California Cap on Greenhouse Gas Emissions

Implications for the Natural Gas Sector

California Air Resources Board
April 24, 2013

What is Cap-and-Trade?

- One of suite of measures to reduce greenhouse gas (GHG) emissions under AB 32
- The “cap” limits total GHG emissions from all regulated sources
- The “cap” declines over time—reduces emissions
- Participants are allowed to “trade” approved GHG emissions allowances—creates flexibility, reduces costs of compliance
- “Works together with command-and-control measures (e.g. traditional regulation)

Goals of the program

- Reduce GHG emissions
- “Price” emissions to incentivize change
- Spur innovation in low emissions and efficient technologies
- Complement existing programs to reduce smog and air toxics
- Ensure AB 32 reduction mandates for GHG are realized through strict limit
- Flexible mechanism—allows covered entities to find most cost effective reductions

Who is covered?

- Stationary sources of emissions at or above 25,000 metric tons of CO_2e per year
  - Large industrial sources (e.g. cement, refineries, oil and natural gas producers)
  - Electricity generation and importers of electricity
- Upstream coverage of small combustion emission sources (at fuel provider—e.g. fuel wholesaler, or first entity to offer fuel on the market)
  - Transportation fuels (beginning in 2015)
  - Residential and commercial use of natural gas (beginning in 2015)

Requirements of Covered Entities

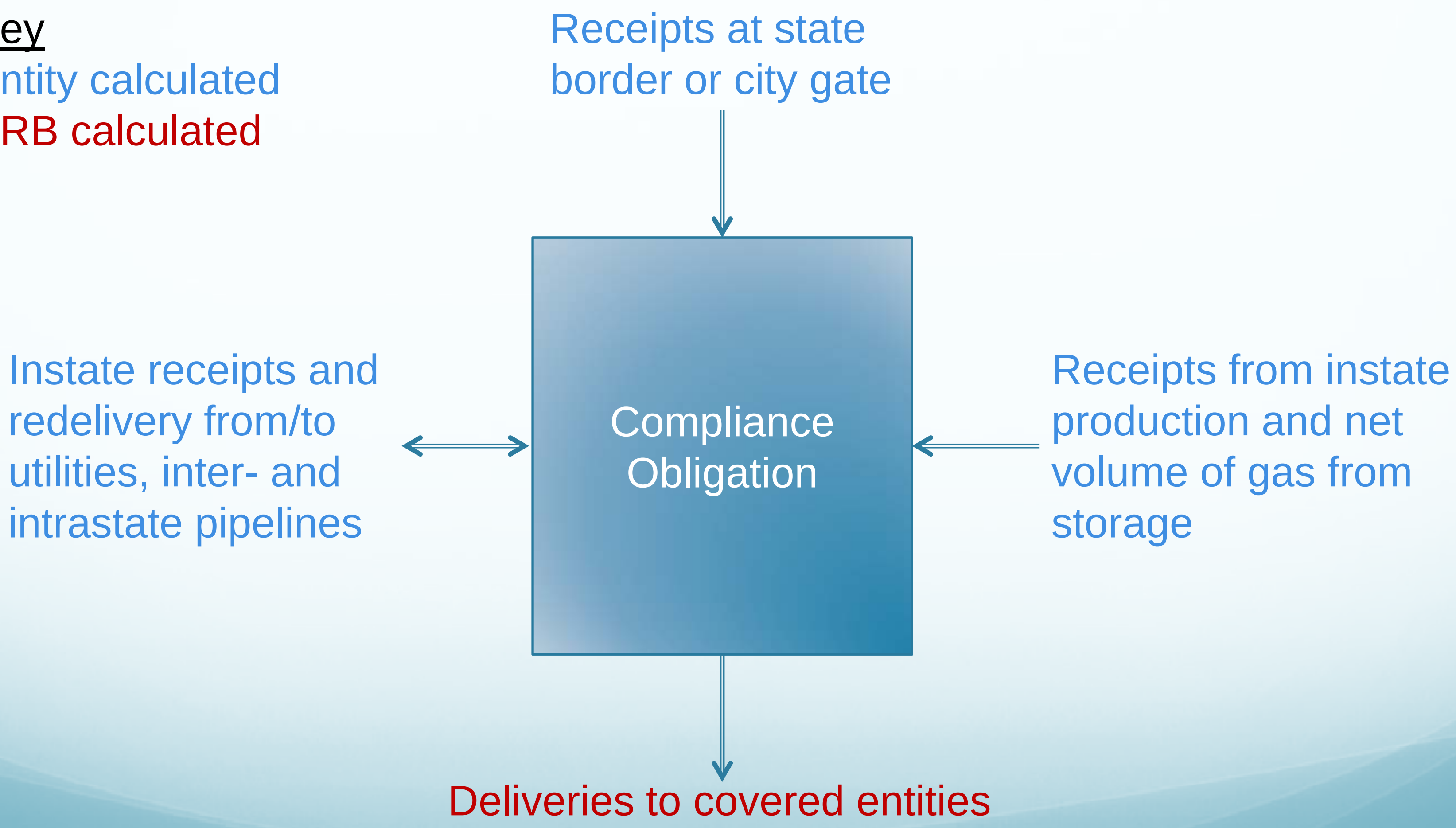
- Register with ARB
- Report GHG emissions annually
- Surrender allowances and offsets to match emissions at the end of each compliance period
  - Reductions are program-wide, not facility specific
- Comply with recordkeeping, market rules, verification, and other requirements in the regulation

Covered Entity - Local Distribution Company

- Public utility gas corporation
  - PG&E
  - San Diego Gas & Electric
  - Southern California Gas Company
  - Southwest Gas Corporation
  - West Coast Gas Company
- Publicly-owned natural gas utilities (examples)
  - Municipality
  - Municipal utility district
  - Joint powers authority
- Intrastate pipelines

Calculation of Compliance Obligation

<u>Key</u>
Entity calculated
ARB calculated



Calculation of Compliance Obligation

- Based on the MMBtu of pipeline quality natural gas at each point
- Outside pipeline quality
  - Exceptions for de minimis amounts (3%)
  - Carbon content sampling required
- Covered emissions
  - CO_2
  - CH_4
  - N_2O
- Exempt emissions
  - CO_2 from biomass-derived fuels

Economic Impact of Natural Gas

- ARB's inventory estimates (LDC covered emissions)
  - 2012 – 50.97 MMTCO2e
  - 2015 – 53.16 MMTCO2e
  - 2020 – 56.44 MMTCO2e
- Economic analysis for Cap-and Trade Regulation indicated cost increases (at $15/allowance) of :
  - 7% for residential customers
  - 8% for commercial customers
  - 6% for industrial customers

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Questions?