



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AB 398 and the Air District 2017 Clean Air Plan

Climate Protection Committee

November 16, 2017

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Climate Protection Manager



Clean Air Plan Goals & Objectives

- Goals:**
- Attain state and national air quality standards
 - Eliminate health risk disparities among Bay Area communities
 - Reduce GHGs: 40% below 1990 levels by 2030
80% below 1990 levels by 2050

- Objectives:**
- Reduce criteria pollutants, toxic air contaminants from all sources
 - Reduce “super-GHGs”
 - Reduce fossil fuel combustion
 - Increase efficiency / reduce demand for fossil fuels
 - Decarbonize the energy system / increase renewable energy

The background of the slide features a scenic view of the Golden Gate Bridge in San Francisco, California. The bridge's iconic orange-red towers and suspension cables are visible against a clear blue sky. In the foreground, the water of the bay is calm, and a small building is situated on the left side of the frame.

What Does AB 398 Do?

- Reauthorizes Cap and Trade (C&T) through December 31, 2030
- Establishes C&T as *THE* rule for petroleum refineries and other large stationary sources to achieve their GHG emission reductions
- *Prevents air districts from adopting or implementing an emissions reduction rule for CO₂ from sources subject to the C&T program*
 - Addresses local air quality through companion bill AB 617
- Strengthens C&T's impact on statewide emissions
 - Reduces amount of offsets allowed to meet cap
 - Requires that 50% of offsets provide direct air/water quality benefits in-state (beginning in 2021)

Bay Area Sources Affected

Bay Area sources subject to the C&T program include ($\geq 25,000$ MT CO₂):

- Refineries
- Cement plants
- Electricity generation facilities
- Cogeneration facilities
- Natural gas suppliers
- Large combustion sources



Approximately 95% of the CO₂ emissions from stationary sources fall under these categories



