

California's Climate Change Policy

Louise Bedsworth

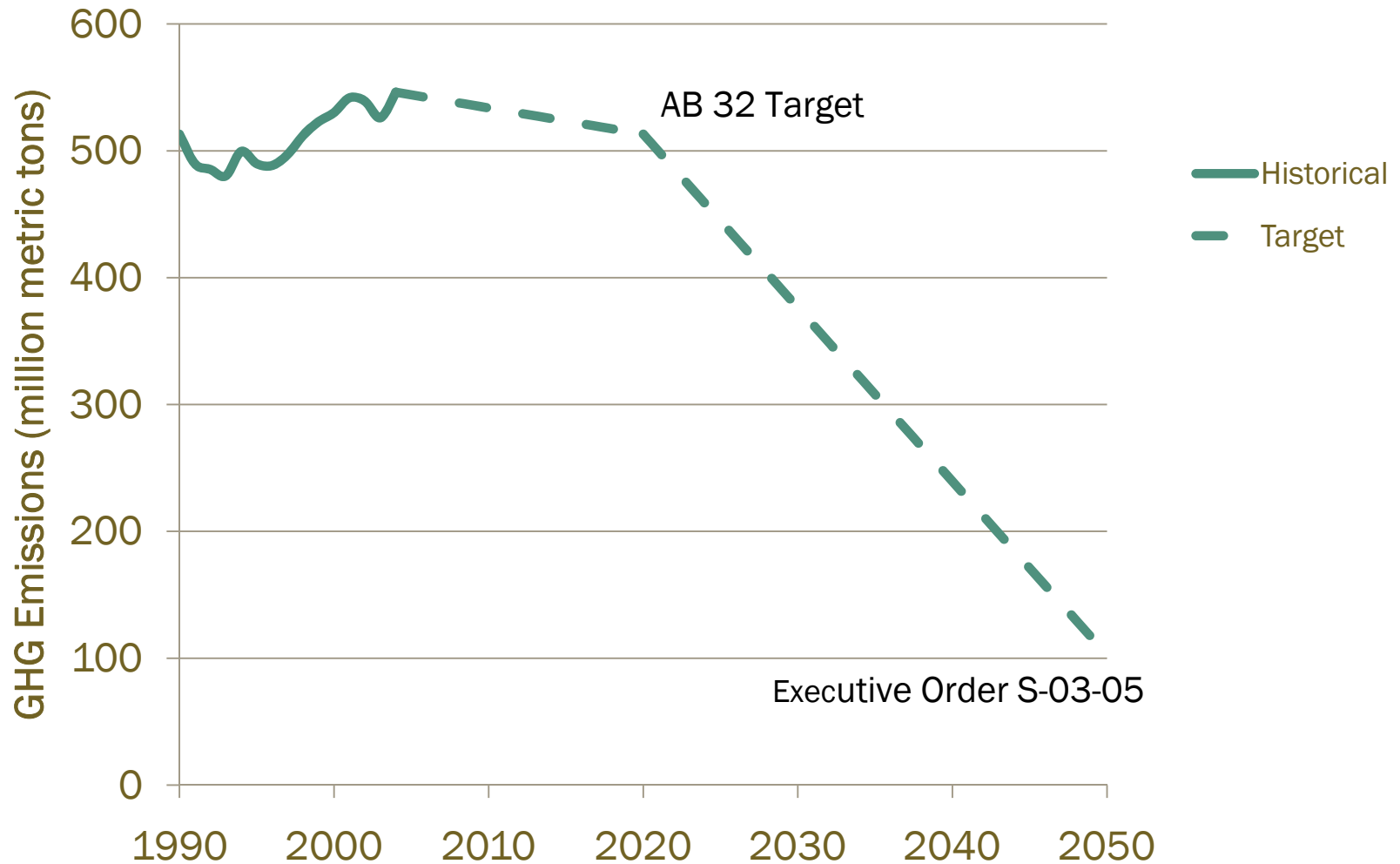


Outline

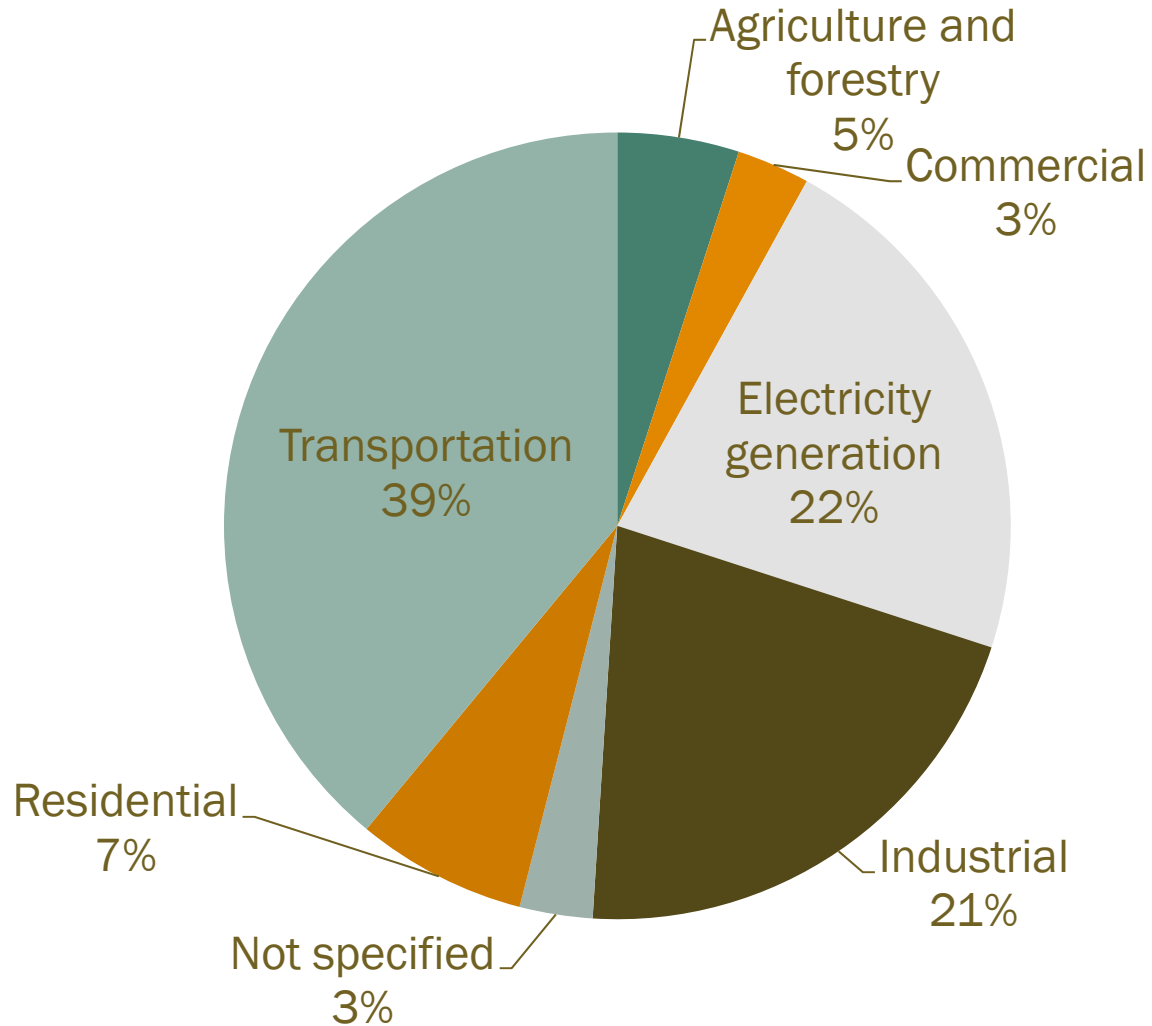
- Introduction
- Climate impacts and challenges
- Reducing emissions
- Preparing for impacts
- Recommendations



