



# Fuels under the Cap

California Petroleum Market Advisory Committee

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# Agenda



- Cost calculation mechanism
- Cost pass-through issues
- Cost pass-through measurement metrics

# The Cap & Trade calculation is detailed



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- CARB has detailed spreadsheet to calculate GHG emissions as MT of CO2e for each fuel
  - CO2 from fuel combustion
  - Methane byproduct from combustion
  - Nitrous oxide byproduct from combustion
- The CO2 emissions from biomass derived fuels are not included in covered CO2e emissions
- Part of spreadsheet is illustrated to right
- Example 100,000 gallons (2,381 barrels) regular grade summer CARBOB put into spreadsheet yields total GHG as 908.97 MT CO2e

Calculations and Reporting [Return to Instructions](#)

Calculate CO<sub>2</sub> emissions using Equation MM-1 from 98.393(a)

$$CO_{2i} = Product_i * EF_i \quad (Eq. MM-1)$$

Calculate CH<sub>4</sub> and N<sub>2</sub>O emissions using Equa

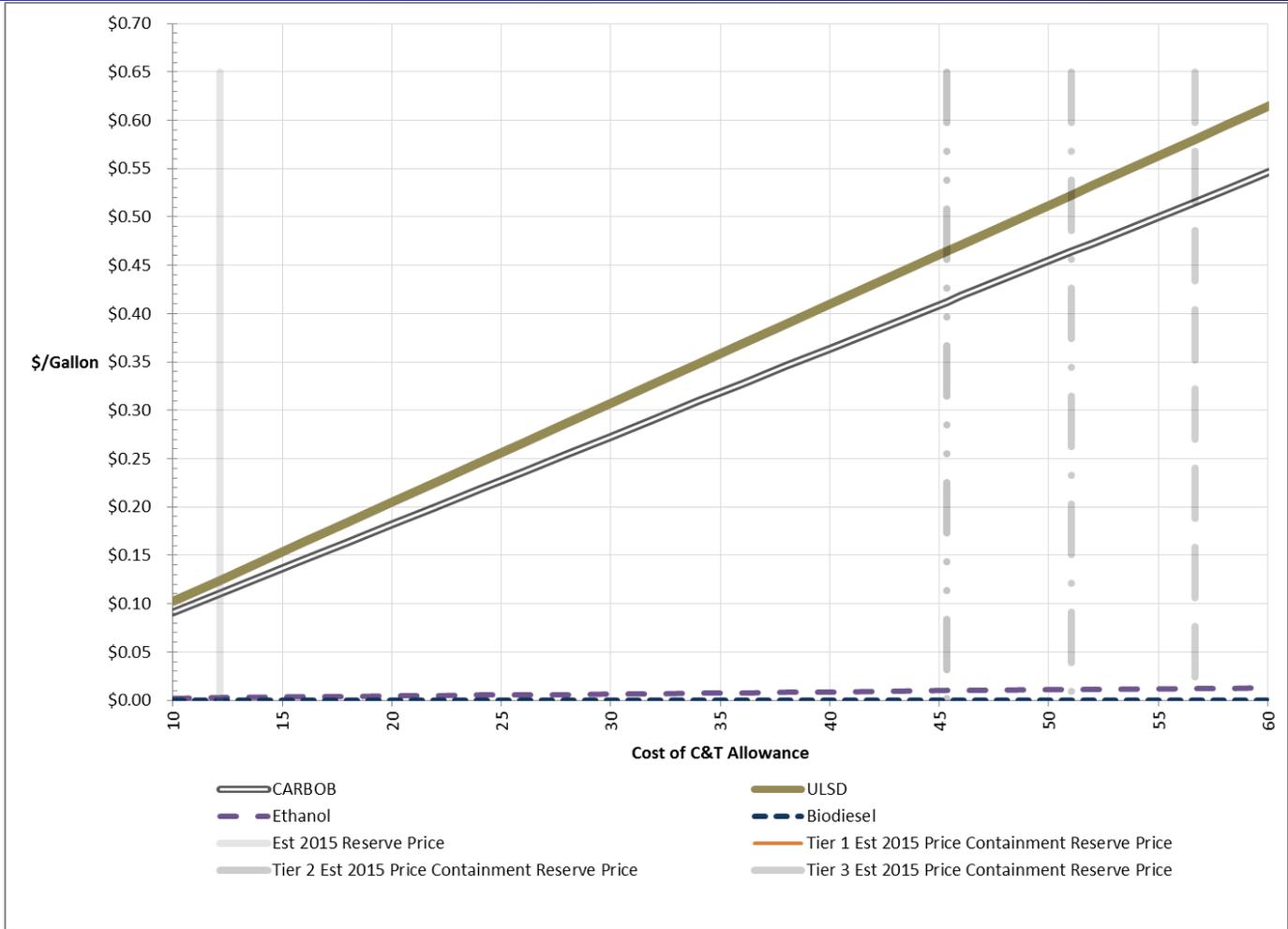
$$CH_4 \text{ or } N_2O = 1 \times 10^{-3} * Fuel * HHV * EF$$