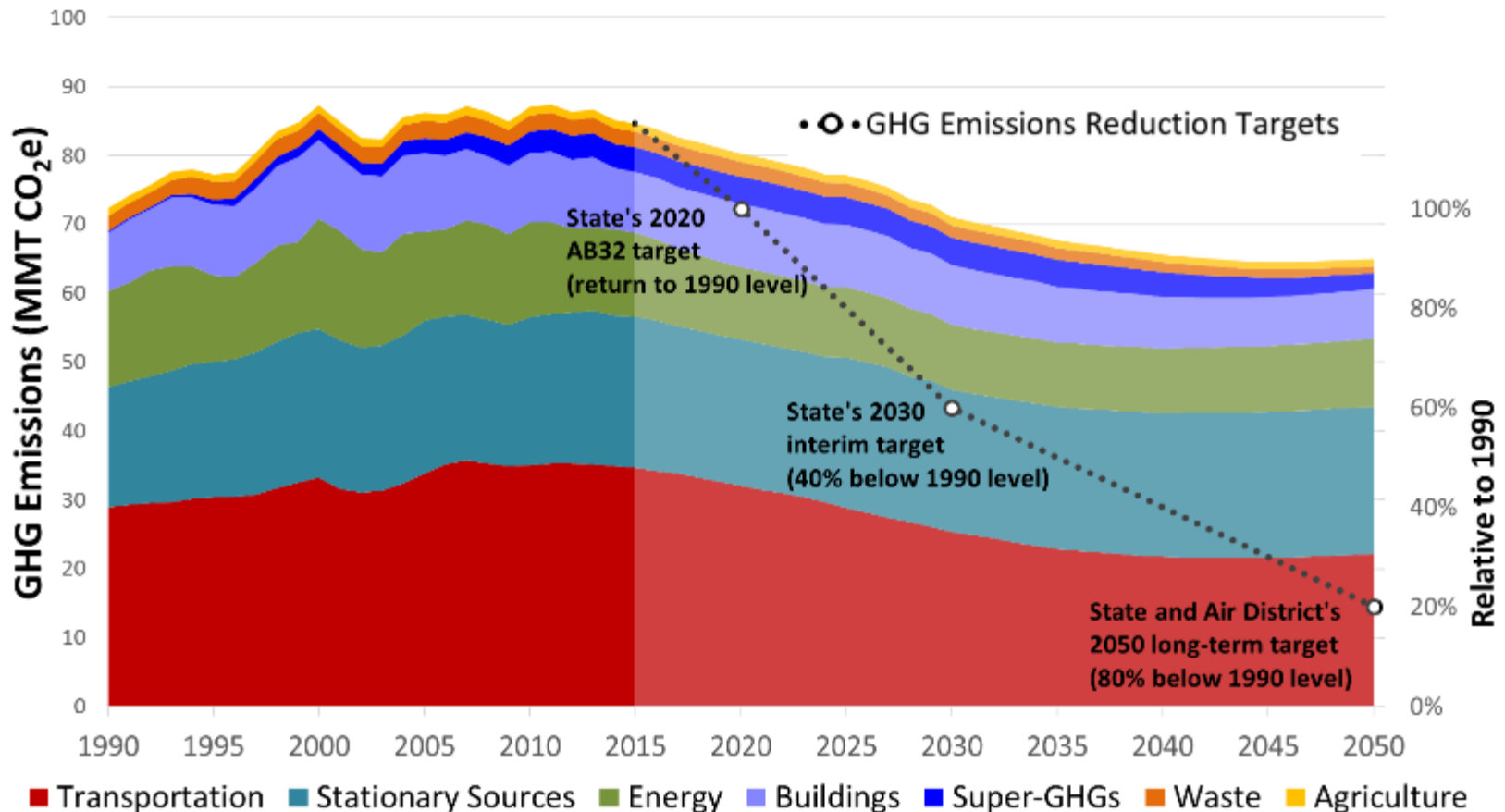
Impact on the Clean Air Plan

Control measures that AB 398 removes from Air District regulatory authority in whole or in part

Control Measure	GHG Reductions in CAP	AB 398 Impact
SS11: Refinery Caps (12-16)	None expected	Precluded from implementation
SS12: Carbon Intensity Limits for Refineries	Not estimated	Precluded from implementation
SS17: GHG BACT	Not estimated	Precluded from implementation
SS18: Basin-wide Combustion Strategy	1.6 million MT	CO ₂ reductions may still be achieved as a co-benefit to reducing criteria pollutants
SS19: Portland Cement	85,055 MT	Only potential amendments addressing CO ₂ would be precluded

Impact on Bay Area GHG Emissions

Bay Area GHG Projections to 2050 with Key State Programs





What is Not Covered by AB 398

AB 398 does NOT limit the Air District's ability to regulate:

- CO₂ from non-C&T sources
- Methane, N₂O, black carbon and fluorinated gases from ALL sources

Still on the table:

- Regulating stationary sources for non-CO₂ GHGs
- Regulating stationary sources not subject to C&T for CO₂
- Grant and incentive programs
- Work with local governments
- Land use and transportation programs
- Research, education and community engagement

Plan Rule-making Schedule

CM #	2017 Control Measures	Pollutant(s) Reduced	Status
SS 20	Toxics Risk Cap (Reg. 11-18)	TAC	Adoption hearing Nov. 2017
SS 11	Refinery Emissions Cap (Reg. 12-16)	CO ₂	Indefinite hold
SS 31, 35, 36, 37	Particulate Matter (Reg. 6, 6-1, 6-6, 6-7, 6-8)	PM	Adoption hearing Feb. 2018
SS 13	Oil and Gas (Reg. 8-37)	CH ₄ , TAC, ROG	Adoption hearing 3 rd Quarter 2018
SS 12	Refinery Carbon Intensity Limits (Reg. 13-1)	CO ₂	Indefinite hold
SS 17	Crude and Slate Permits (Reg. 2-1, 2-2)	All Pollutants	On hold for ~2 years while we gather data
SS 16	Basin-Wide Methane Strategy	CH ₄	Work groups meeting, draft by end of 2017
CM #	2018 Control Measures	Pollutant(s) Reduced	Status
SS 6	Refinery Fuel Gas (Rule 9-1)	SO ₂	Adoption hearing 1 st Quarter 2018
SS 22	Stationary Gas Turbines (Rule 9-9)	NO _x	Adoption hearing 2 nd Quarter 2018
SS 19	Portland Cement (Rule 9-13)	SO ₂ , PM	Technical study underway
SS 1	Fluid Catalytic Cracking in Refineries (Rule 6-5 Phase 2)	PM	Evaluating technologies as part of AB617 BARCT review
SS 15	Natural Gas Processing and Distribution	CH ₄	Second phase CPUC rule-making underway
WA 1, 2	Landfills and Composting Operations	All Pollutants	Compost: Adoption hearing 3 rd Quarter 2018; Landfills: Evaluating control technologies