California Has Established Aggressive GHG Emission Targets



California's GHG Emissions, 2006

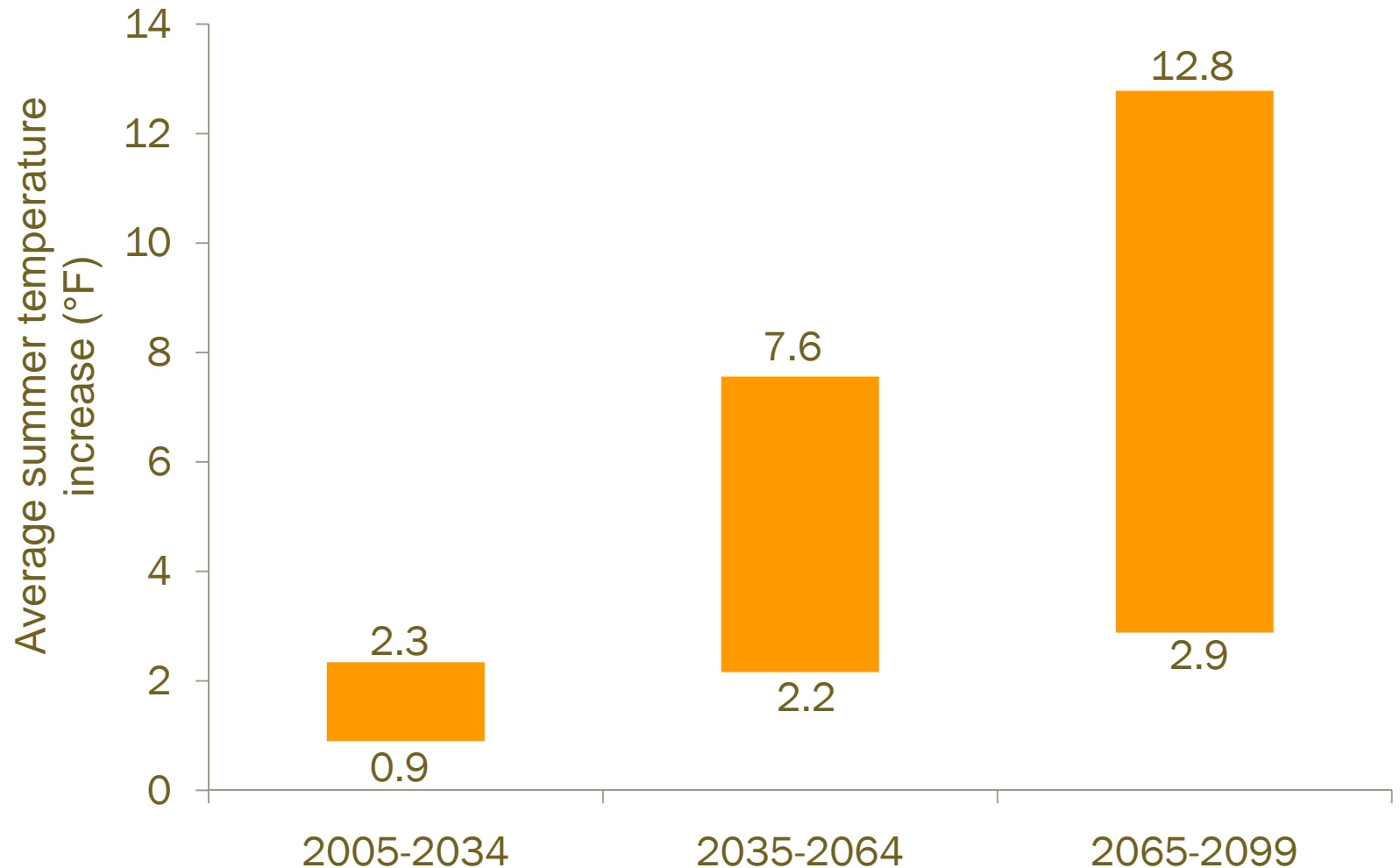


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