



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

AGENDA: 14

# Air District Climate Protection Program Update

Board of Directors Special Meeting  
July 29, 2015

Henry Hilken  
Director, Planning & Climate Protection

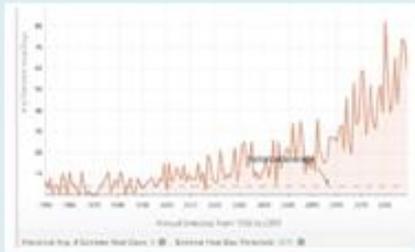


# Summary

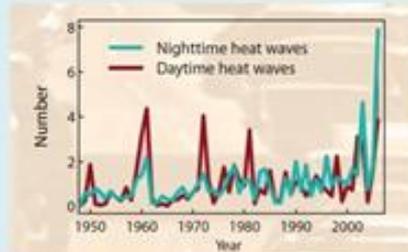
- Aggressive action by the Air District to address climate protection is essential, and is underway
- Emphasize energy efficiency, electrification, low/no-carbon energy sources
- Use all tools in the toolbox
- Support and complement aggressive state, regional and local programs
- Leadership is key – Air District programs most effective if they are replicated in other regions

# Climate Protection Vital to Air District's Mission

- Improve public health, air quality and the global climate



Extreme Heat Days



Nighttime Heat Waves



Air Pollution



Wildfires



Flooding



Drought



Heat Illnesses



Vector Borne Diseases



# Goals and Focus

## What:

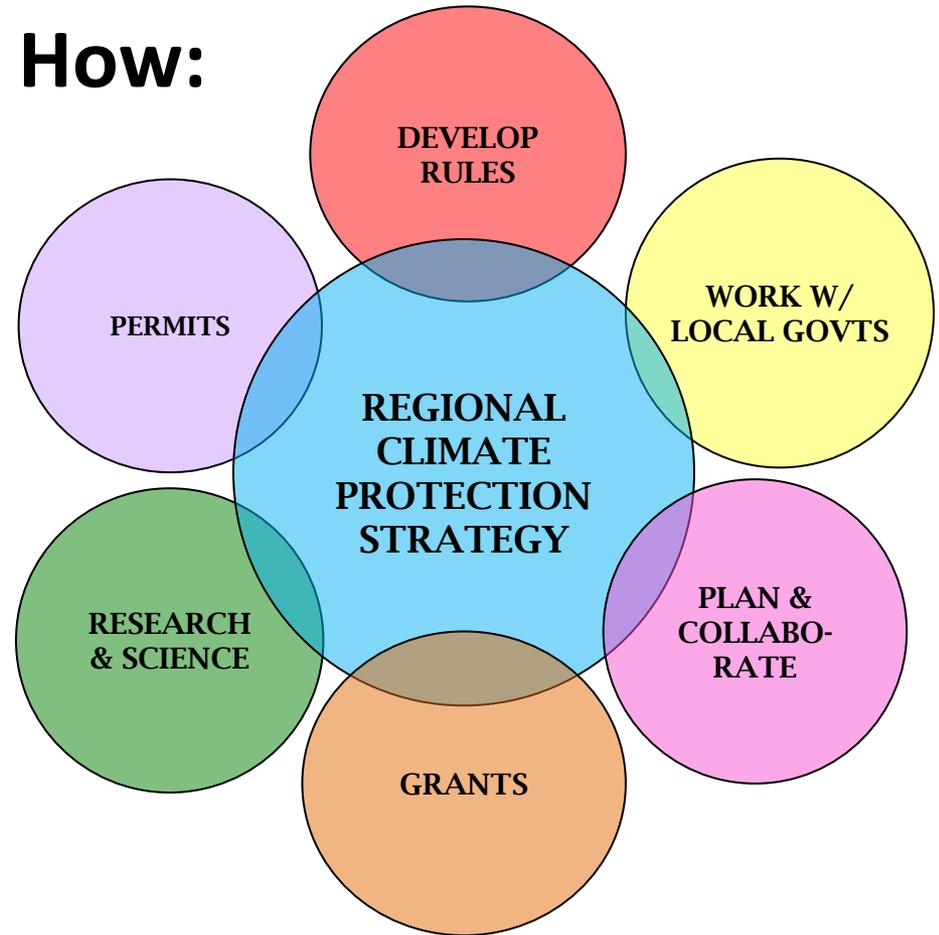
*Efficiency*

*Electrification*

*Decarbonize energy*

*Reduce non-energy GHGs*

## How:





# Initial Proposed Climate Rulemaking

Regulations	Timeline
Limit GHGs in Permits (New Source Review)	Q2 2016
Cap & Trade Backstop for Refineries	TBD
Further Reduce Emissions from Back-up Diesel Generators	Q2 2016
Further Reduce Methane from Capped Wells	Q4 2016
Further Reduce Fugitive Methane from Oil & Gas Production (w/ ARB)	TBD
Further Reduce Methane Leaks from Natural Gas Transmission & Distribution (w/CPUC, ARB)	TBD
Further Reduce Black Carbon from Wood Burning	Q4 2015
Further Reduce Methane from Landfills	Q3 2016