Funding and Financing

Investing in Clean Air and Climate Protection in 2018

TFCA = \$23 million

- Clean vehicles
- Trip reduction
- Bicycle facilities

Heavy Duty Vehicles = \$27 million

- Shore power
- School buses
- Goods movement

Climate grants = \$4.5 million

- Help implement climate action plans
- Reduce GHGs from existing buildings
- Foster innovation in policy and programs

Technology Implementation Office = \$3 million

- Variety of financing mechanisms
- Focus on stationary sources

Wood Smoke = \$800,000

- Decommission wood stoves, fireplaces
- Install cleaner heating devices (e.g., heat pumps)



Working with Local Governments

Support local gov't efforts to achieve low carbon buildings, renewable energy, trip reduction and zero waste goals

- Policy and technical assistance
 - Model PV solar ordinance toolkit
 - Best Practices
 - Guidance, training to assist with community-wide GHG inventories
- Support for Community Choice Energy programs
 - Strategies and technical assistance for zero carbon electricity
- Quantification tools
 - Vehicle miles traveled web data portal
 - Consumption based GHG inventory
 - Climate Action Plan Database



Land Use & Transportation

Planning Guidance and Tools for Local Agencies

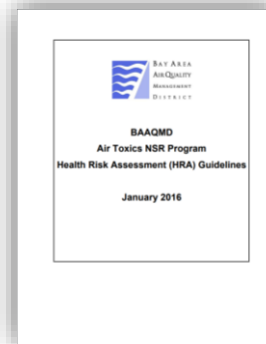


CEQA Thresholds and Guidelines

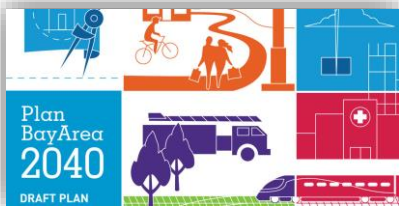
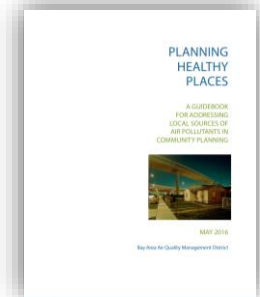
Climate Action Plan guidelines



Community health risk assessments



Planning Healthy Places



Plan Bay Area

Science & Research

Building Our Knowledge

Key Programs:

