

Public Meeting

Point of Regulation for the Sources of Fuel Combustion Included in the Second Compliance Period in a California Cap-and-Trade Program

June 23, 2009

California Air Resources Board

California Cap-and-Trade Rulemaking Timeline

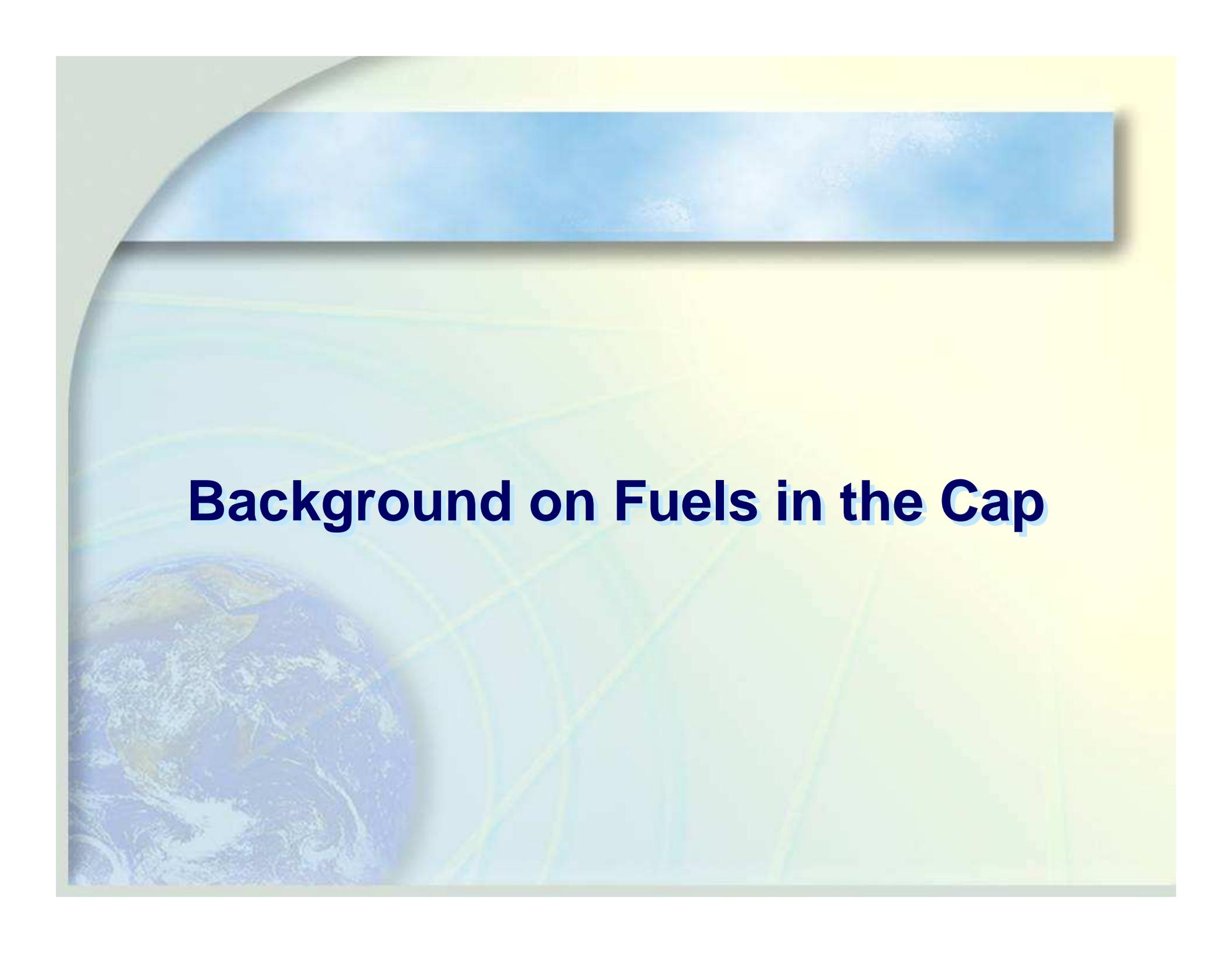
- Focus in 2009: work through implications of different issues and policy decisions
- Focus in 2010: finalize program design and regulatory language
- Late 2010: Board consideration of cap-and-trade regulation
- Extensive public process throughout