Regulations Under Evaluation	Timeline
Cap & Trade Backstop for Other Sources	TBD
Reduce Emissions from Composting Operations	Q4 2016
Reduce Emissions from Wastewater Treatment Facilities	TBD
Require New Construction to be EV Ready	TBD
Limit Fossil Fuel Combustion from Furnaces, Water Heaters	TBD



# Major Climate Protection Initiatives

- First Air District to:
  - develop regional GHG inventory
  - adopt GHG fee on stationary sources
  - adopt GHG thresholds of significance for CEQA
  - conduct regional multi-pollutant planning
- Over \$300 million invested in grant programs to reduce GHGs and air pollutants
- Extensive technical and financial support for local government climate protection work
- Regional Summits: Stephen Schneider (2005), Al Gore (2006), Thomas Friedman (2009)



# Support to Local Governments

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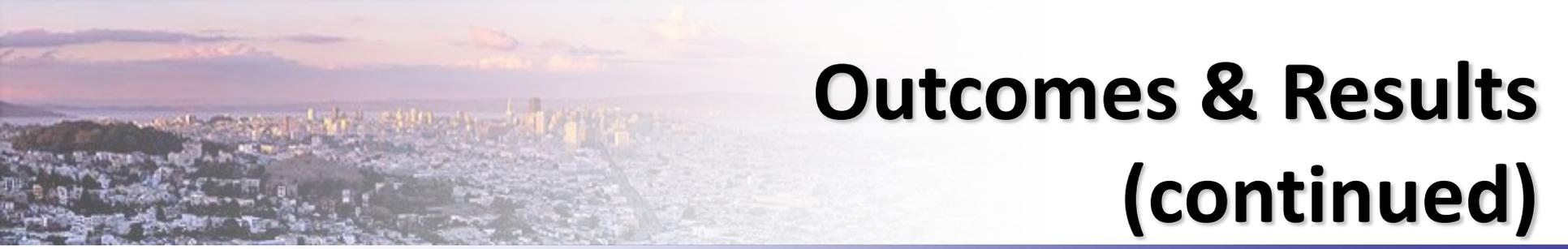
- Grants for local climate action plan development and implementation
- County-based training workshops on conducting GHG inventories
- Guidance on developing climate action plans
- Provide data and best practices
- Consultation, review and feedback on climate action plan development
- Outreach on Cap & Trade funding for local projects



# Outcomes & Results

## Bay Area Local Governments Lead the Nation in Climate Action Planning

- 58 local climate action plans (CAPs) adopted
- More CAPs than any other U.S. metropolitan region
- Cities and counties with CAPs = 80% of Bay Area population
- Enhanced capacity of local staff, e.g. San Mateo RICAPS program
- Air District staff assists local governments in securing funding for CAP implementation



