

# Public Workshops to Discuss Proposed Short-Lived Climate Pollutant Reduction Strategy

Sacramento: April 26, 2016

Bakersfield: May 3, 2016 (1:30 p.m.)

May 3, 2016 (6:00 p.m.)

California Environmental Protection Agency

 **Air Resources Board**

# Today's Presentation

- Discuss components of Proposed Short-Lived Climate Pollutant (SLCP) Reduction Strategy
- Comments from EJAC members
- Comments from audience
- Email address for sending comments during workshop:  
[webcast@valleyair.org](mailto:webcast@valleyair.org)
- Next Steps for SLCP Reduction Strategy

# Development of the SLCP Strategy

- Recommended action in the 2014 Scoping Plan Update
- Required by Senate Bill 605
- One of Governor's "pillars" to meet 2030 GHG emissions goal of 40 percent below 1990 levels
- Concept Paper released in May 2015
- Draft Strategy released in September 2015
- Proposed Strategy released on April 11, 2016

# California Already a Leader in Reducing SLCP Emissions

- Black carbon emissions from anthropogenic sources are 90% lower than in the 1960s, and will be cut in half again by 2020
- Methane emissions are regulated at landfills; Cap-and-Trade offset protocols encouraging reduction of methane emissions; and methane leaks will be reduced from oil and gas rules under development
- HFC emissions are being reduced from refrigerants, motor vehicle air-conditioning, and consumer products that together will cut these emissions by 25 percent in 2020

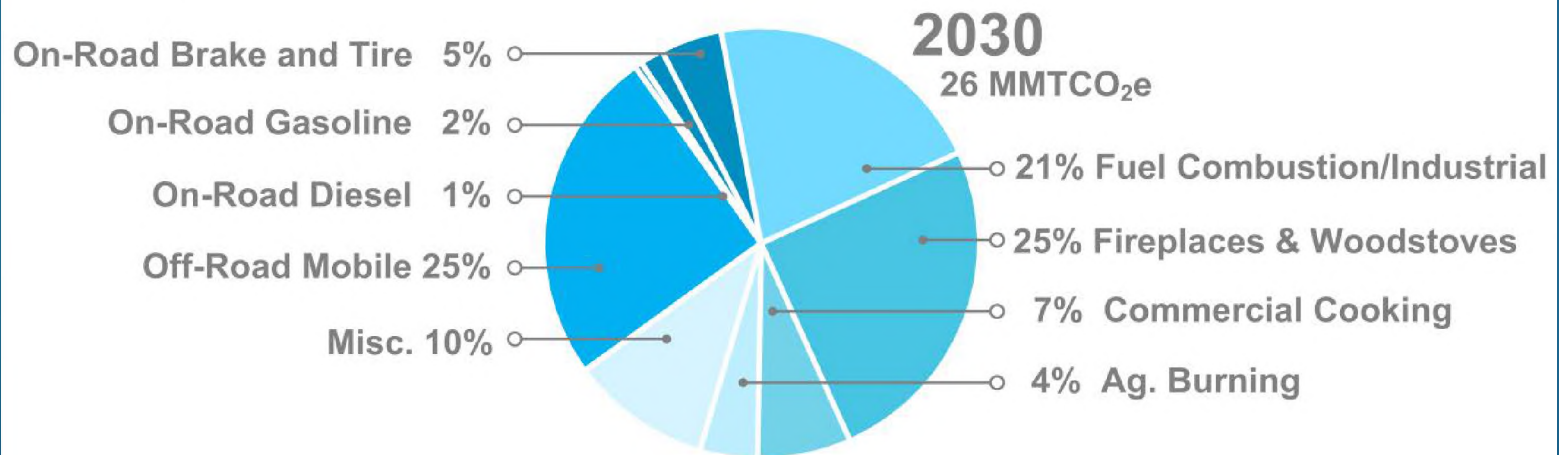
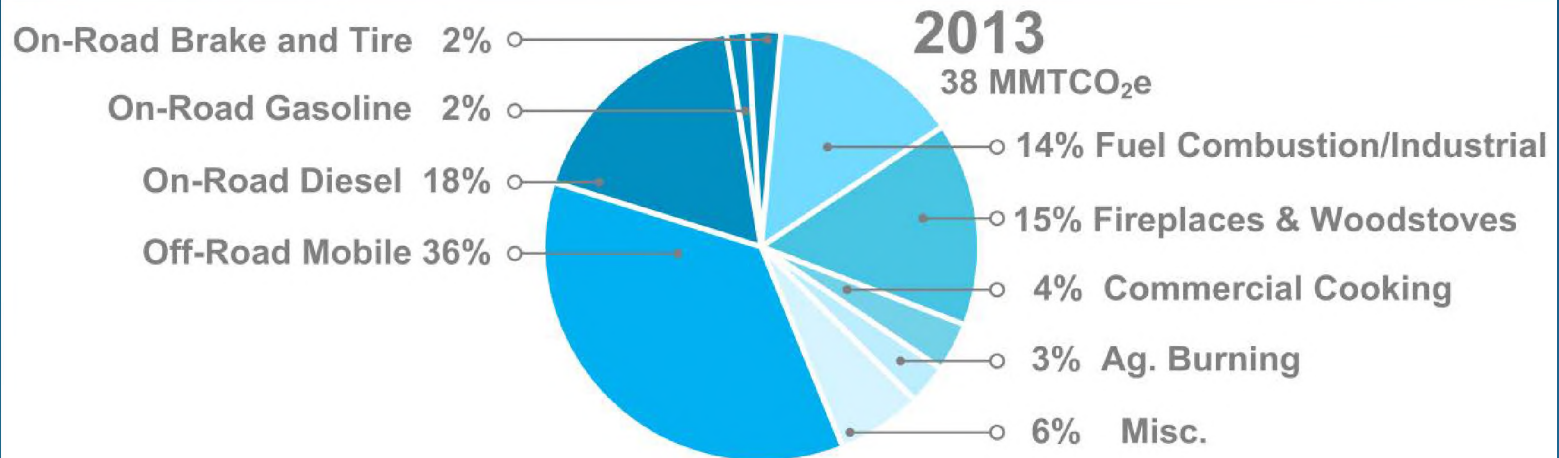
# Proposed SLCP Emission Targets

