Short-Lived Climate Pollutant Panel

CBA 2017 Symposium

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Sacramento, CA

CALIFORNIA
AIR RESOURCES BOARD

Short-Lived Climate Pollutants

- 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

SLCP Strategy

- SB 605 (Lara, 2014) directed development of SLCP Strategy to reduce emissions
- SB 1383 (Lara, 2016) directed approval and implementation of SLCP reduction measures
- Approved by the California Air Resources Board in March 2017
- Identifies measures for reducing SLCPs
  - 40 percent reduction of methane and HFCs and 50 percent reduction of anthropogenic black carbon from 2013 levels by 2030
- SLCP reductions support 2030 statewide GHG reduction target of 40 percent below 1990 levels (SB 32; Pavley, 2016)

SB 1383 Requirements

- Begin implementation by January 1, 2018
- Identifies 2030 SLCP emission reduction targets
- Specific direction on methane reductions from:
  - Dairy and livestock operations
  - Landfills (organics diversion)
- Develop State policies for production and use of renewable gas
  - CEC – develop recommendations for development and use of renewable gas in 2017 Integrated Energy Policy Report

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 MMTCO$_2$e (using 20-year GWPs)

SB 1383 Requirements for Dairy and Livestock Sector

- Reduce dairy and livestock methane emissions by 40 percent from 2013 levels by 2030
- CPUC – develop selection criteria and cost recovery guidelines for gas corporation selection of at least five dairy biomethane pipeline injection projects by January 1, 2018
- CARB – improve predictability of revenue streams for renewable gas:
  - Establish pilot financial mechanism
  - Provide guidance on regulatory impact on credit revenues
  - By January 1, 2018

SB 1383 Requirements for Dairy and Livestock Sector

- ARB to report on progress dairy and livestock sector have made in meeting reduction goals in SLCP Strategy
  - By July 1, 2020
- ARB to implement methane reduction regulations
  - On or after January 1, 2024
- Regulatory considerations:
  - Technological/economic feasibility, cost-effectiveness
  - Potential to minimize / mitigate leakage
  - Evaluation of incentive based programs
  - Avoidance of impacts to disadvantaged communities

SB 1383 Requirements for Dairy and Livestock Sector

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

Dairy and Livestock Working Group Directive

- CARB to form working group with stakeholders to identify and address technical, market, regulatory, and other challenges and barriers to the development of dairy methane emissions reduction projects
- Stakeholders to include project developers, industry representatives, state and local agencies, energy agency representatives, compost producers, and environmental and conservation organizations

Dairy and Livestock Greenhouse Gas Reduction Working Group Process

- Kickoff meeting held on May 23, 2017
- Three subgroups formed to develop policy recommendations:
  - Subgroup #1: Fostering markets for non-digester projects
  - Subgroup #2: Fostering markets for digester projects
  - Subgroup #3: Research needs, including enteric fermentation

Dairy Working Group Process (cont.)

- Nine public subgroup meetings held to date
  - Expected to continue through 2018
- Dairy and Livestock Working Group meeting on January 5, 2018
  - Subgroups present to agency principals (CARB, CPUC, CDFA, and CEC) status of process, any initial policy recommendations and path forward for developing final recommendations