# Outcomes & Results (continued)

## Climate Protection Grants

- Climate Protection Grant Program (2008)
  - \$3 million invested, 53 grants to local governments and non-profits
  - Over 54,000 annual metric tons CO<sub>2</sub>e reduced
  - 7 full-time permanent Climate Staff
  - Launched game-changing initiatives:
    - Marin Clean Energy (community choice aggregation)
    - Property Assessed Clean Energy (PACE) programs
- CononcoPhillips GHG Mitigation Program (2009)
  - \$4 million in grants for municipal energy efficiency & renewable energy



# Outcomes & Results (continued)

## Mobile Source Grants Reduce Criteria Pollutants, Air Toxics and GHGs - \$300 Million in Grants 2007-2014

Metric tons of  
emissions reduced  
over life of projects:

CO<sub>2</sub>e 776,000

PM<sub>10</sub> 1,000

PM<sub>2.5</sub> 950

### Mobile Source Grants:

- EV vehicles & infrastructure
- Bike-share
- Shuttles & bike projects
- School buses
- Shore power
- Heavy duty vehicle retrofits



# Outcomes & Results

## GHG Benefits of Selected Air District Rules

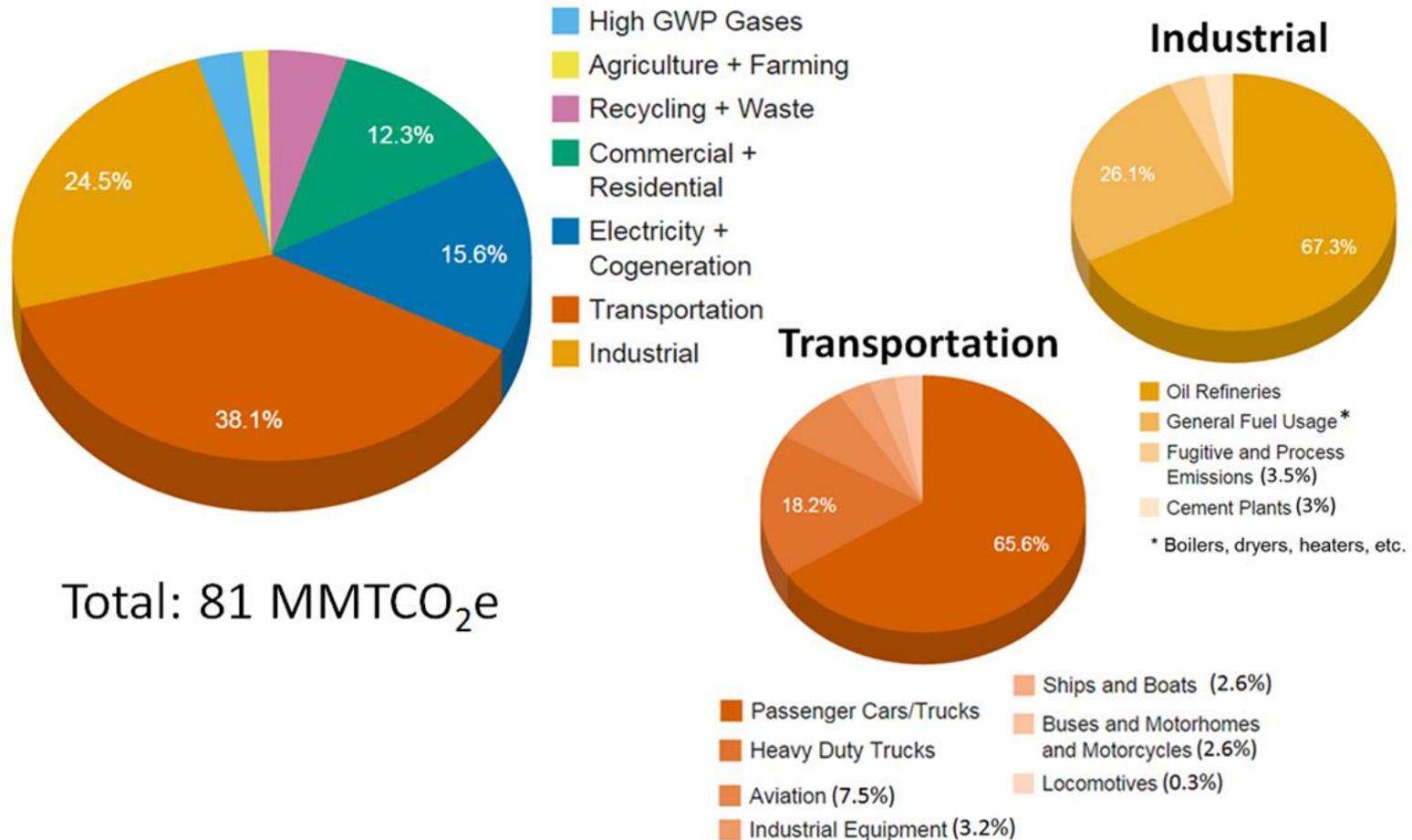
Rule #	Name	Metric Tons/Year CO <sub>2</sub> e Reduced
8-18	Equipment Leaks at Refineries	200 – 500
8-34	Landfills	4 million
8-44	Marine Loading	3,700 – 7,400
8-53	Vacuum Trucks	<10
14-1	Commuter Benefit	35,800