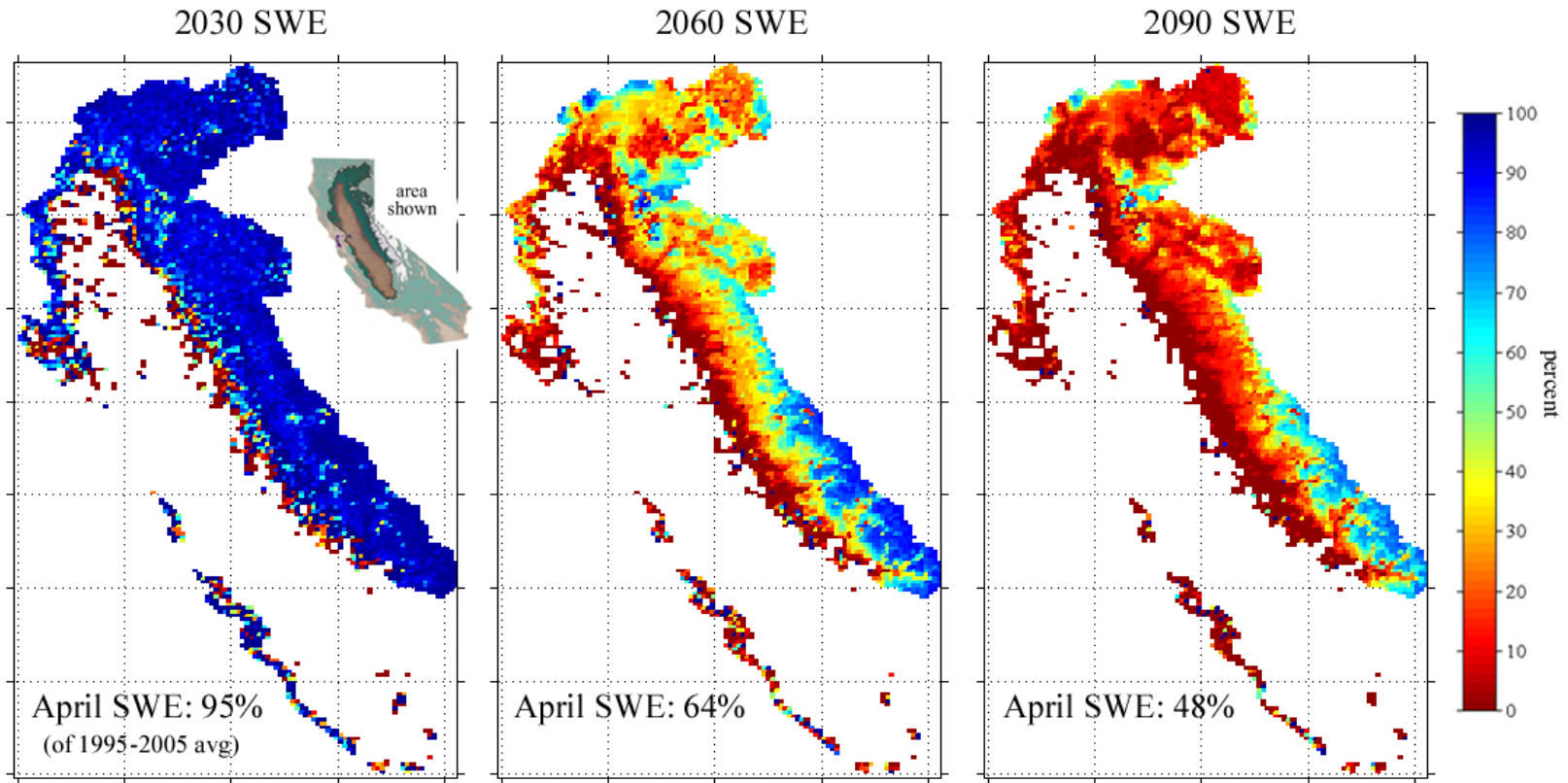
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Temperatures Will Rise, Even With GHG Emission Reductions