- Emissions Inventory
- GHG Measurement
- Air Modeling
- Air Monitoring

Inform

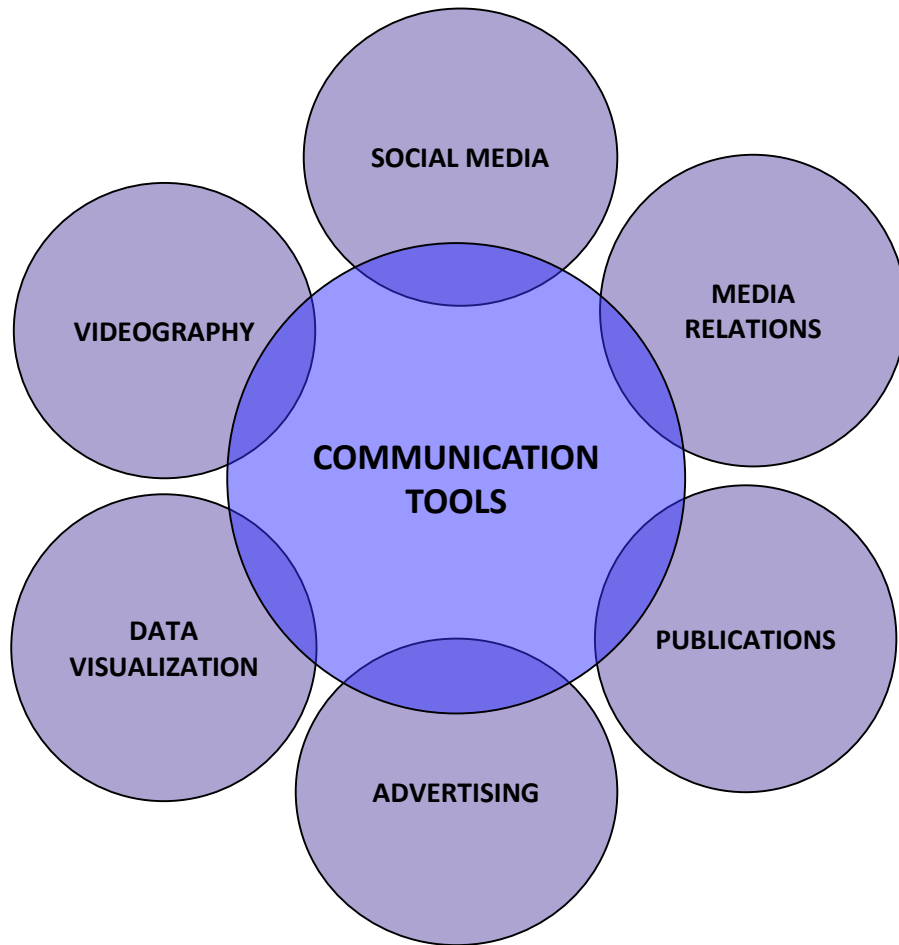
Rule-making

Community Air Risk Evaluation (CARE) Program
Climate and clean air policies and programs
Grant and incentive funding priorities
Outreach and communications strategies





Communications & Community Engagement



Creating Widespread Buy-in and Support

Communications tools facilitate engagement with stakeholder and community groups to promote:

- Electric vehicles
- Trip reduction
- Anti-idling
- Decarbonizing buildings
- Energy efficiency
- Water conservation
- Waste reduction

Next Steps

Road to 2050



- Near-term rule-making
- Follow/participate in C&T development
- Release Climate Grant Program draft guidelines
- Continue existing grants and incentive programs
- Develop draft CEQA thresholds
- Launch financial programs through the TIO
- Develop add'l model ordinances



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AGENDA: 5

California Air Resources Board Draft 2017 Climate Change Scoping Plan Update

Climate Protection Committee
November 16, 2017

David Burch
Principal Planner

Evolution of the Scoping Plan

Initial Scoping Plan:

- Adopted in 2008 per AB 32
- Focus on reducing GHG emissions to 1990 levels by 2020
- Established basic template



2014 Update: Executive Order set target to reduce GHG emissions 40% below 1990 by 2030



2017 Update:
ARB Board scheduled to take action in December

Context for 2017 update:

- SB 350: Codified the 2030 GHG reduction target in State law
- Cap & Trade program extended beyond 2020 by AB 398
- Need to ensure climate program protects AQ in impacted communities
- Increased importance of CA leadership due to backsliding at the federal level



Objectives for 2017 Update

- Achieve 2030 GHG reduction target & set path to 2050
- Provide air quality co-benefits, esp in impacted communities
- Protect public health
- Demonstrate cost-effective GHG reductions
- Provide flexible compliance for industry
- Minimize potential “leakage” to areas outside CA
- Focus climate investment in disadvantaged communities:
Cap & Trade revenues → Greenhouse Gas Reduction Fund
- Facilitate sub-national and national collaboration



Scenarios Considered

Alternative scenarios evaluated:

- No Cap & Trade: rely on prescriptive “command & control” approach
- Carbon Tax: put a price, but no fixed limit, on carbon emissions
- Cap & Tax: declining cap on individual facilities, tax each ton of GHG emitted

Proposed Scenario: Cap & Trade + statutorily required programs

- C&T provides mechanism to ensure GHG reduction targets are achieved
- Allows linkage to trading programs in other states/nations
- Offers flexibility to regulated sources
- Generates \$ for Greenhouse Gas Reduction Fund & impacted communities