Purpose of Meeting

- Discuss options for the points of regulation (and regulated parties) as they apply to sources of fuel combustion included in the second compliance period of the California cap-and-trade program
- Stakeholders are asked to provide written comments on this topic to ARB by July 14th (<http://www.arb.ca.gov/cc/capandtrade/comments.htm>)

Outline for Today's Presentation

- Background on fuels in the cap
- Compliance obligation considerations
- Point of regulation options for each fuel
- Future meeting topics
- Roundtable discussion and questions

The background features a stylized globe on the left side, showing continents and oceans. Overlaid on the globe and the rest of the page are several thin, curved lines in shades of blue and green, creating a sense of motion or a network. The overall color palette is light and airy, with a gradient from pale yellow at the top to light blue at the bottom. A dark blue horizontal bar is positioned at the top of the page.

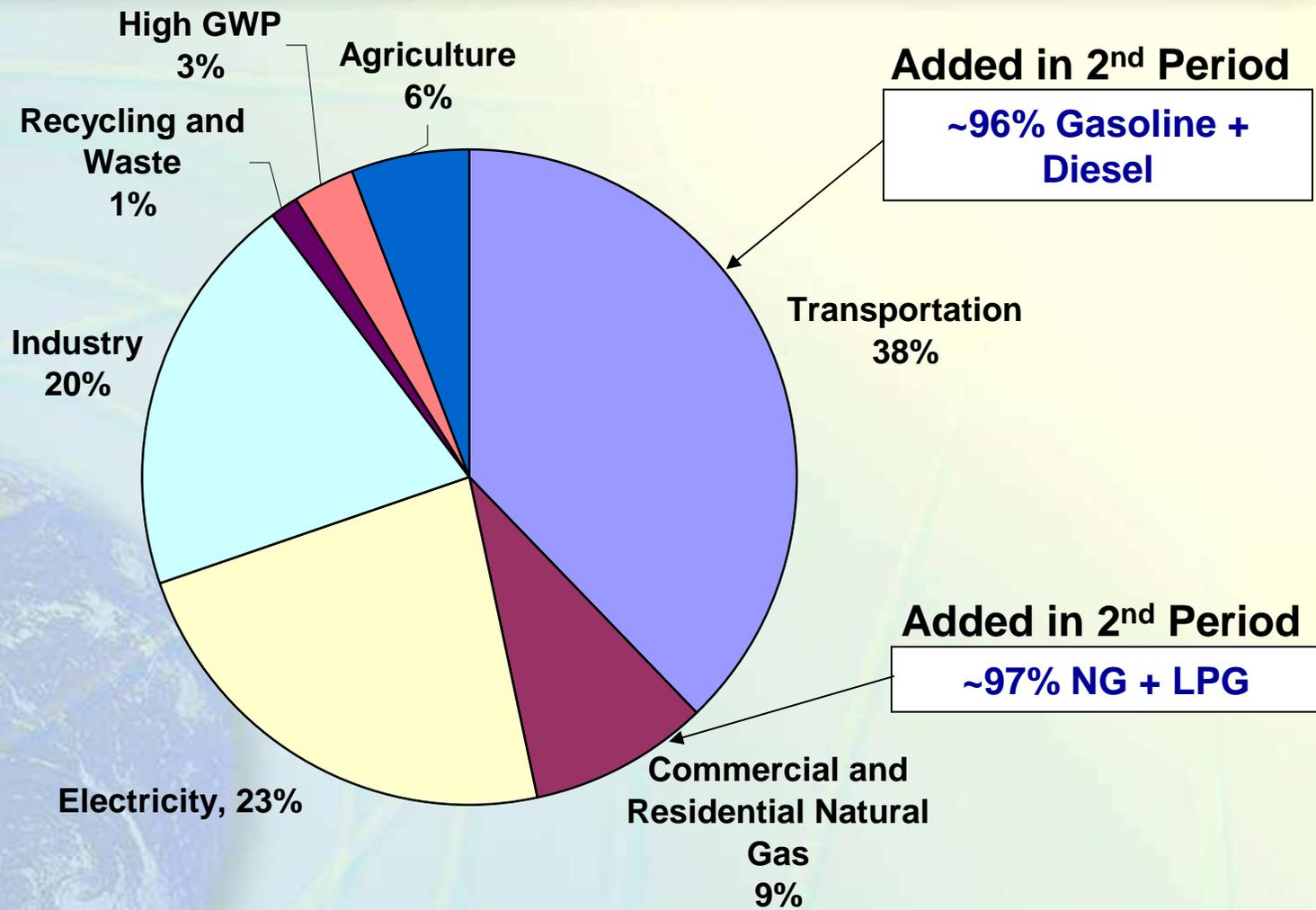
Background on Fuels in the Cap

Capped Sources

- 2012-2014 (Narrow Scope)
 - In-State Electricity Generation Facilities (>25,000 MT CO₂e/yr) and Imported Electricity
 - Large Industrial Facilities (>25,000 MT CO₂e/yr)
- 2015-2020 (Broad Scope – 2nd and 3rd compliance periods). Narrow scope fuels plus:
 - Transportation fuel use
 - Small industrial fuel use (<25,000 MT CO₂e/yr)
 - Residential and commercial fuel use

Source: Scoping Plan page 31

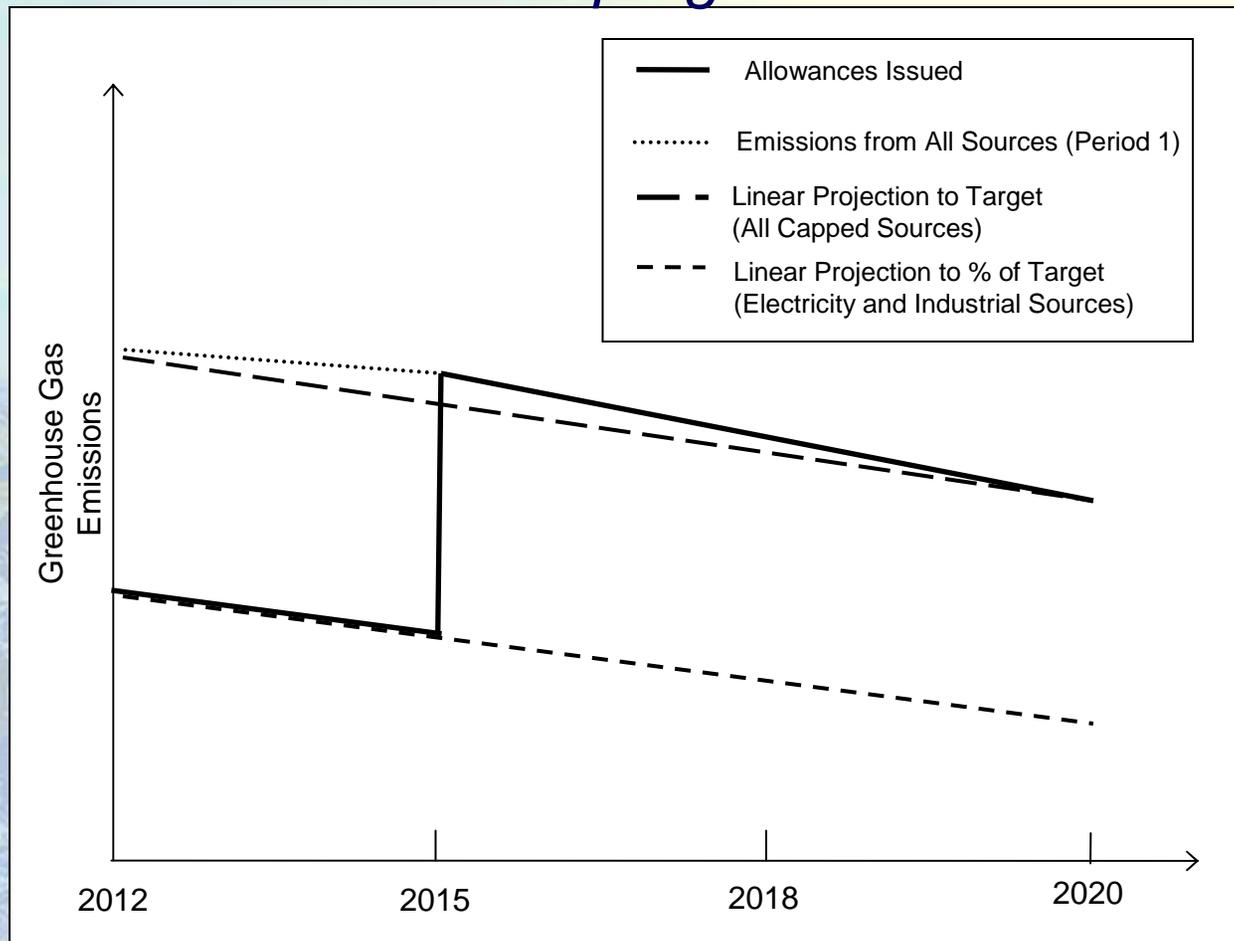
California GHG Inventory (2002 – 2004 Average)



