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Concerned  
Scientists

# A Science-based View on Setting a RGGI Target

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# The Science Behind Setting Long-Term Emission Reduction Targets

- 280ppm pre-industrial, ~380ppm today
- Uncertainty exists about sensitivity of climate to increases in atmospheric concentrations of CO<sub>2</sub>:
  - 450ppm >> 1.5 to 4 °C
  - 550ppm >> 2° to 5°C

*Source: IPCC (2001).*

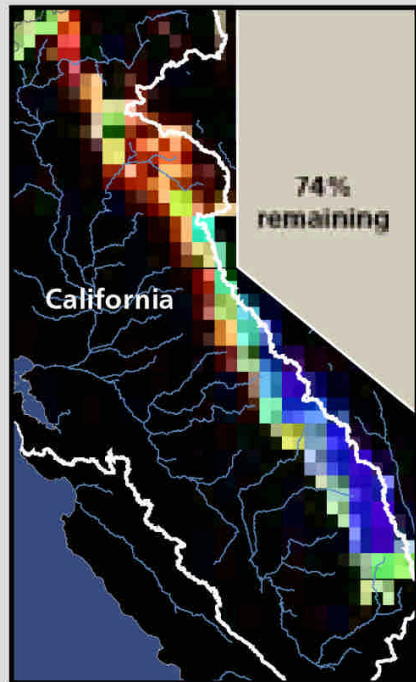
- Recent climate models and impact assessments show a stabilization target of appx. 450ppm would help avoid the worst impacts.