Reported Emissions	[Product] Annual volume of product "I" supplied or imported into California by the reporting party. Report CARBOB as RBOB. (barrels).	[EF <sub>i</sub> ] Product-specific CO <sub>2</sub> emission factor from Table MM-1 (metric tons CO <sub>2</sub> per barrel).	[CO <sub>2</sub> ] Annual CO <sub>2</sub> emissions that would result from the complete combustion or oxidation of each petroleum product or natural gas liquid "I" (metric tons).	[Fuel] Volume of the fuel combusted (gallons per year).	[HHV] Default high heat value of the fuel from Table C-1 of Subpart C (mmBtu per gallon)	[EF <sub>CH4</sub> ] Fuel-specific default emission factor for CH <sub>4</sub> , from Table C-2 of Subpart C (kg CH <sub>4</sub> per mmBtu).
<b>TOTAL</b>	<b>2381</b>		<b>893.5893</b>			
<b>CBOB—Summer</b>						
Regular	2,381	0.3753	893.59			
Midgrade		0.3758	0.00			
Premium		0.3763	0.00			
<b>CBOB—Winter</b>						
Regular		0.3663	0.00			
Midgrade		0.3684	0.00			
Premium		0.3705	0.00			
<b>RBOB—Summer</b>						
Regular		0.3686	0.00			
Midgrade		0.3677	0.00			
Premium		0.367	0.00			
<b>RBOB—Winter</b>						
Regular		0.3676	0.00			
Midgrade		0.3676	0.00			
Premium		0.3679	0.00			
<b>Distillate Fuel Oils</b>						
Distillate No. 1		0.4264	0.00			
Distillate No. 2		0.4296	0.00			
<b>Liquefied Petroleum Gas (LPG)</b>	<b>0</b>					
Ethane		0.2537	0.00	0.0000	0.069	0.001
Ethylene		0.2835	0.00	0.0000	0.1	0.001
Propane		0.2349	0.00	0.0000	0.091	0.001
Propylene		0.2521	0.00	0.0000	0.091	0.001
Butane		0.2761	0.00	0.0000	0.101	0.001
Butylene		0.2936	0.00	0.0000	0.103	0.001
Isobutane		0.2655	0.00	0.0000	0.097	0.001
Isobutylene		0.2939	0.00	0.0000	0.103	0.001
Pentanes Plus		0.3235	0.00	0.0000	0.11	0.001
<b>Biomass-Derived Fuel</b>						
Ethanol (100%)		0.2422	0.00			
Biodiesel (100%, methyl ester)		0.3957	0.00			
Rendered Animal Fat		0.3724	0.00			
Vegetable Oil		0.411	0.00			

# Fuels Under Cap “Tax” depends on allowance price and fuel



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# No consensus approach to the cost pass-through mechanism yet