Source: Scoping Plan

Concept of the Cap

Goal: Establish cap for each year at the beginning of the program



Source: Scoping Plan Appendix page C-18



Compliance Obligation Considerations

Considerations for Determining Point of Regulation (POR)

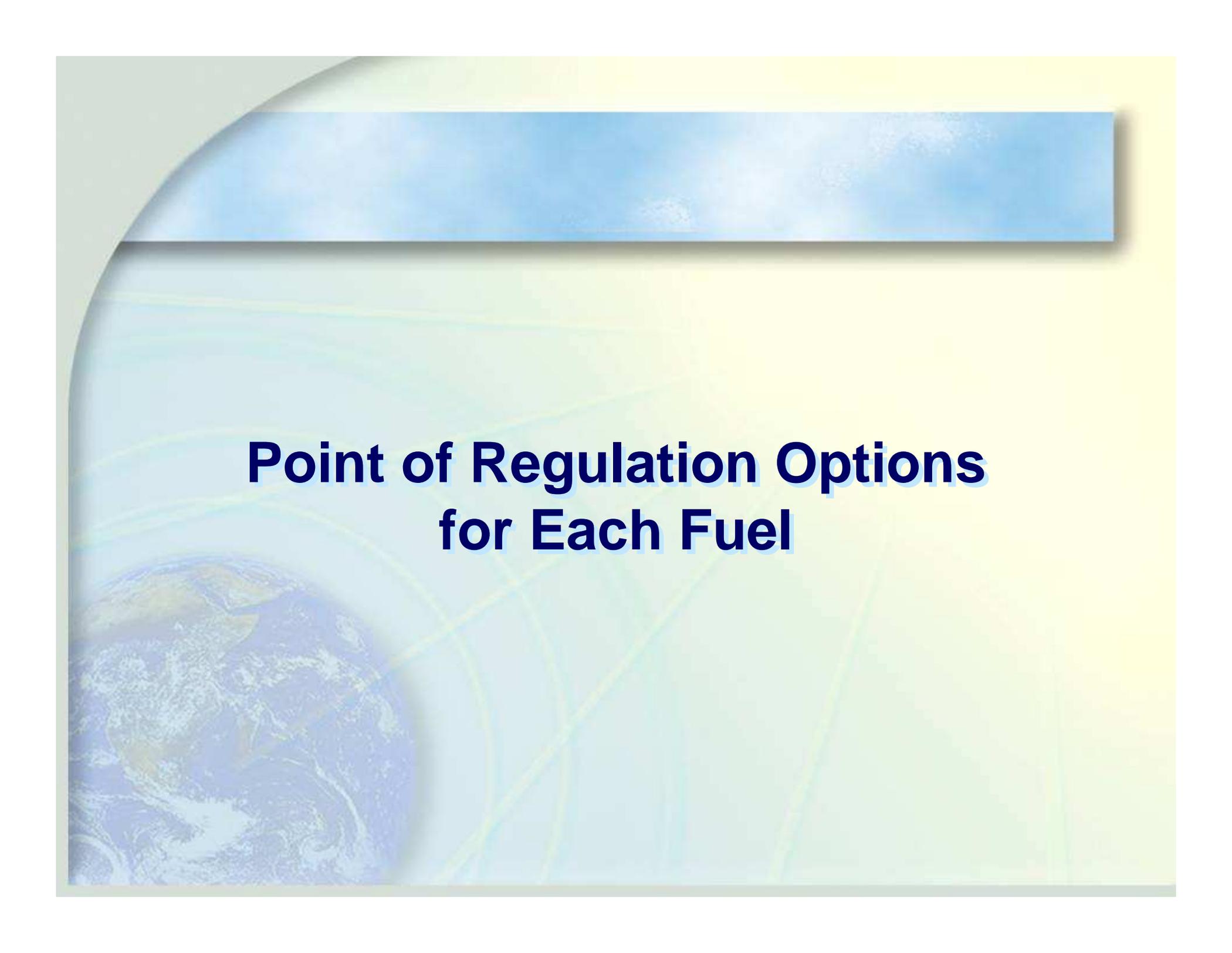
- Capture as many emissions as possible
- POR with information to report fuel used in CA
- Limit the number of regulated parties
- POR with information to avoid double pricing of emissions from fuel use at large stationary sources (i.e. 'net out')
- Consider relevant legal constraints
- Consider need for full information on how refined fuel was produced (i.e. full production pathway)