## Proposed Target Emission Levels (MMTCO<sub>2</sub>e)

Pollutant	Inventory	Forecast	Targets	Percent Reduction from 2013 Levels
	2013	2030	2030	
<b>Black Carbon (Non-forest)</b>	38	26	19	50%
<b>Methane</b>	118	117	71	40%
<b>HFCs</b>	40	65	24	40%



# Black Carbon Emissions

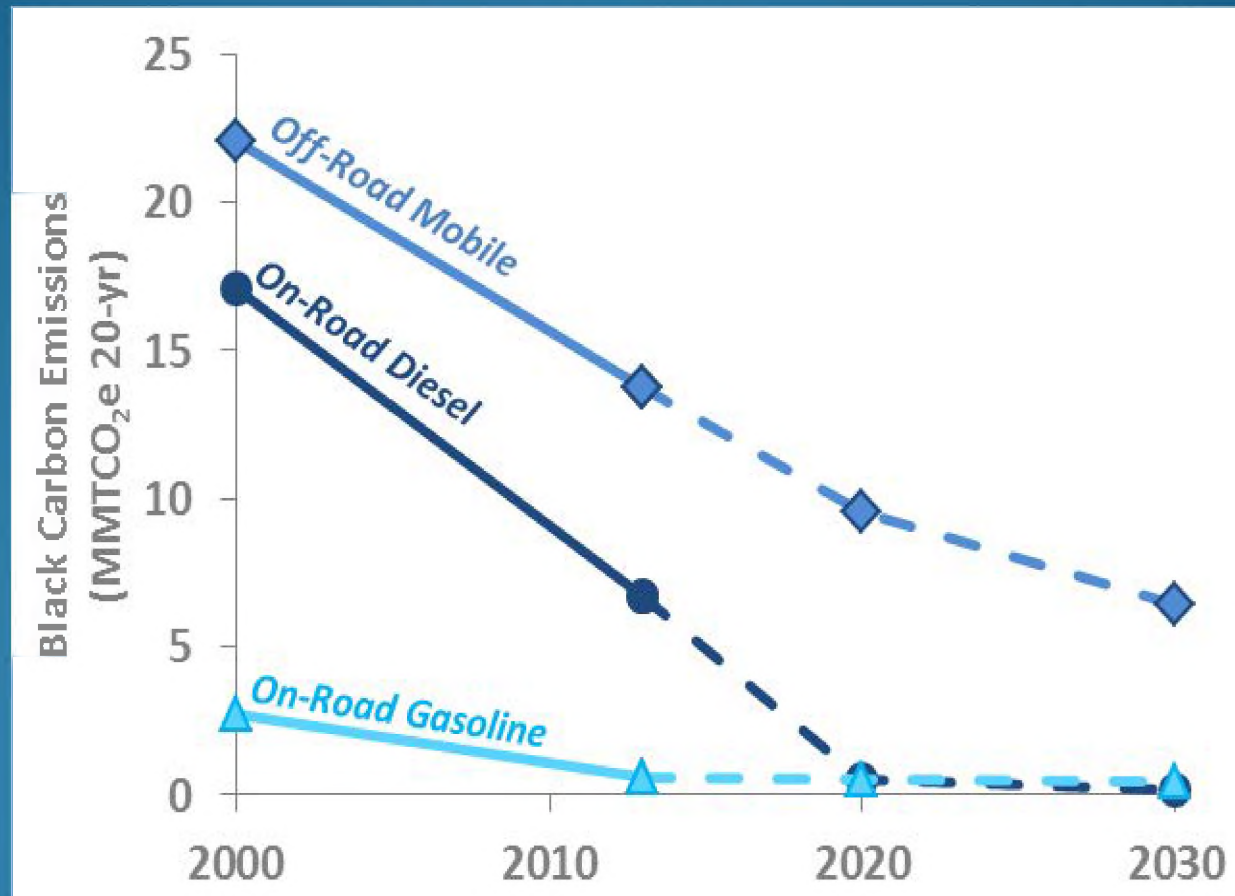


# Existing Black Carbon Reduction Programs

Achievements from both ARB and air district programs

