

Short-Lived Climate Pollutant Reduction Strategy

March 23, 2017



California Environmental Protection Agency

 **Air Resources Board**

Overview

- Purpose of SLCP Strategy
- Development Process
- SB 1383 Requirements
- Environmental Analysis
- Recommended Board Action

Purpose of SLCP Strategy

- Includes methane, fluorocarbons (including hydrofluorocarbons or HFCs), and black carbon
- Lifetimes of days to a few decades
- Tens to thousands of times greater global warming potential than carbon dioxide
- Reductions can provide immediate climate change and public health benefits
- SB 605 (Lara, 2014) directed development of SLCP Strategy to reduce emissions
- SB 1383 (Lara, 2016) directed approval and implementation of SLCP reduction measures

Process for Developing SLCP Strategy

- Extensive public engagement
- Consultation with the EJAC
 - SLCP Strategy to be incorporated into 2017 Scoping Plan Update
 - EJAC provided Scoping Plan recommendations
 - 8 recommendations related to SLCP Strategy
- 3 draft proposals released
- 10 public workshops
- Final proposed SLCP Strategy released March 2017

SB 1383 Requirements

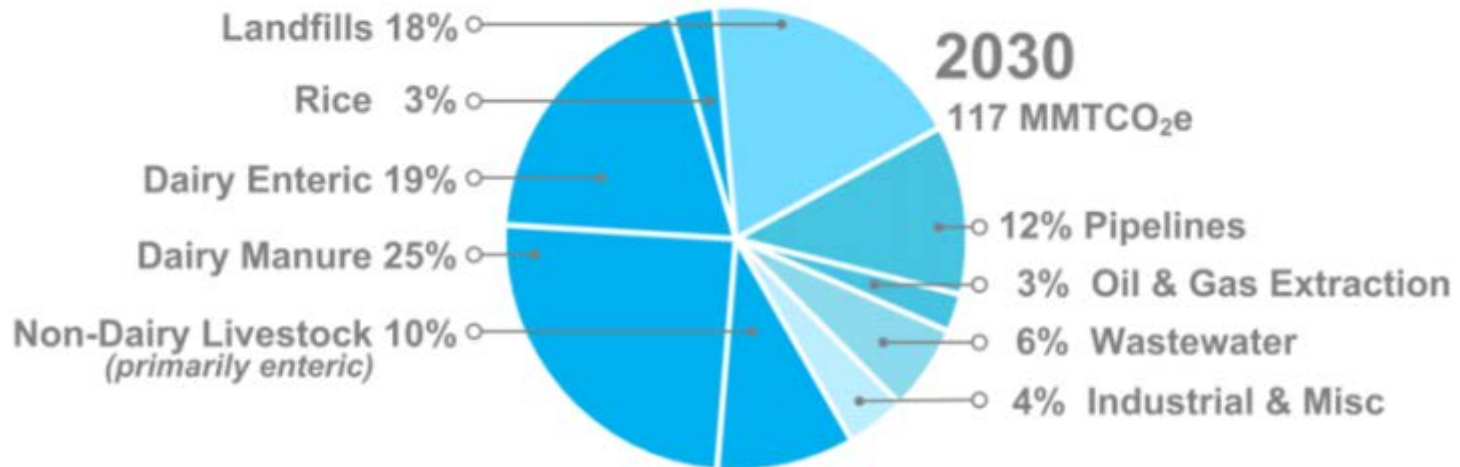
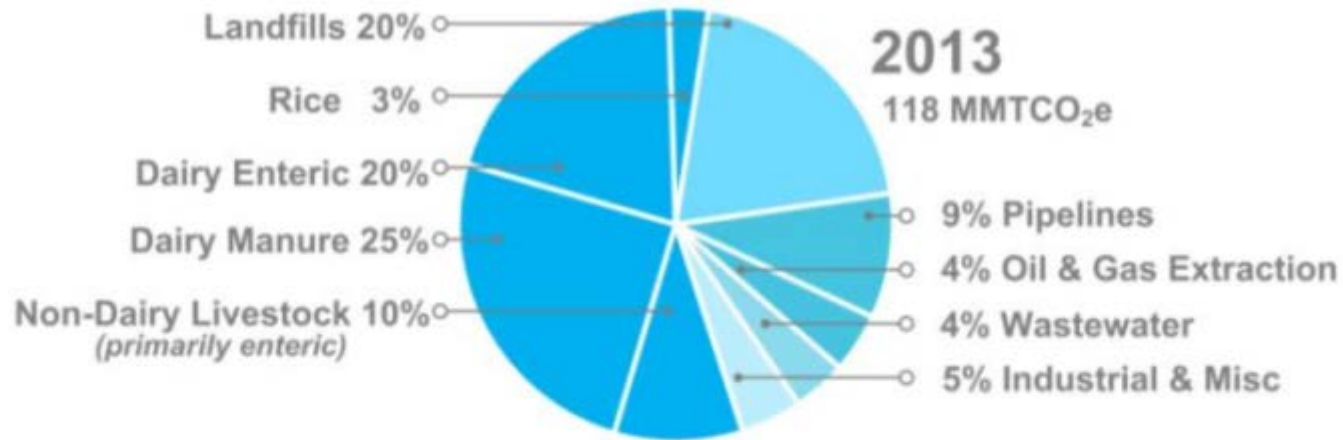
- Begin implementation by January 1, 2018
- Codifies 2030 SLCP emission reduction targets
- Black carbon target for anthropogenic sources
- Specific direction on methane reductions from:
 - Dairy and livestock
 - Landfills (organics diversion)
- Develop State policies for production and use of renewable gas