Establishing a Compliance Obligation: Broad Scope

- Who: Point of regulation will be defined for all types of fuel consumed in California
- What: Direct emissions from fuel combustion (fuel carbon content as proxy)
 - Fuel production pathway emissions upstream from the point of regulation may also have a compliance obligation
- Considerations:
 - ‘Net out’ fuels sold by fuel providers to large point sources with direct compliance obligations
 - ‘Net out’ fuels exempt from the program (e.g. petroleum used in plastics)

Reporting

- GHG Mandatory Reporting Regulation will be revised as part of cap-and-trade regulation in 2010
 - 2nd compliance period fuels to be added
- Regulated parties in the cap-and-trade program will also be reporting entities



Point of Regulation Options for Each Fuel

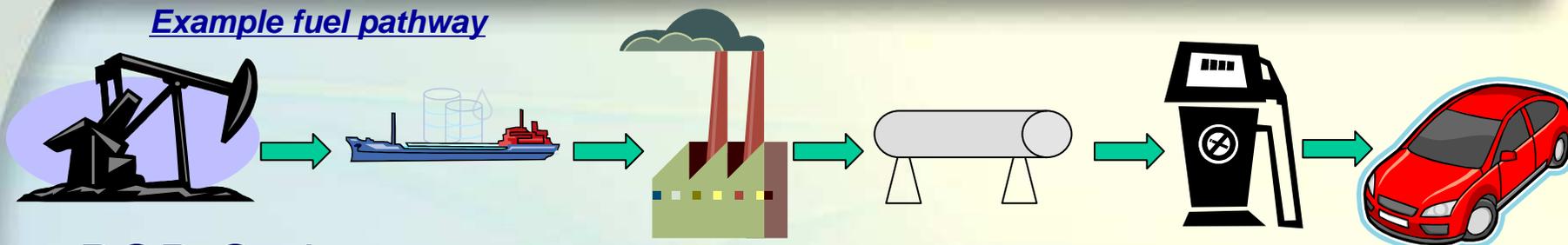
POR for Regulations with Fuels

	LCFS	Proposed AB 32 Fee Reg	CaRFG3, RFS	AB 32 Cap / Trade
Gasoline, diesel	Refinery or importer of blendstock	Refinery or importer of blendstock	Distribution Rack	TBD
Natural gas	Utilities or fuel dispensing eq. owner	Utilities + ind. pipeline operators	N/A	TBD
LNG	Fuel provider supplying to dispenser	Treated as Natural Gas	N/A	TBD
Electricity	Utilities or veh elec providers, indiv. owners	Fuel supplier or importer of electricity	N/A	<i>See notes below</i>
Hydrogen	Fuel producer for veh use	N/A	N/A	<i>See notes below</i>
E85	Fuel producer for veh use	N/A	N/A	TBD

- POR definition above for LCFS does not capture all possible PORs
- Electricity for transportation will not be classified as a “fuel”. The point of regulation for electricity will capture all uses.
- Hydrogen (H₂) fuel doesn’t contain carbon so H₂ fuel use will not be included. H₂ production is captured as industrial source.