Key Elements of Revised Strategy

- Major reductions by 2030 in emissions of methane (40%), black carbon (50%) & fluorinated gases (40%) compared to 2013 baseline
- Increase the Low Carbon Fuel Standard to 18% beyond 2020 to reduce carbon intensity of fuels
- Increase renewable electricity to 50% & double energy efficiency savings by 2030 per SB 350
- Reduce emissions from light & heavy-duty vehicles per ARB's Mobile Source Strategy & Sustainable Freight Action Plan
- Reduce vehicle travel & revise VMT reduction targets for sustainable communities strategies per SB 375
- Implement Cap-and-Trade program post-2020 as revised per AB 398
- Revised draft **deletes** proposal in January draft to adopt regulation to reduce GHG emissions from refineries 20% by 2030

Emissions Reduction by Program

Estimated Cumulative GHG Reductions by Measure: 2021-2030

<u>Program</u>	<u>Tons (MMT CO₂e)</u>	<u>% of Total Reductions</u>
Cap & Trade	236	38%
High-GWP gases*	217	35%
Mobile Sources	64	10%
Energy Efficiency	64	10%
LCFS (biofuels)	25	4%
50% RPS	<u>16</u>	3%
Total	620**	



* Methane, black carbon, fluorinated gases

** Cumulative reductions needed to achieve 2030 target



SB 375 Targets

SB 375 requires metro areas to develop Sustainable Communities Strategies



- Reduce GHG emissions by integrating land-use & transportation planning
- Decrease light-duty vehicle travel (VMT) per capita



ARB proposing revised GHG reduction targets:

<u>Region</u>	<u>Current 2035 Target</u>	<u>Recommended 2035 Target</u>
Bay Area	-15%	-19%
Sacramento	-16%	-19%
South Coast	-13%	-21%
San Diego	-13%	-21%



Nexus to 2017 Clean Air Plan

- Scoping Plan & our 2017 Clean Air Plan both rely on same basic strategy:
 - Focus on reducing methane, black carbon & fluorinated gases in near-term
 - Comprehensive long-term effort to reduce CO₂ emissions by decreasing fossil fuel combustion: transportation, buildings, industrial sources, etc.
- Air District rule-making to reduce methane emissions:
 - Area-wide prohibition on significant methane releases
 - Oil and Gas production rule
 - Compost rule & Landfill rule
- Grants:
 - Existing grant programs: reduce vehicle travel & promote zero-emission vehicles
 - New climate grant program: focus on reducing emissions from existing buildings
- Technology Implementation Office to promote innovative technologies
- Update CEQA guidelines & GHG thresholds
- Improve our community air monitoring program to comply with AB 617
- Continue & enhance our support for climate efforts by local agencies

A photograph of the Golden Gate Bridge in San Francisco, California, spanning across the water. The bridge's iconic orange-red towers and suspension cables are prominent against a clear blue sky. In the foreground, a white building and some greenery are visible on the left side of the frame.

Role of Local Agencies

Scoping Plan recognizes important role for local governments

- Support implementation of Scoping Plan policies using local authority to address key sectors: transportation, buildings, energy, waste, water, etc.
- Provide additional GHG reductions beyond the State measures
- Test innovative policies & programs
- CEQA review to reduce GHG emissions from new plans & projects
- Engage & educate local residents to reduce their GHG footprint

Air District working to support local efforts

- Funding: on-going grant programs + new \$4.5 M climate grant program
- Model ordinances and best practices
- Technical assistance, information-sharing, webinars
- Consumption-based GHG emissions inventory



Next Steps

- Action by ARB Board scheduled for December 14 or 15
- Cap & Trade: ARB staff will adjust parameters of C&T program for the post-2020 period per AB 398
- Air District
 - Move forward with implementation of 2017 Clean Air Plan
 - New methane rules
 - Long-term CO₂ strategy
 - Grants to local agencies
 - Partnerships with business, schools, community & enviro groups
 - Public education
 - Pathway to achieve the 2050 vision