



Agriculture and Climate Change

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Assembly Bill 32 Requirements

Approved in 2006, AB 32 launched a comprehensive State effort to reduce GHG emissions to 1990 level by 2020. *Requirements:*

- Adopt discrete early action measures.
- Develop Scoping Plan and update it every five years.
- Adopt GHG emission reporting regulation.
- Continue GHG reductions beyond 2020.
- AB 32 gives authority to adopt schedule of fees to pay for program.



AB 32 Implementation

- On track to meet the 2020 target.
- Complementary strategies that serve as a national and international model.
 - Direct measures or regulations
 - Incentive programs
 - Market-based mechanisms (cap-and-trade)
- Strategies reduce GHGs in every sector by improving energy and water efficiency, and providing consumers with cleaner fuel choices.
- Improved air quality and investments in CA clean economy.



Ongoing Activities in Ag

Dairy Digesters

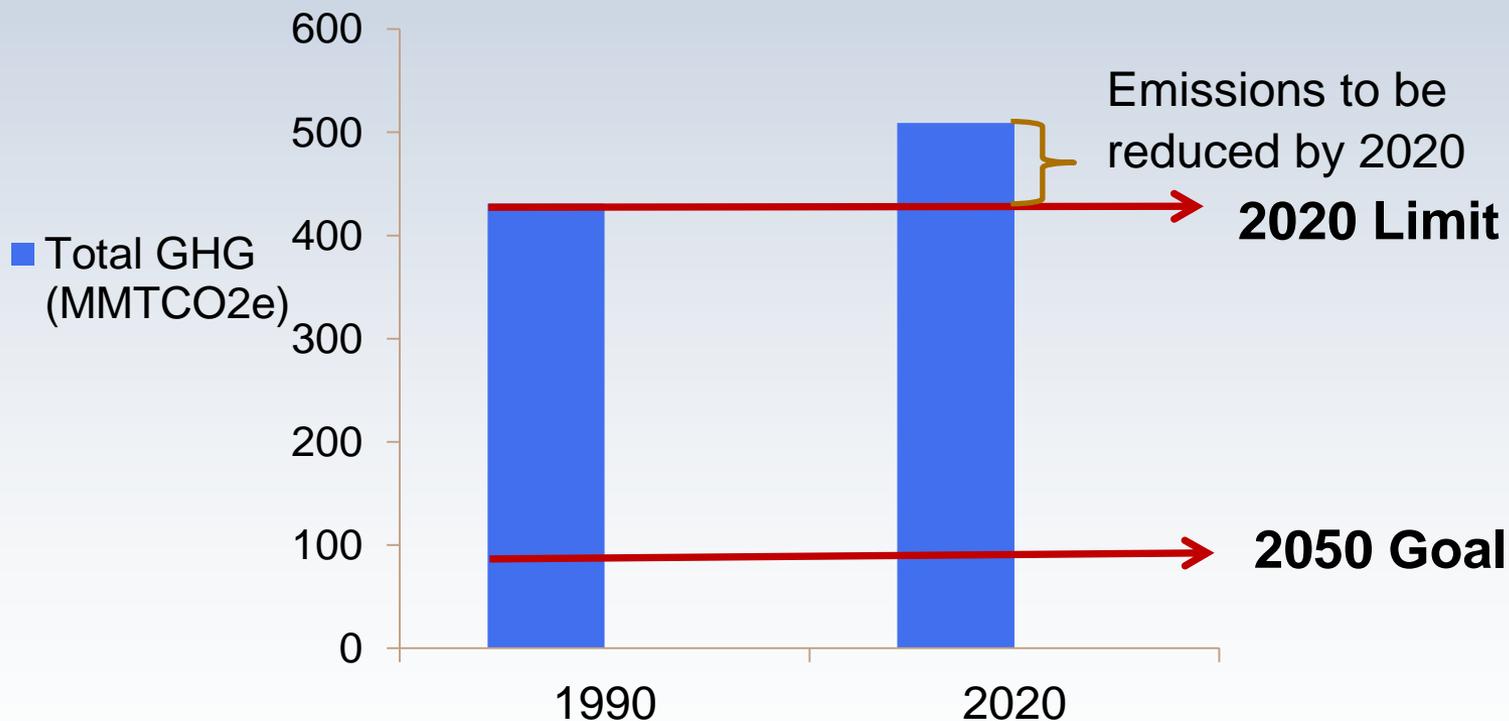
- Adoption of manure digesters to reduce methane emissions was included as a voluntary strategy in initial Scoping Plan.
 - However, digesters have not expanded due to the recession, higher feed and fuel prices, and insufficient utility contracts and incentives.
- Working with stakeholders to remove obstacles to digester installations and determine if program should be mandatory and/or more strongly incentivized.

Ongoing Activities in Ag, Cont.