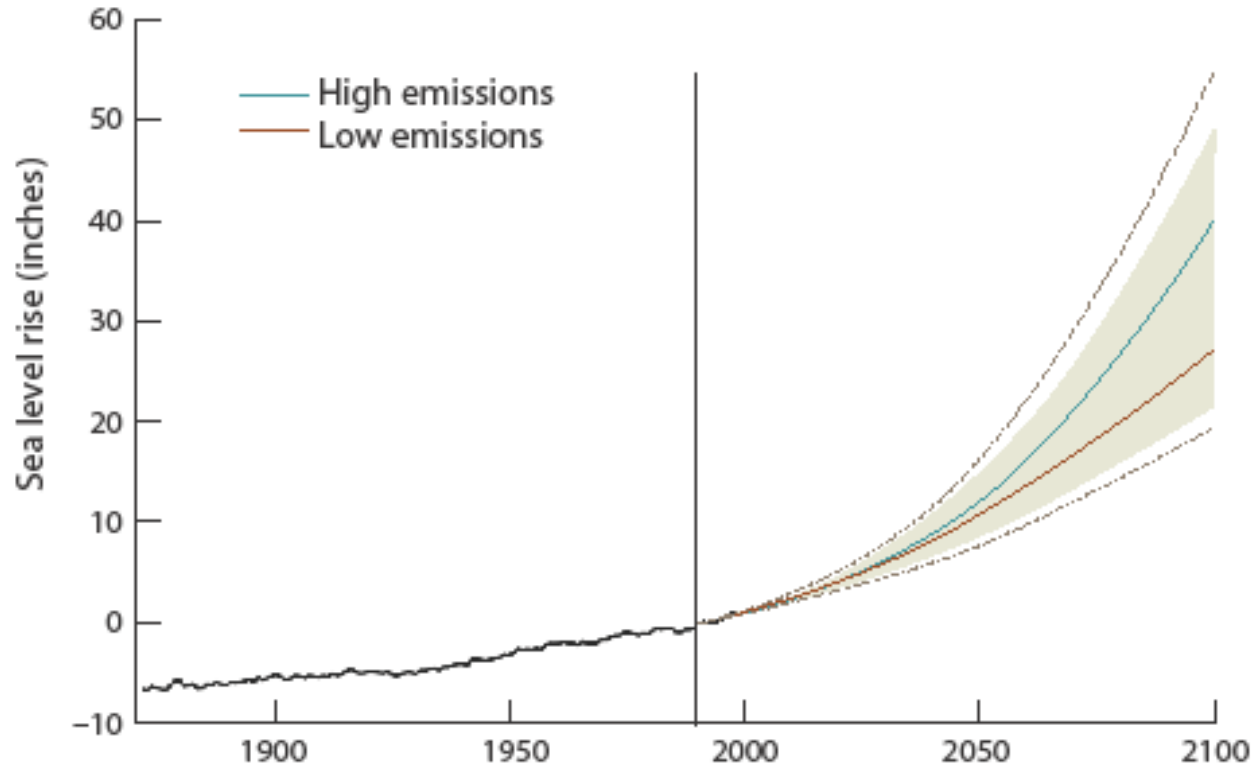
Warmer Temperatures Will Reduce Sierra Snowpack



Note: Results shown for 1.1 – 3.8 °F temperature change.
Source: Knowles and Cayan, 2002

- Less water storage (water supply risk)
- Earlier/higher winter runoff (flood risk)