SB 1383 SLCP Emission Reduction Targets

	Inventory (2013)	Forecast (2030)	Targets (2030)	Percent Reduction from 2013 Levels
Methane	118	117	71	40%
HFCs	40	65	24	40%
Black Carbon (Anthropogenic)	38	26	19	50%

Emission Levels in MMTCO₂e (using 20-year GWPs)

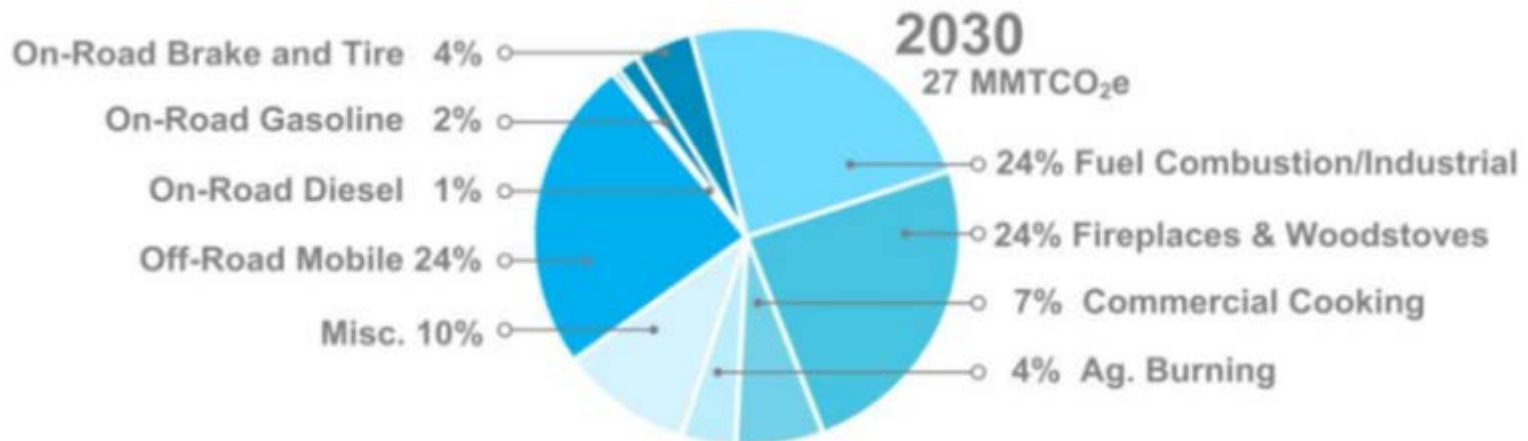
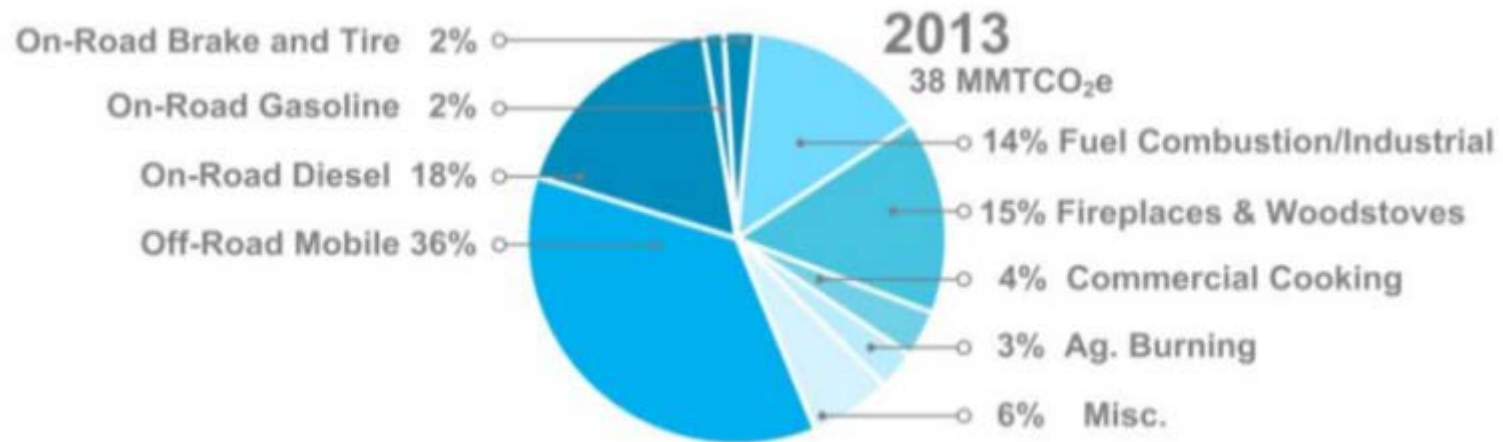
Methane Emissions