- Prescribed, agricultural, and residential burning; and charbroiling rules
- In-Use fleet rules
- Off-Road engine standards
- Clean fuel rules
- Ship engine and fuel standards
- Incentive programs

# Mobile Sources Black Carbon Emissions





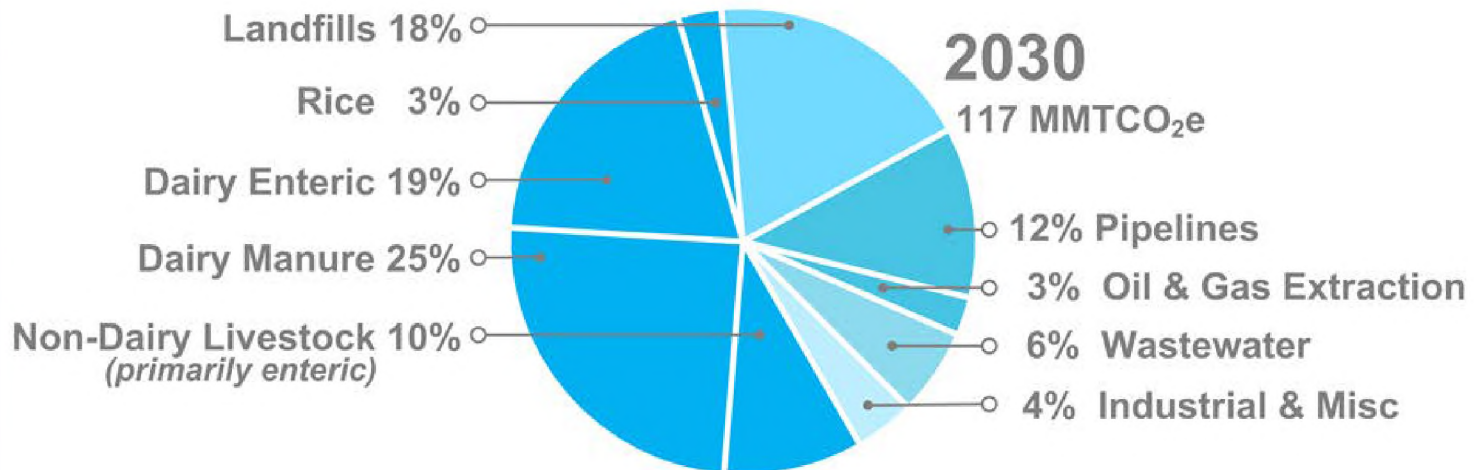
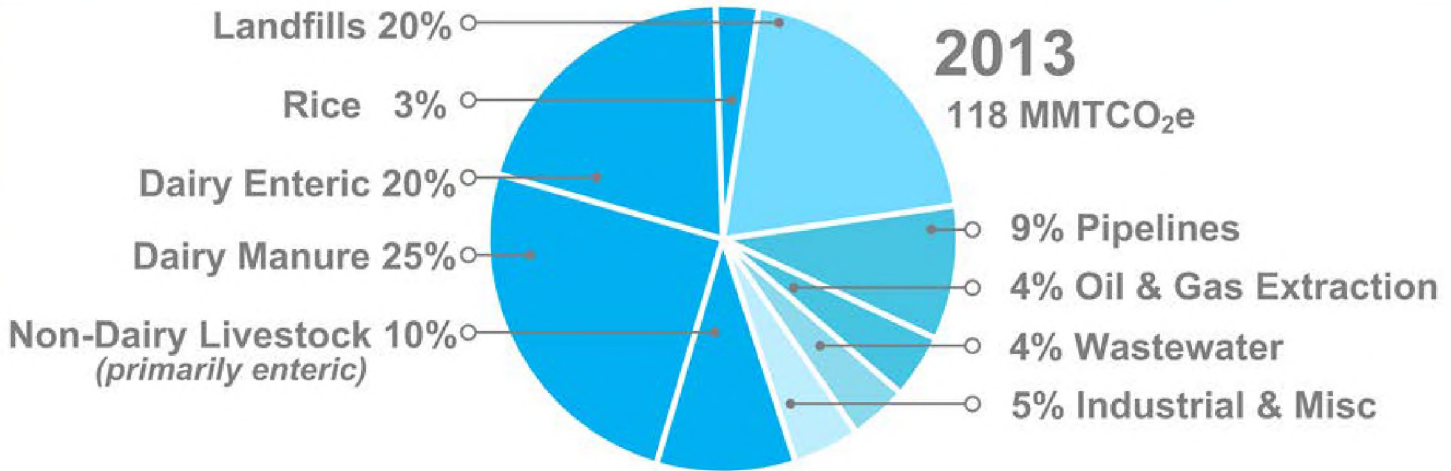
# Proposed Black Carbon Measures to Meet 50 Percent Reduction Target

