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Overview of California Climate Goals and Policies

LEGISLATIVE ANALYST'S OFFICE

Presented to:
Joint Committee on Climate Change Policies
Hon. Eduardo Garcia, Chair





State GHG Goals and Policies



The Global Warming Solutions Act of 2006 (Chapter 488 [AB 32, Nunez/Pavley])

- Established the goal of reducing greenhouse gas (GHG) emissions statewide to 1990 levels by 2020.
- Directed the Air Resources Board (ARB) to adopt regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions by 2020. Authorized ARB to adopt cap-and-trade regulation through 2020.



State Established a Variety of Policies to Meet 2020 Target

- Scoping Plan developed by ARB includes 33 percent renewable portfolio standard (RPS), low carbon fuel standard (LCFS), energy efficiency, and cap-and-trade.

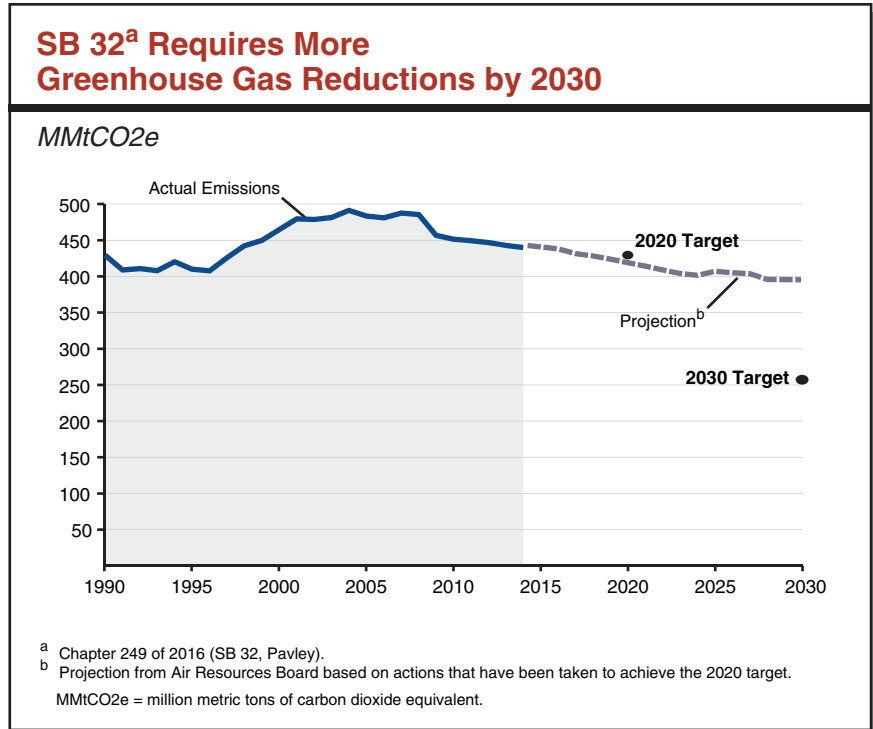


Recent Legislation Established 2030 GHG Target and Policy Direction

- Chapter 249 of 2016 (SB 32, Pavley) established GHG target of at least 40 percent below 1990 levels by 2030.
- Chapter 250 of 2016 (AB 197, E. Garcia) directs ARB to prioritize regulations that result in direct GHG emission reductions.
- Other legislation provides more specific direction regarding some of the policies that must be used to achieve 2030 target, including a 50 percent RPS, doubling energy efficiency, and activities to reduce short-lived climate pollutants.



New 2030 Goal Likely More Difficult to Achieve Than 2020 Goal





Options for Achieving More Aggressive 2030 Target

January Scoping Plan Alternatives to Achieve 2030 Goal						
Options For Meeting 2030 Goals						
	Proposal: Cap-and-Trade + Others	Alternative 1: No Market- Based Mechanism	Alternative 2: Carbon Tax + Others	Alternative 3: Cap-and-Trade Only	Alternative 4: Cap-and-Tax + Others	Estimated Cost Per Ton
Policies Enacted by the Legislature						
50 percent RPS	✓	✓	✓	✓	✓	\$100 to \$300
Double energy efficiency	✓	✓	✓	✓	✓	-550 to -\$300
Reduce SLCPs	✓	✓	✓	✓	✓	N/A
Demand response	✓	✓	✓	✓	✓	-200
Additional Scoping Plan Measures						
Market-based approaches						
Extend cap-and-trade	✓			✓		25 to 85
Carbon tax			✓			50
Complementary Policies						
Mobile Source Strategy and Sustainable Freight Initiative	✓	✓	✓	✓	✓	Less than 50
Reduce refinery emissions by 20 percent	✓	✓	✓		✓	70 to 200
Reduce refinery emissions by 30 percent		✓				70 to 200
Increase LCFS to 18 percent	✓	✓	✓		✓	250
Increase LCFS to 25 percent		✓				400
Increase RPS to 60 percent		✓				300 to 450
Reduce emissions from oil production by 25 percent		✓				70 to 200
Reduce other industrial emissions by 25 percent		✓				70 to 200
Increase renewable natural gas by 5 percent		✓				300 to 1500
ZEVs and vehicle retirement incentives ^a		✓				-150 to 200
Energy efficiency ^b		✓				100 to 200
Other						
Cap-and-tax					✓	N/A
^a In addition to what is included in the Mobile Source Strategy and Sustainable Freight Initiative. ^b In addition to doubling energy efficiency savings, as required by Chapter 547 of 2015 (SB 350, de León). RPS = renewable portfolio standard; SLCPs = short-lived climate pollutants; N/A = not available; LCFS = low carbon fuel standard; and ZEVs = zero emission vehicles.						



Key Issues for Legislative Consideration



Ensuring Oversight and Evaluation of Major Climate Policies.

- To date, there have been no robust evaluations of the overall statewide effects—including on GHG reductions, costs, and co-pollutants—of most of the state’s major climate policies and spending programs that have been implemented.
- Legislature might want to consider creating an independent committee of outside experts, including academic researchers and economists, to help evaluate effects of California’s climate policies.



GHG Reductions and Costs Needed to Meet 2030 Target Are Highly Uncertain.

- How do different policy options balance and/or mitigate these uncertainties?



Criteria for Evaluating Policy Options.

- Cost-effectiveness of reducing GHGs.
- Likelihood of encouraging GHG reductions in other jurisdictions.
- Effects on other pollutants, such as criteria and toxic pollutants.
- Distribution of costs and benefits across different regions, sectors of the economy, or households with different income levels.