Gasoline and Diesel

Example fuel pathway



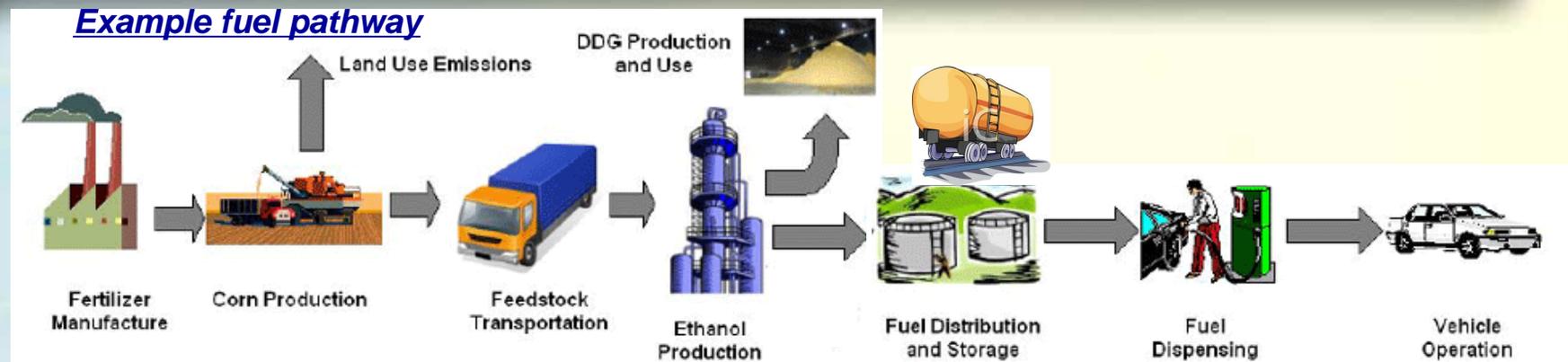
POR Options

- Refiners or blendstock importers
- Distribution terminal racks

Considerations

- Compliance at rack would be consistent with CaRFG3
- Refiners and importers will have fuel production info (LCFS)
- Compliance must account for low biofuel blends (e.g. E10-10% ethanol blend)
- Ability to 'net out':
 - E.g. Diesel fuel used in narrow scope industrial sources

High Biofuel Blends (E85, B100, etc)



POR Options

- Fuel producers or importers
- Refiners

Considerations

- Compliance must account for petroleum feedstock (e.g. 15% gasoline)
- Various biofuel carbon intensity variations are being considered

Natural Gas

POR Options

- CA end users supplied directly from interstate pipelines
- Intrastate pipelines
- Local Distribution Companies (LDCs)