Sea Level Rise Likely To Accelerate



Source: Modified from Rahmstorf, 2007

- Levee failures in Delta
- Coastal erosion and flooding

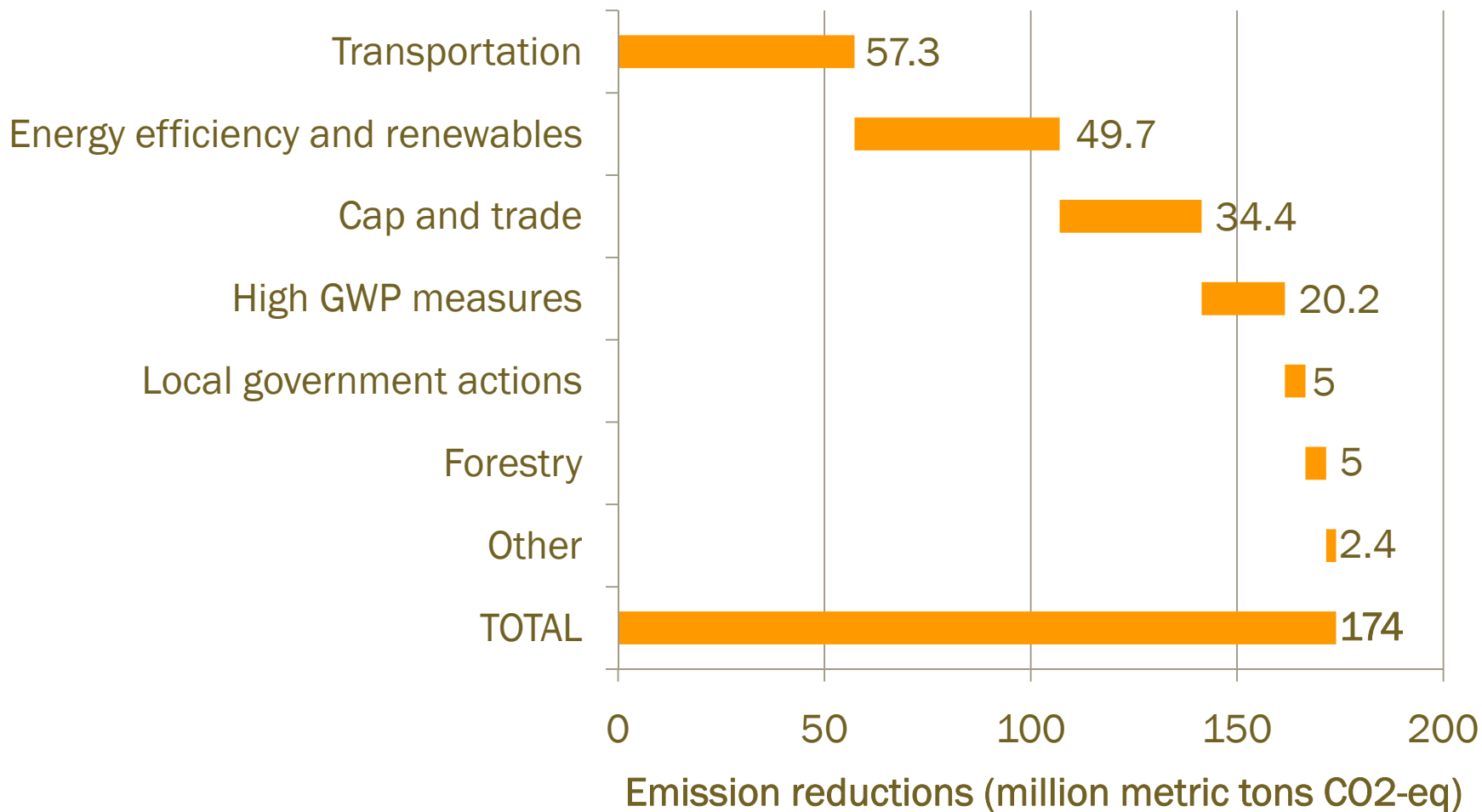


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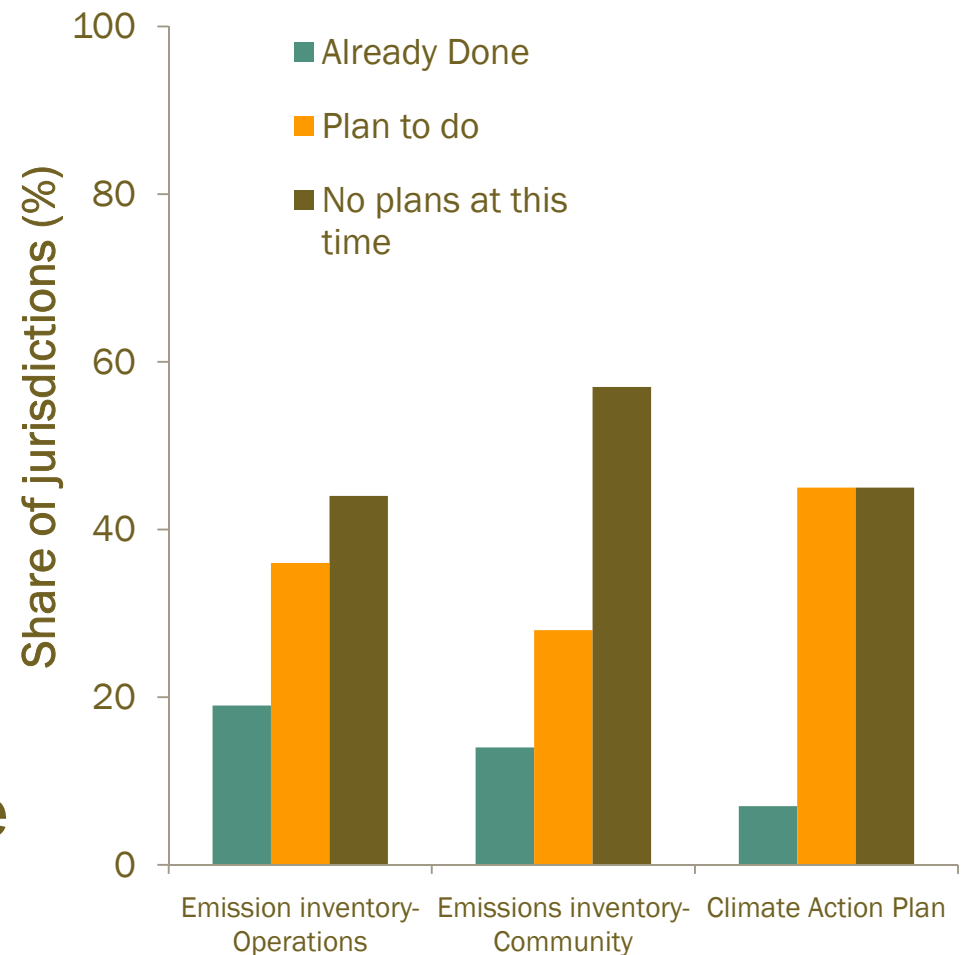