Measure Name	2030 Annual Emission Reductions	2030 Annual Emissions
2030 BAU		<b>26</b>
Residential Fireplace and Woodstove Conversion	3	
California Sustainable Freight Action Plan State Implementation Plans Clean Energy Goals	4	
2030 BAU with new measures		<b>19</b>

# Recommended Actions for Forest-Related Sources of Black Carbon Emissions

- Increase rate of fuel reduction to improve forest health and reduce wildfire risk
- Support market development for beneficial uses of woody waste
- SLCP Strategy part of integrated planning with 2030 Target Scoping Plan Update and State's Forest Carbon Plan currently under development

# Methane Emissions



# Proposed Methane Measures to Meet 40 Percent Reduction Target

Measure Name	2030 Annual Emission Reductions	2030 Annual Emissions
2030 BAU		<b>117</b>
Dairy Manure	21	
Dairy and Livestock Enteric Fermentation	5	
Landfill	5	
Wastewater, Industrial and Other Miscellaneous Sources	7	
Oil and Gas Sector	8	
2030 BAU with new measures		<b>71</b>



# Proposed Methane Emission Reduction Measures

## Dairies

- Reduction targets for manure methane emissions at dairies (20 percent in 2020, 50 percent in 2025, and 75 percent in 2030)
  - Targets would result in a more than 40% reduction in methane emissions from entire dairy sector by 2030
- ARB, in coordination with CDFA and local air and water quality agencies, to begin regulatory process in 2017 to reduce manure methane emissions at dairies
- State to support research and monitor progress on reducing enteric emissions by 25 percent

# Proposed Methane Emission Reduction Measures (cont.)

## Landfills

- ARB and CalRecycle to develop a regulation by 2018 to virtually eliminate organic disposal in landfills by 2025
  - Include food waste prevention and rescue programs with a target of 10 percent food waste reduction by 2020 and 20 percent by 2025

## Wastewater Treatment Plants

- ARB and other agencies to assess actions to require capturing and utilizing methane
- Develop regional opportunities to co-digest waste at existing and new digester facilities

# Proposed Methane Emission Reduction Measures (cont.)

## Oil and Gas

- ARB developing a regulation by 2016 to reduce fugitive methane emissions from oil and gas production, processing, and storage
- CPUC to complete rulemaking by 2017, pursuant to Senate Bill 1371, to minimize methane leaks from natural gas pipeline system

# HFC Emissions





# Proposed HFC Measures to Meet 40 Percent Reduction Target

Measure Name	2030 Annual Emission Reductions	2030 Annual Emissions
2030 BAU		<b>65</b>
Financial Incentive for Low-GWP Refrigeration Early Adoption	2	
HFC Supply Phasedown	19	
Sales ban of very-high GWP refrigerants	5	
Prohibition on new equipment with high-GWP Refrigerants	15	
2030 BAU with new measures		<b>24</b>

# Economic Analysis

- Analysis Includes:
  - Direct economic costs associated with new technologies and management strategies
  - Direct economic benefits including efficiency cost savings and revenue from marketable products
- Implementing the five major measures would collectively require several billion dollars of investment in clean technologies and strategies
- SLCP measures will be included in the macroeconomic analysis of 2030 Target Scoping Plan Update

# Environmental Analysis

- Draft Environmental Analysis (EA) completed
  - Potentially significant impacts found for some resource areas
- Released for 45-Day public comment period
  - April 11, 2016 – May 26, 2016
- ARB will prepare written responses to relevant comments received on Draft EA

# Next Steps

May 19, 2016	Present Proposed Strategy to Board
May 26, 2016	Comment period ends for draft EA and Proposed Strategy. Send comments to: <a href="http://www.arb.ca.gov/lispub/comm/bclist.php">http://www.arb.ca.gov/lispub/comm/bclist.php</a>
Late summer or early fall 2016	Present final Strategy and responses to EA comments to Board for approval



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SLCP Website:

<http://www.arb.ca.gov/cc/shortlived/shortlived.htm>