# Diminishing Sierra Snowpack

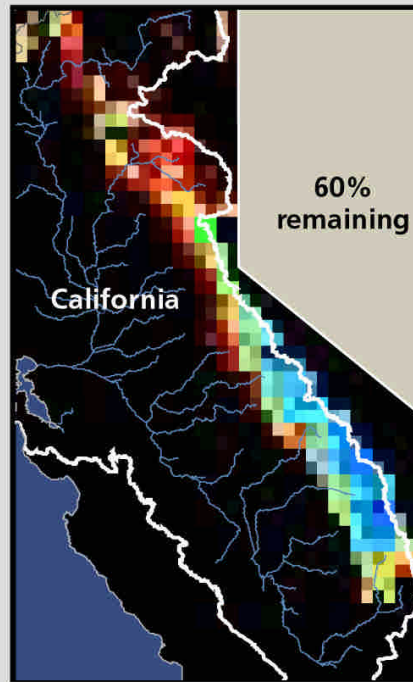
% Remaining, Relative to 1961-1990

2020–2049

Lower Emissions

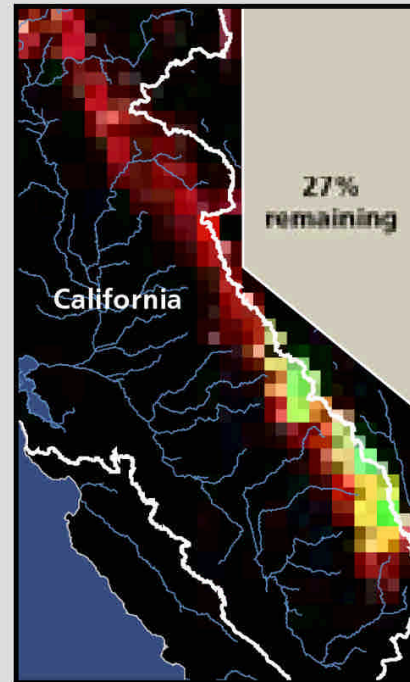


Higher Emissions

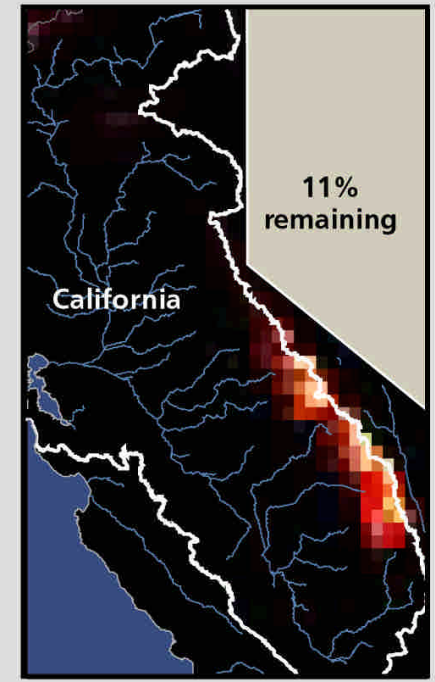


2070–2099

Lower Emissions



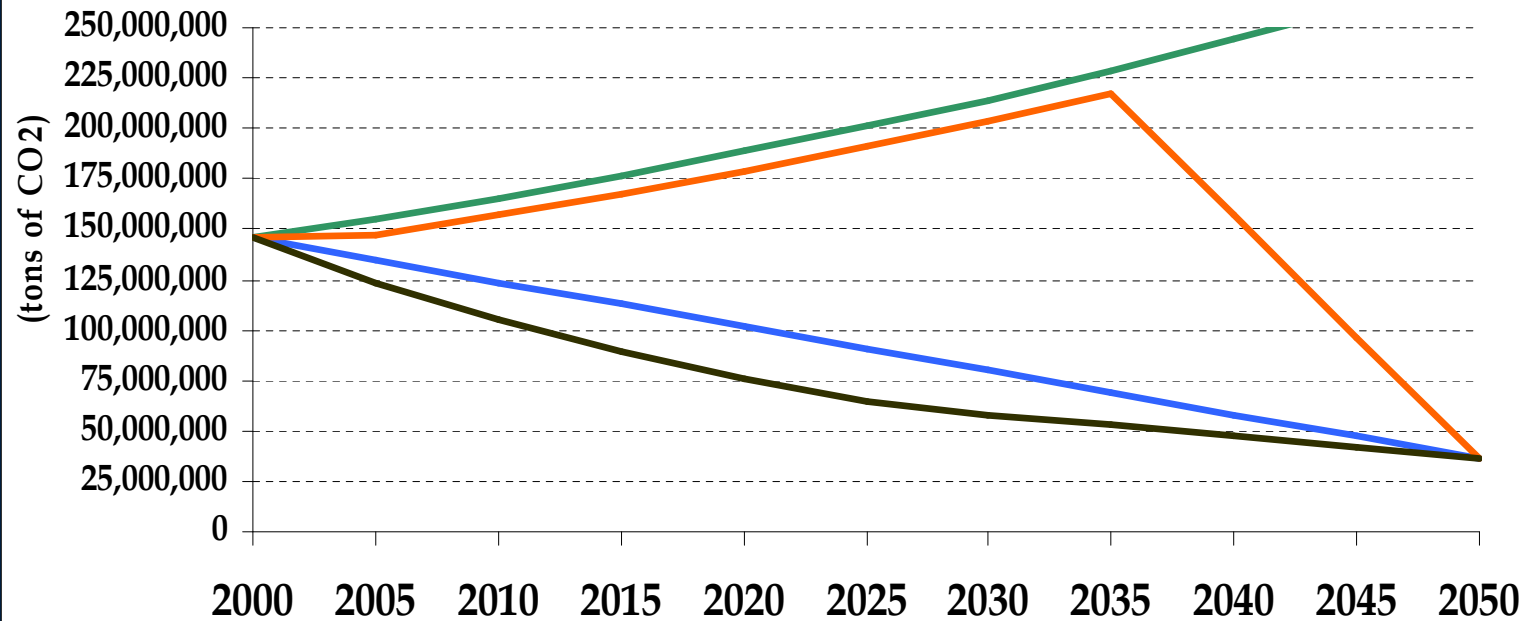
Higher Emissions



Remaining Snowpack (%)



## Possible RGGI Emissions Pathways for 75% Reduction from 2000 Levels by 2050



— BAU path

— "Smooth path"

— "Weak" path

— "Aggressive path"

# Setting RGGI Near-Term Targets

- Recent modeling shows “wait-and-see” approach is not a viable near-term policy:
  - Delaying reductions risks putting 450ppm out of reach
  - Total costs will be lower if we start now vs. later

Source: Yohe *et al.* (2004).

- Committing to meaningful early reductions (e.g., “smooth” or “aggressive” pathway) is our best insurance policy against uncertainty.
- We count on leadership from the RGGI states to show the way to 2050...