Transportation, Energy Dominate Planned AB 32 Emission Reductions



Local Governments Increasingly Involved in Emission Reductions

- Local and regional governments have authority over land use and transportation planning
- SB 375 seeks VMT reduction
- Local governments are active on climate change issues



Californians Are Very Supportive of the State's Efforts

| | Favor (All Adults) |
|--|-----------------------|
| Global Warming Solutions Act of 2006 (AB 32) | 66% |
| GHG emission standards for new passenger vehicles | 78% |
| Increasing use of renewable energy | 85% |
| Encouraging local governments to change land use patterns to encourage less driving | 78% |
| Requiring an increase in energy efficiency for residential and commercial buildings and appliances | 76% |
| Requiring industrial plants, oil refineries, and commercial facilities to reduce emissions | 80% |

Source: Baldassare et al., PPIC Statewide Survey, July 2009



The Economic Impacts of AB 32 Are Under Debate

- CARB analysis shows little or no economic impact
 - Shift to clean energy
 - Economic growth remains steady
 - Fuel expenditures decline
 - Peer reviewers and LAO critical of initial CARB analysis
- LAO analysis shows a loss of jobs in the near-term, but the long-term impact is uncertain
- Neither analysis estimates the cost of climate change



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Sea Level Rise Threatens Habitat and Infrastructure



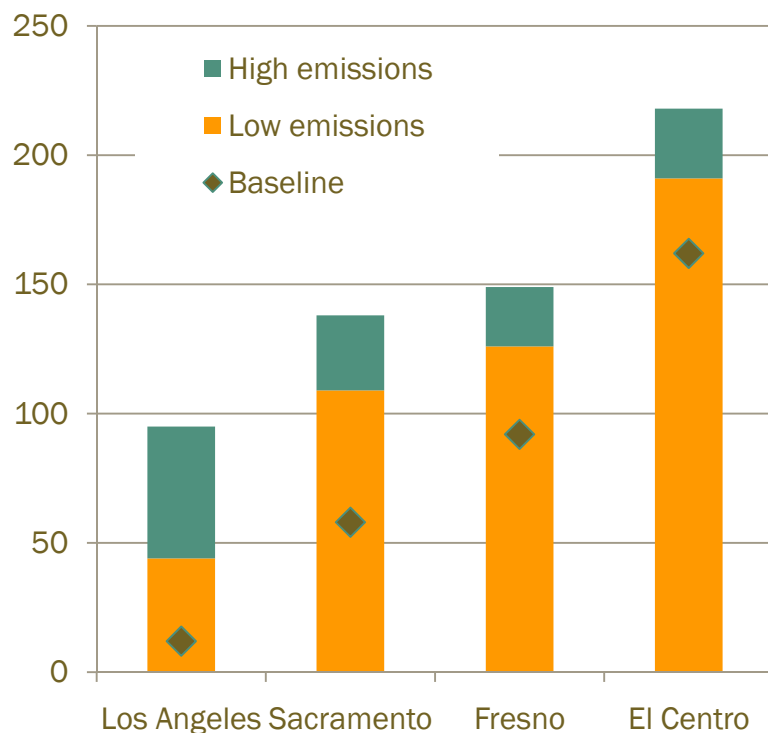
- Coastal agencies considering risks
- Difficult tradeoffs across coastal goals
 - Armoring protects structures...
 - ...but blocks habitat and public access