*Over 4,040,000 metric tons CO<sub>2</sub>e reduced annually:  
Equivalent to removing 860,000 cars from the road each year*



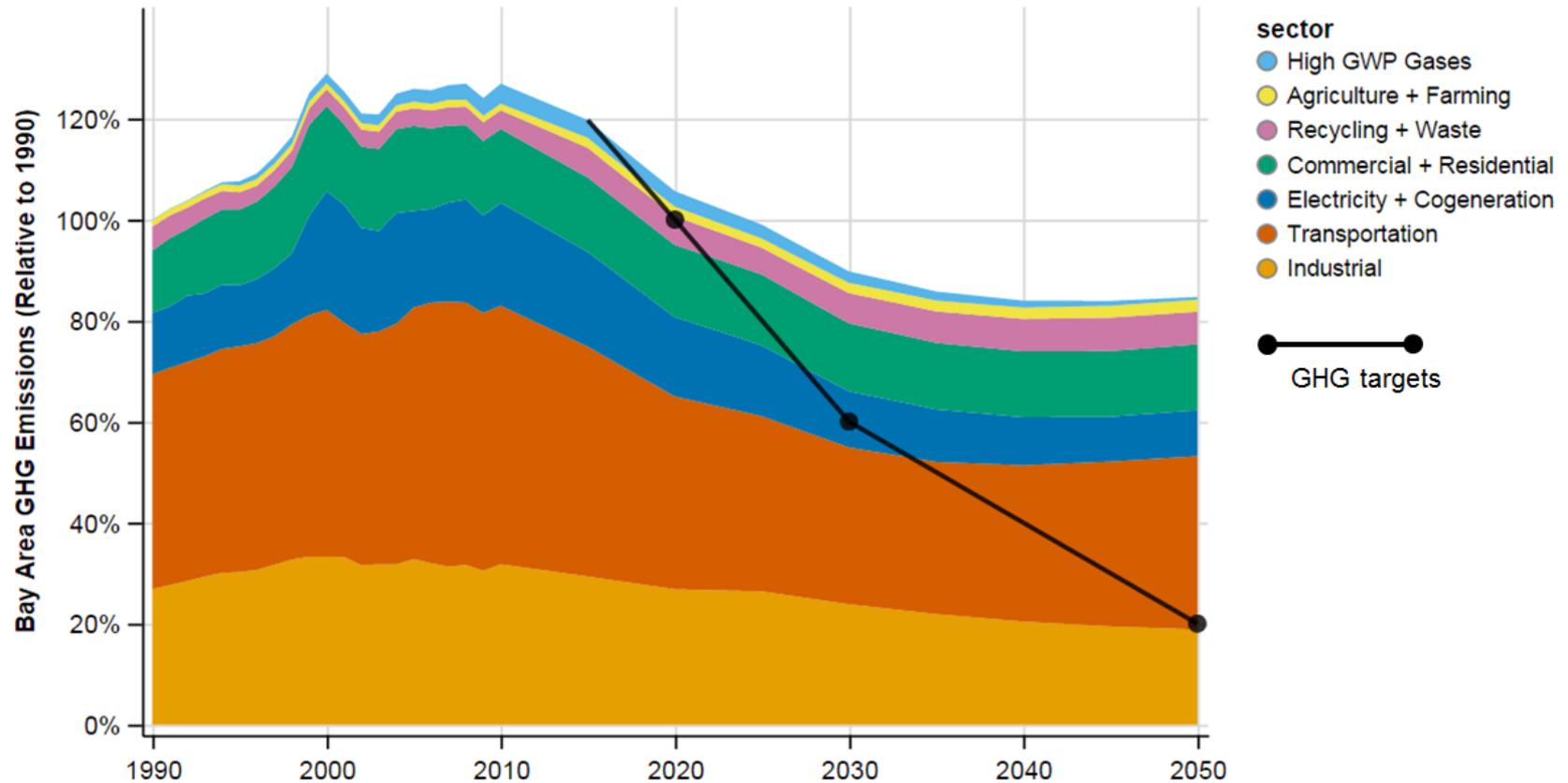
# Bay Area GHG Emissions

## 2015 Bay Area GHG Emissions by Sector (CO<sub>2</sub>e)



# Bay Area GHG Forecasts

GHG Emissions & Projections (Relative to 1990)  
with Committed & Expected Policies





# Climate Protection Resolution

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## Air District Board Resolution 2013-11:

- Reduce Bay Area GHG emissions 80% below 1990 levels by 2050
- Develop a Regional Climate Protection Strategy to be included in the Clean Air Plan Update
- Develop a work program to guide and document the Air District climate protection work in the near-term
  - 10-point climate work program adopted April 2014



# 10-Point Climate Action Work Program

Work Program Area	Recent Achievements
Regional Climate Protection Strategy	Conducted “gap analyses,” developing control measures, planning for public workshops in Fall
GHG Rule Development	GHG rule-development proposed for methane sources, refineries, permitting, generators, wood smoke
Inventory & Forecasting	Refining methane inventory; black carbon and consumption-based inventories coming soon; forecast scenarios being developed
GHG Emissions Monitoring	GHG monitoring equipment purchased and being calibrated; to be launched in Fall
Support for Local Governments	Regular updates on Cap & Trade funding for local CAP implementation; launched VMT data project with MTC; launched solar schools initiative with KyotoUSA
Bay Area’s Energy Future	Advisory Council Report delivered to Board April 2015



