- Shasta Ranch Aggregate
- Sierra Pacific Industries

Project Process

Prepare Draft Climate Action Plan

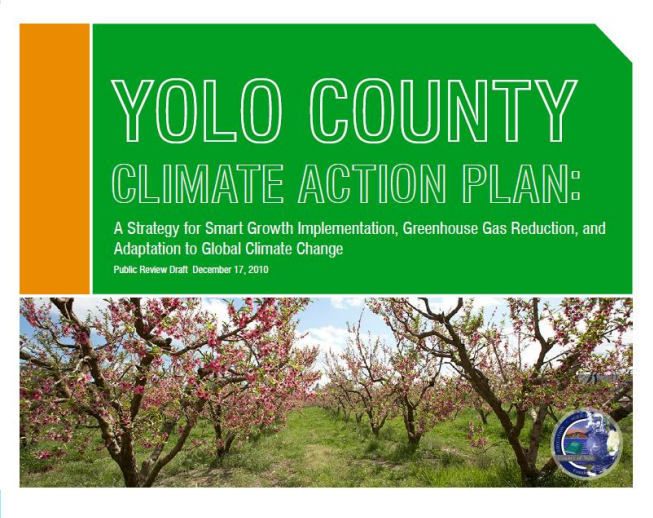
- District & Working Group Review of Administrative Draft CAP
- Preparation of Public Review Draft CAP
- Public Review Period & Workshop
- Board of Supervisors Study Session
- Optional City Council Study Sessions



Project Approach

Final Climate Action Plan and CEQA

- Incorporate Board, Council, and Public comments
- Prepare Final CAP
- CEQA Documentation
- Plan Adoption



Workshop Exercises

Quiz Time! (15 minutes)
Understanding your community (activity data and cost per jurisdiction)

Brainstorming Solutions (20 minutes)
What are you already doing to reduce emissions?
What else can we be doing to reduce emissions?

Tell the Group!
Present the results of your groups work to the rest of the workshop

Workshop Exercises

H E L L O

My name is…

#

Please be good to your fellow participants…

No cell phones

No side conversations

Play nice

Listen to others

Work within the time given

Any others?

Shasta Regional Climate Action Plan
Community Workshop

May 11, 2011