Source:
San Francisco Bay Conservation and Development Commission



Temperature Rise Will Have Direct And Indirect Health Effects

Projected increase in number of heatwave days by the end of the 21st century

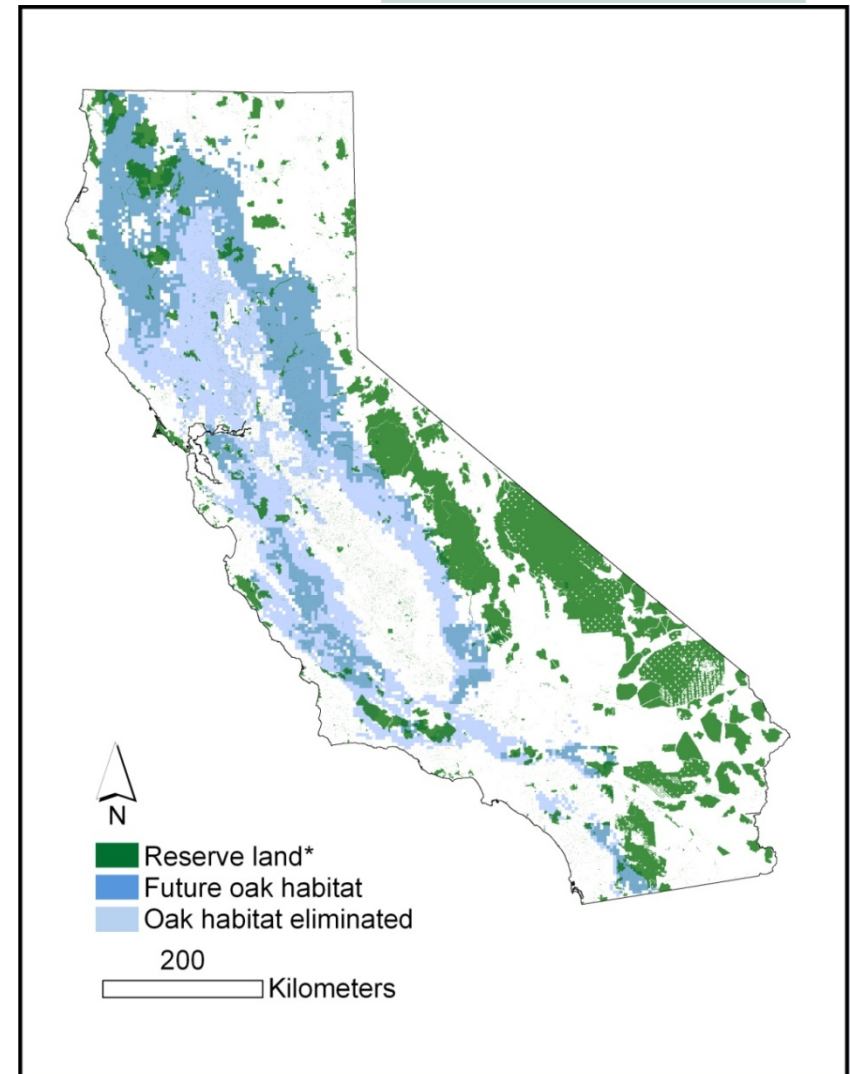


Source: Hayhoe, et al., 2004

- Local health agency concerns include:
 - Extreme heat, poor air quality, wildfires
- Some existing programs will aid adaptation
- Information and resources are lacking

Climate Change Will Threaten Habitat

- Extinction risks high
- Development can block species movement
- Potential conflicts in protection strategies
 - Current threats
 - Future threats



Source: Kueppers et al., 2005



Adaptation Hindered by Several Barriers

- Information
 - What to plan for
 - Uncertainty about costs and benefits
- Funding and resources
- Authority
 - Federal policy constraints
- Lack of political will or incentives



Electricity and Water Agencies Ahead of Other Areas

- Consumer-focused service
- Long-range planning
- Used to weathering supply uncertainties
- Rate-payer base provides revenue stream
- Some tools already in place



Other Areas Face Greater Challenges

- Decisions based on historical information
 - Species protection
 - Flood management
 - Air quality planning
- Constraints on revenue generation
 - Flood and coastal management
 - Public health



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Future Policies Should Continue California's Leadership

- Develop an integrated climate policy that considers mitigation and adaptation
- Take near-term actions to work toward long-term GHG reductions
- Launch no-regrets adaptation actions now
- Reduce uncertainties surrounding mitigation and adaptation policies



Notes on the use of these slides

These slides were created to accompany a presentation. They do not include full documentation of sources, data samples, methods, and interpretations. To avoid misinterpretations, please contact:

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Thank you for your interest in this work.

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