# Climate Staffing & Resources

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- New Climate Protection Section established March 2015
- Climate Protection Manager and 7 staff
  - Planners, Engineers, Specialist, Policy Advisor
- Climate Protection Program resources in FYE 2016 budget = \$1.6 million
- Additional Climate Protection staff and resources in other divisions



# Regional Climate Protection Strategy

- Bay Area GHG inventory & forecast
- Consumption-based GHG inventory
- Climate change impacts to the Bay Area
- Economic sector-based analysis of GHGs
- GHG emission reduction measures
- Support for Plan Bay Area and regional resiliency work

# Economic Sector Analysis

Consistent with 2014 Scoping Plan sectors

- Transportation
- Energy
- Agriculture
- Water
- Waste
- Buildings
- Stationary Sources
- Short-lived Climate Pollutants
- Natural & Working Lands





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# The Pathway to 2050

## Grants

- Reduce black carbon

## Develop Rules

- Cap & trade backstop
- Limit methane
- Limit black carbon

## Permits

- Limit GHG via New Source Review

## Research & Science

- Improve methane, BC inventory
- Methane monitoring
- Consumption-based inventory

## Work w/ local gov'ts

- Improve building efficiency
- PACE, other financing
- Implement, track local CAPs
- Urban heat island mitigation

## Plan & Collaborate

- Support strong Plan Bay Area
- Expand VMT reduction programs

# Summary of Ozone Seasons

Year	National 8-Hour	State 1-Hour	State 8-Hour
2012	4	3	8
2013	3	3	3
2014	5	3	10
2015	0	0	3

**Spare the Air Alerts: 7/28, 7/29**

**Days > 0.075 ppm 8-hour NAAQS: None as of 7/29**