HFC Emissions



Anthropogenic Black Carbon Emissions



Methane Emission Reductions —Manure Management

- In consultation with CDFA, ARB to:
 - Develop a manure management strategy
 - Form dairy and livestock workgroup to address barriers to manure methane reduction projects
 - Kickoff on May 23, 2017
 - Will include technical working groups to evaluate specific topics



Methane Emission Reductions

–Manure Management (cont.)

- CPUC – develop guidelines for min. 5 dairy biomethane pipeline injection projects
- CEC – develop recommendations for development and use of renewable gas in 2017 Integrated Energy Policy Report (IEPR)
- ARB – improve predictability of revenue streams for renewable gas:
 - Establish pilot financial mechanism
 - Provide guidance on regulatory impact on credit revenues

Methane Emission Reductions –Manure Management (cont.)

- Report on progress by July 1, 2020
- Implement methane reduction regulations January 1, 2024
- Regulatory considerations:
 - Technological/economic feasibility, cost-effectiveness
 - Potential to minimize / mitigate leakage
 - Evaluation of incentive based programs
 - Avoidance of impacts to DACs
- CDFA to administer \$50M C&T proceeds this year to reduce manure methane from dairy and livestock sector

Methane Emission Reductions –Enteric Fermentation

- Near-term: Voluntary, incentive-based approaches until cost-effective and scientifically-proven reduction methods available
- Assure reduction measures:
 - Pose no threat to animal welfare
 - Do not compromise human health, or consumer acceptance



Methane Emission Reductions –Landfills

- CalRecycle – develop organics diversion regulations by end of 2018:
 - 50% diversion by 2020 from 2014 levels
 - 75% diversion by 2025 from 2014 levels
 - 20% recovery of edible foods by 2025
- Progress report on meeting goals by July 1, 2020

Hydrofluorocarbon Measures

- Kigali Global HFC phasedown agreement (Oct. 2016)
- ARB assessing impact on future State HFC reductions
- May propose additional measures to meet 40 percent target
 - Incentivize early adoption of low-GWP refrigeration
 - Restrict sales on new very-high GWP refrigerants
 - Prohibit use of high-GWP refrigerants in new stationary equipment
- Energy efficiency the same or better than high-GWP HFCs



Black Carbon Measures

- Significant health benefits already achieved
- Incentives to replace woodstoves
 - \$5M in Cap-and-Trade proceeds this fiscal year
 - ARB to administer program
 - Build on existing local air district programs, where possible
- Additional reductions from other planning activities to meet AQ and GHG goals
 - State Implementation Plans, Mobile Source Strategy
 - 2017 Scoping Plan Update

Forests

- Wildfires largest source of black carbon
- Increasing in frequency and severity
- Public health and climate change impacts
- More research needed (radiative forcing, forest management practices)
- Continue multiagency work to:
 - Complete the Forest Carbon Plan
 - Identify and fund research on radiative forcing, BC impacts of forest management practices
- Planning woody-waste summits (summer 2017)

Environmental Analysis

- Revised Draft Environmental Analysis (EA) completed
 - Potentially significant indirect impacts found for some resource areas
- Released for public comment
 - November 26, 2016 – January 17, 2017
- ARB prepared the Final EA and written responses to comments received on the Revised Draft EA
 - Released in March 2017

Staff Recommendation for Board Action

- Staff recommends the Board adopt the proposed resolution that:
 - Approves Final Proposed SLCP Strategy
 - Approves written responses to EA comments, certifies Final EA, and makes required CEQA findings
 - Calls for status reports to the Board