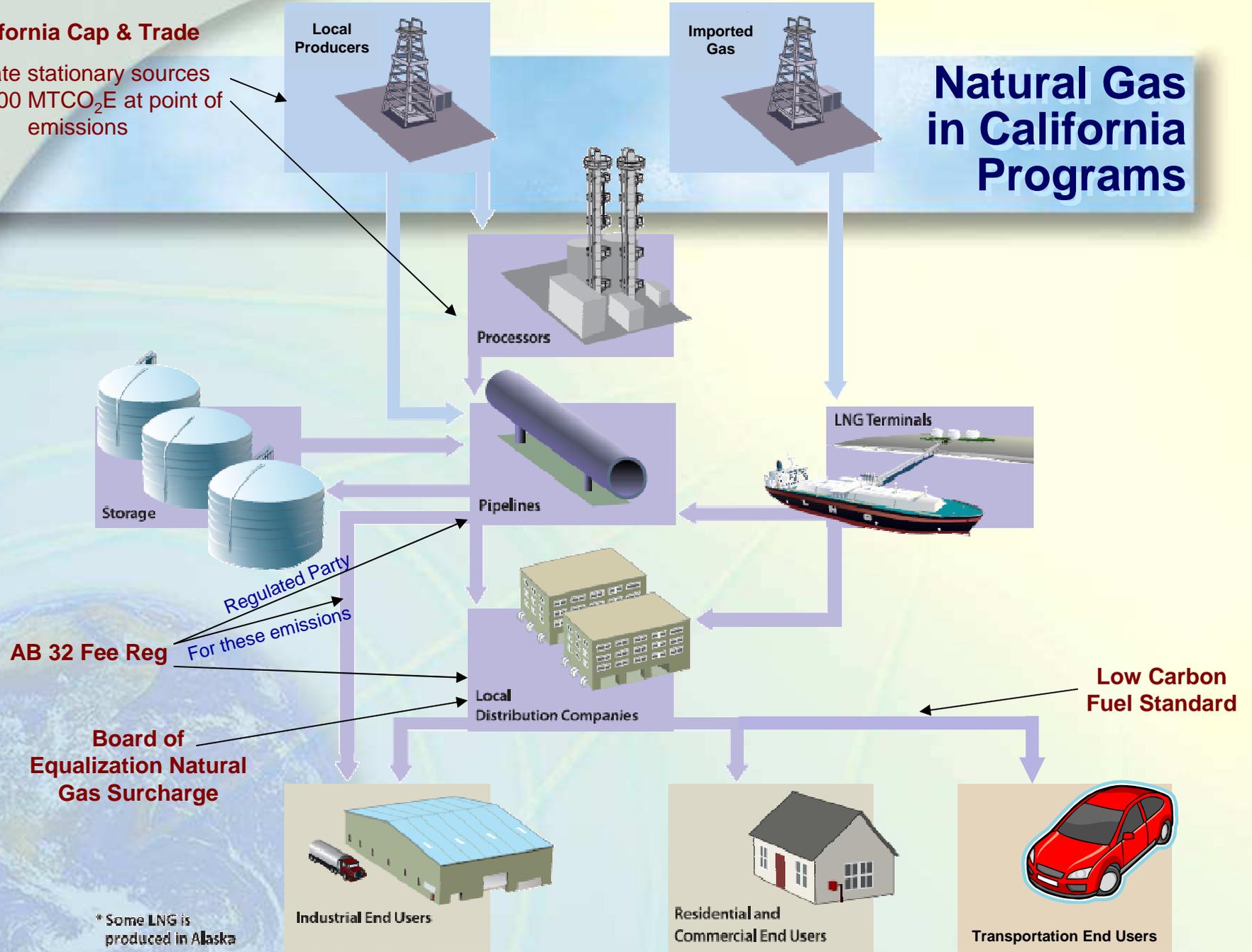
Considerations

- Multiple points of regulation may be needed to capture scope of emissions
 - E.g., capture end users for direct deliveries from interstate pipelines and/or non-utility deliveries
- LDCs have some ability to ‘net out’ narrow scope sources
- Avoid double counting (e.g., NG underground storage)
- Entities already reporting information to the state
- Ability to pass through costs