- State is funding research to determine baseline N₂O emissions from various soils, crops, and farming techniques used throughout California.
- ARB is considering a new offset compliance protocol for Rice Cultivation Projects that will provide methods for quantifying reductions in methane emissions from flooded rice fields.
 - Projects would be limited to the major rice growing regions in California and the Mid-South US.
 - ARB is considering two practices (for California): 1) replacing wet seeding with dry seeding, and 2) early drainage at the end of season.

GHG Emissions Reduction Targets

- By 2020 reduce GHGs to 1990 levels.
- By 2050 reduce GHGs to 80% below 1990 levels.*



Note: MMT = Million Metric Tons

* Executive Order S-3-05

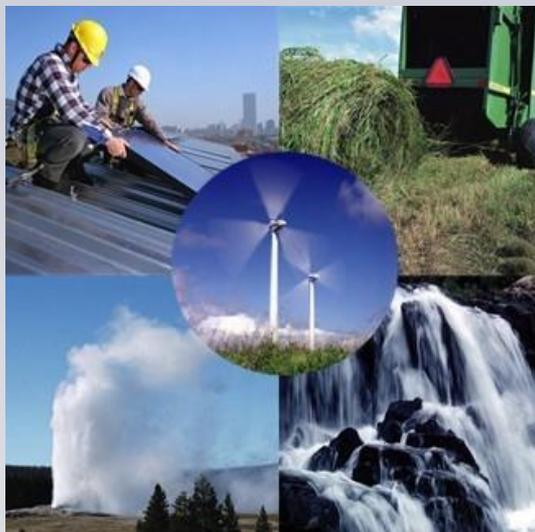
AB 32 Scoping Plan: Update Overview

- Highlight progress towards achieving 2020 limit and continue momentum to move beyond 2020 through regulations, partnerships, and incentives.
- Latest understanding of climate science.
 - Short-lived climate pollutants, e.g. methane black carbon
- Part of Governor's overall climate strategy.
 - Environmental Goals and Policy Report
 - Safeguarding California
 - Climate Change Research Plan



Achieving Long-Term Vision

- Long term vision needed with clear actions for addressing climate change.
- Continued progress is key to California's continued environmental, agricultural, and economic leadership.
- Unique opportunity to address air quality, climate, environmental justice, energy, and economic challenges.



AB 32 Scoping Plan: Focus Areas

- Continue GHG reductions in nine key topics areas:
 1. Energy
 2. Transportation
 3. Agriculture
 4. Water
 5. Waste Management
 6. Natural and Working Lands
 7. Short-Lived Climate Pollutants
 8. Green Buildings
 9. Cap-and-Trade
- Recommendations and challenges to meeting the long-term vision from other state agencies.



Recommendations for Agriculture



Convene an interagency workgroup to:

- Establish Agriculture GHG reduction targets for mid-term and 2050.
 - Expand existing calculators/tools to develop a California-specific GHG tool.
 - Develop strategies to reduce GHGs associated with the energy needed to deliver water to agriculture operations.
- Dairy Digester Workgroup will develop recommendations for a methane capture standard by 2016.

Recommendations for Ag - Continued

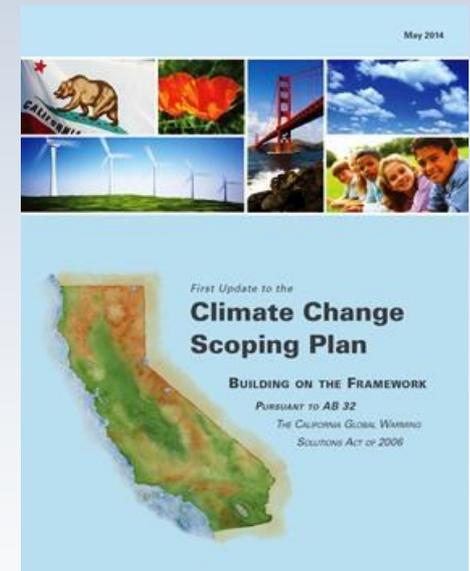
- Conduct research that identifies GHG reduction benefits of efficient farming practices and provide incentives.
- Evaluate Regional Water Quality Control Boards' data to determine if fertilizer data are adequate to establish statewide N₂O inventory.
 - If data are inadequate then develop a way to collect data.
- Convene inter-agency workgroup to engage local and regional planning agencies to coordinate a land use program to develop recommendations on farmland conservation.

Recommendations for Ag - Continued

- CDFA will strengthen technical assistance programs and incentives to help agricultural operators develop carbon plans and implement GHG emission reduction practices.
- In 2015, the Bioenergy Interagency Working Group will:
 - Strengthen/update actions contained in its Action Plan to promote digester biogas into pipelines and bioenergy onto the electricity grid.
 - Evaluate potential biomass energy generation capacity.
 - Develop methods to quantify biomass life-cycle C flux.

Next Steps

- ARB is working with CDFA to implement the recommendations in the Scoping Plan Update
- This includes working now to convene multi-stakeholder workgroups



Thank you

Questions or Comments:

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More Information:

ARB Climate Change Programs Website:
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