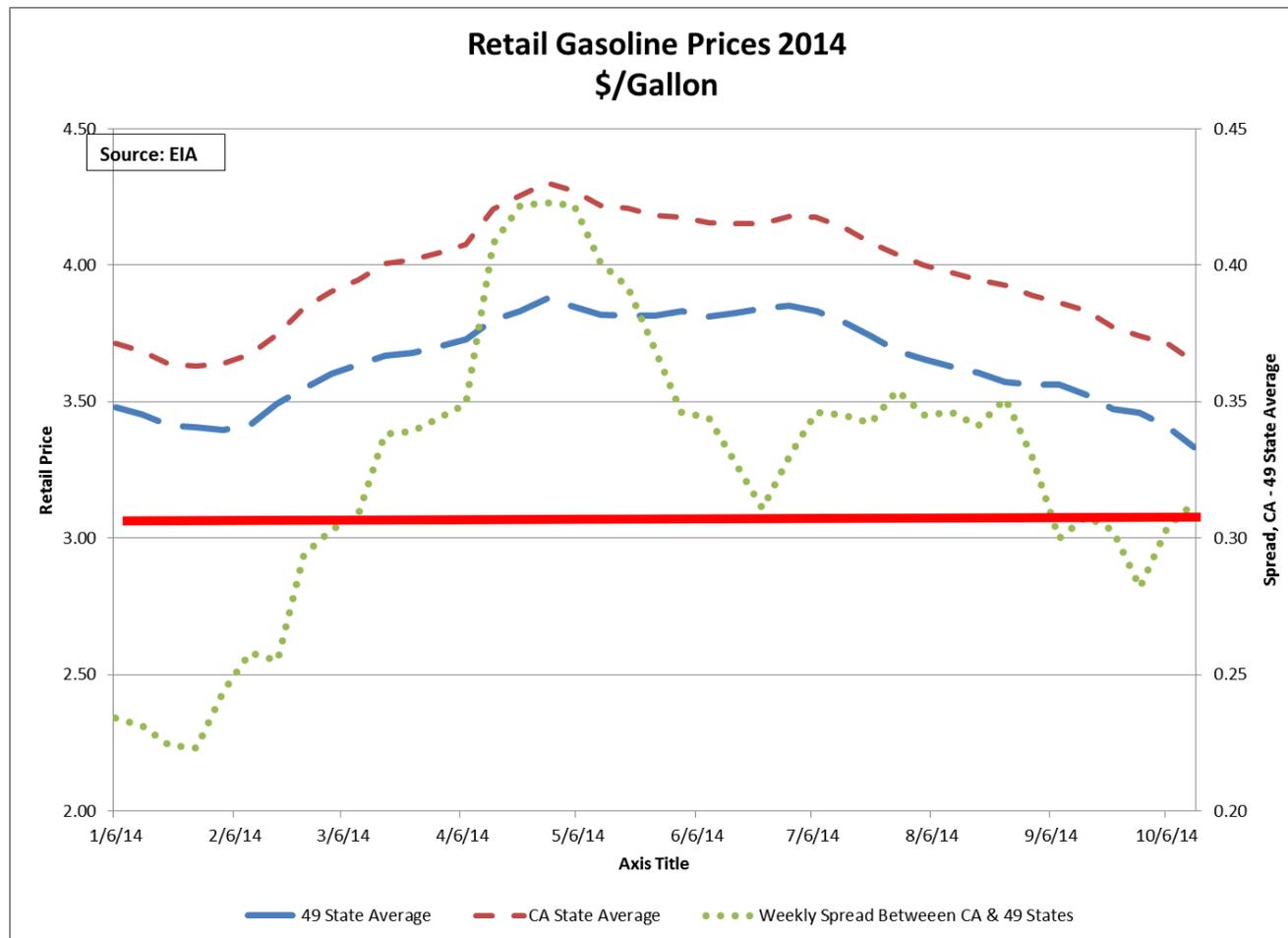
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1. Loading the delivery truck will trigger an invoice
2. The two options for cost pass-through on the invoice are:
  - a. As a line item, like other taxes/fees or,
  - b. Embedded in the price of the commodity and not broken out
3. Line item proponents want the transparency
4. Others are concerned about justifying the cost pass-through to government agencies
  - a. No way to “true up” costs in an unregulated commodities market and concerned about claims of “gouging”
5. How the line item cost will be calculated is not settled either:
  - OPIS Cap at the Rack daily?
  - Quarterly auction prices
  - Gasoline and diesel coverage require different cost recovery levels
6. Start up of the program is likely to be turbulent until the market sorts out
  - a. Suppliers may have radically different prices

# California gasoline retail has averaged 31 cpg over the US average



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California Petroleum Market Advisory Committee December 16, 2014

**Comparison with the US average is a useful measure of cost pass-through**

# Other issues



- Cost recovery for fuel exports by truck