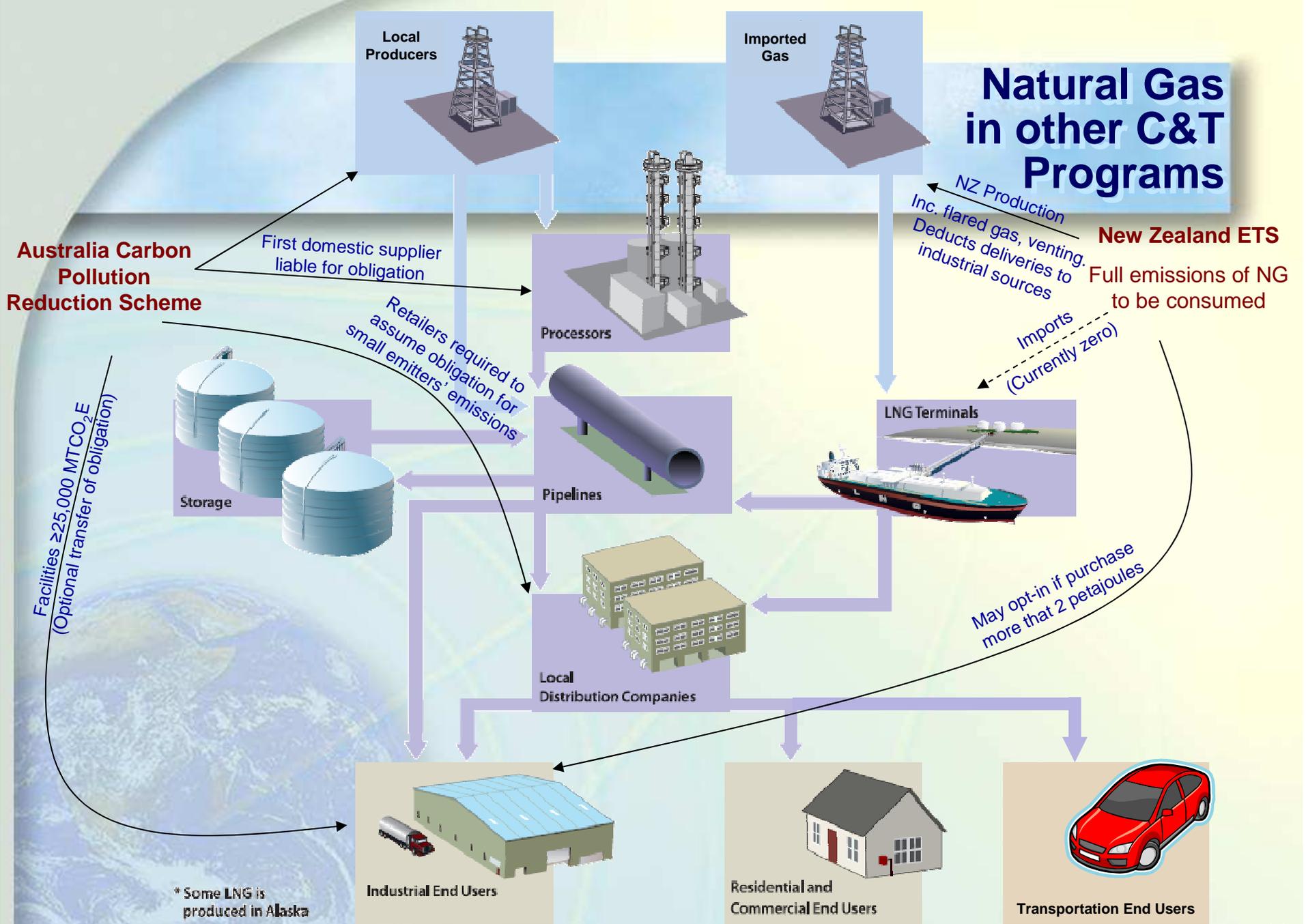
California Cap & Trade

In-state stationary sources
> 25,000 MTCO₂E at point of emissions

Natural Gas in California Programs



Natural Gas in other C&T Programs



Non-Natural Gas Fuels

- Liquid petroleum gas (“propane”)
 - ~9% of resid./comm. sector emissions; ~1% of total inventory
 - Variety of end uses, delivery methods
 - CPUC regulates safety of propane distribution systems, at point of propane system operator
 - Prices are unregulated
- Kerosene
 - ~0.3% of resid./comm. sector emissions; ~0.03% of total inventory
- Others?

Workshop Discussion Questions

1. Are we capturing the appropriate fuel types?
2. Are there suggestions for the cap setting process for these fuels?
 - Sources of data, projections
 - Determining fuel production pathway emissions
3. What are the benefits and challenges with various POR alternatives?

Future Fuels-Related Topics

- Consideration of importing LCFS credits for compliance with cap-and-trade program
- Reporting process
 - Methodologies for 2nd compliance period fuels
- Cap setting process and data, including fuels
- Possible inclusion of fuel pathway emissions (out-of-state) in fuel provider compliance obligation
 - Cap-setting public meeting

References

- **Low Carbon Fuel Standard (LCFS)**
 - <http://www.arb.ca.gov/regact/2009/lcfs09/lcfsisor1.pdf>
- **AB 32 Mandatory Reporting**
 - <http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>
- **BOE Tax Laws (NG Surcharge Law and Fuel Surcharge)**
 - <http://www.boe.ca.gov/sptaxprog/natgas.htm>
 - <http://www.boe.ca.gov/sptaxprog/spftdmfuels.htm>
- **New Zealand Emissions Trading Scheme**
 - <http://www.climatechange.govt.nz/emissions-trading-scheme/index.html>
- **Australia Carbon Pollution Reduction Scheme**
 - <http://www.climatechange.gov.au/emissionstrading/index.html>

Team Leads for Cap & Trade Rulemaking

Sam Wade, Mary Jane Coombs	Cap setting and allowance distribution
Ray Olsson	Market operations and oversight
Brieanne Aguila	Offsets and cap-and-trade project manager
Claudia Orlando	Electricity
Joshua Cunningham	Transportation fuels
Manpreet Mattu	Reporting, and Energy efficiency
Bruce Tuter, Mihoyo Fuji	Industrial sectors
Karin Donhowe	Residential and commercial fuels
Mihoyo Fuji	Marginal abatement costs and leakage related issues
David Kennedy, Stephen Shelby, Barbara Bamberger, Mihoyo Fuji, Jeannie Blakeslee, Judy Nottoli, Jerry Hart	Impact analyses (environmental, economic, localized, small business, public health)

For More Information...

- ARB's Cap-and-Trade Web Site
 - <http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>
- To stay informed, sign up for the Cap-and-Trade listserv:
 - http://www.arb.ca.gov/listserv/listserv_ind.php?listname=capandtrade
- Western Climate Initiative
 - <http://www.westernclimateinitiative.org>