

LCFS Dashboard

DRAFT – For Discussion Only

March 8, 2016
Sacramento, CA

California Environmental Protection Agency
 **Air Resources Board**

Proposed Weekly Credit Transfer Activity Report Example

Table 1. LCFS Credit Transfer Activity Report for the week of Jan. 3-10 2016 *

Date Completed	Date Posted	Price \$/MT	Number	Total Price
4-Jan	21-Dec	\$120	50,000	\$6,000,000
4-Jan	22-Dec	\$50	2,000	\$100,000
4-Jan	23-Dec	\$75	10,000	\$750,000
5-Jan	23-Dec	\$120	2,000	\$240,000
5-Jan	23-Dec	\$120	500	\$60,000
5-Jan	23-Dec	\$135	1,000	\$135,000
6-Jan	28-Dec	\$120	5,000	\$600,000
6-Jan	28-Dec	\$120	20,000	\$2,400,000
6-Jan	28-Dec	\$100	5,000	\$500,000
7-Jan	28-Dec	\$120	10,000	\$1,200,000
7-Jan	28-Dec	\$120	1,000	\$120,000
7-Jan	28-Dec	\$120	500	\$60,000
8-Jan	29-Dec	\$110	10000	\$1,100,000
8-Jan	30-Dec	\$100	500	\$50,000
8-Jan	30-Dec	\$115	2,000	\$230,000
TOTALS		Week Average Price	Week Total Credits	Week Total
		\$113.18	119,500	\$13,525,000

* Excludes 2 transfers of a total of 2,000 credits at a zero dollar price

Proposed Dashboard Calculator: Estimated LCFS Premium for Low-CI Fuels

Select Compliance Year	CI Standard (gCO ₂ e/MJ)	Select Fuel	Fuel Energy Density (MJ/gal)
2016 ▼	96.50	Denatured Ethanol ▼	81.51
	Gasoline Gallon Equivalent (MJ/GGE)	Select Fuel/Vehicle Combination	Energy Economy Ratio (EER)
Gasoline Substitute	115.83	Light/Medium Duty Gasol ▼	1.0

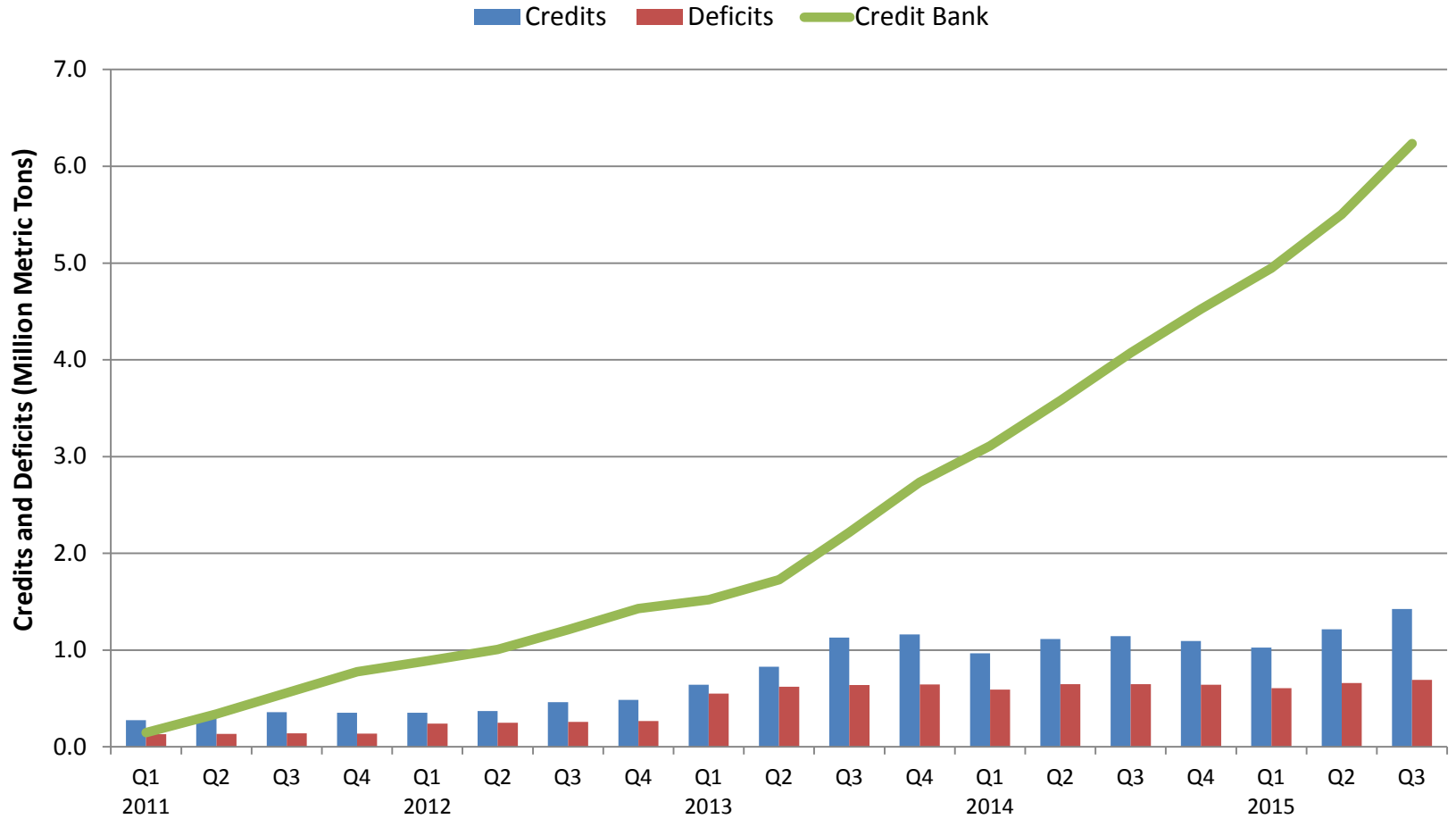
**Table I: Alternative Fuel Premiums at Sample LCFS Credit Prices
(per GGE for fuels used as gasoline substitutes)**

CI Score (gCO ₂ e/MJ)	Credit Price					
	\$60	\$80	\$100	\$120	\$150	\$200
0	\$0.67	\$0.89	\$1.12	\$1.34	\$1.68	\$2.24
10	\$0.60	\$0.80	\$1.00	\$1.20	\$1.50	\$2.00
20	\$0.53	\$0.71	\$0.89	\$1.06	\$1.33	\$1.77
30	\$0.46	\$0.62	\$0.77	\$0.92	\$1.16	\$1.54
40	\$0.39	\$0.52	\$0.65	\$0.79	\$0.98	\$1.31
50	\$0.32	\$0.43	\$0.54	\$0.65	\$0.81	\$1.08
60	\$0.25	\$0.34	\$0.42	\$0.51	\$0.63	\$0.85
70	\$0.18	\$0.25	\$0.31	\$0.37	\$0.46	\$0.61
80	\$0.11	\$0.15	\$0.19	\$0.23	\$0.29	\$0.38
90	\$0.05	\$0.06	\$0.08	\$0.09	\$0.11	\$0.15
99.78 (Max pass-through for CARBOB)	-\$0.02	-\$0.03	-\$0.04	-\$0.05	-\$0.06	-\$0.08

Proposed Dashboard Figure

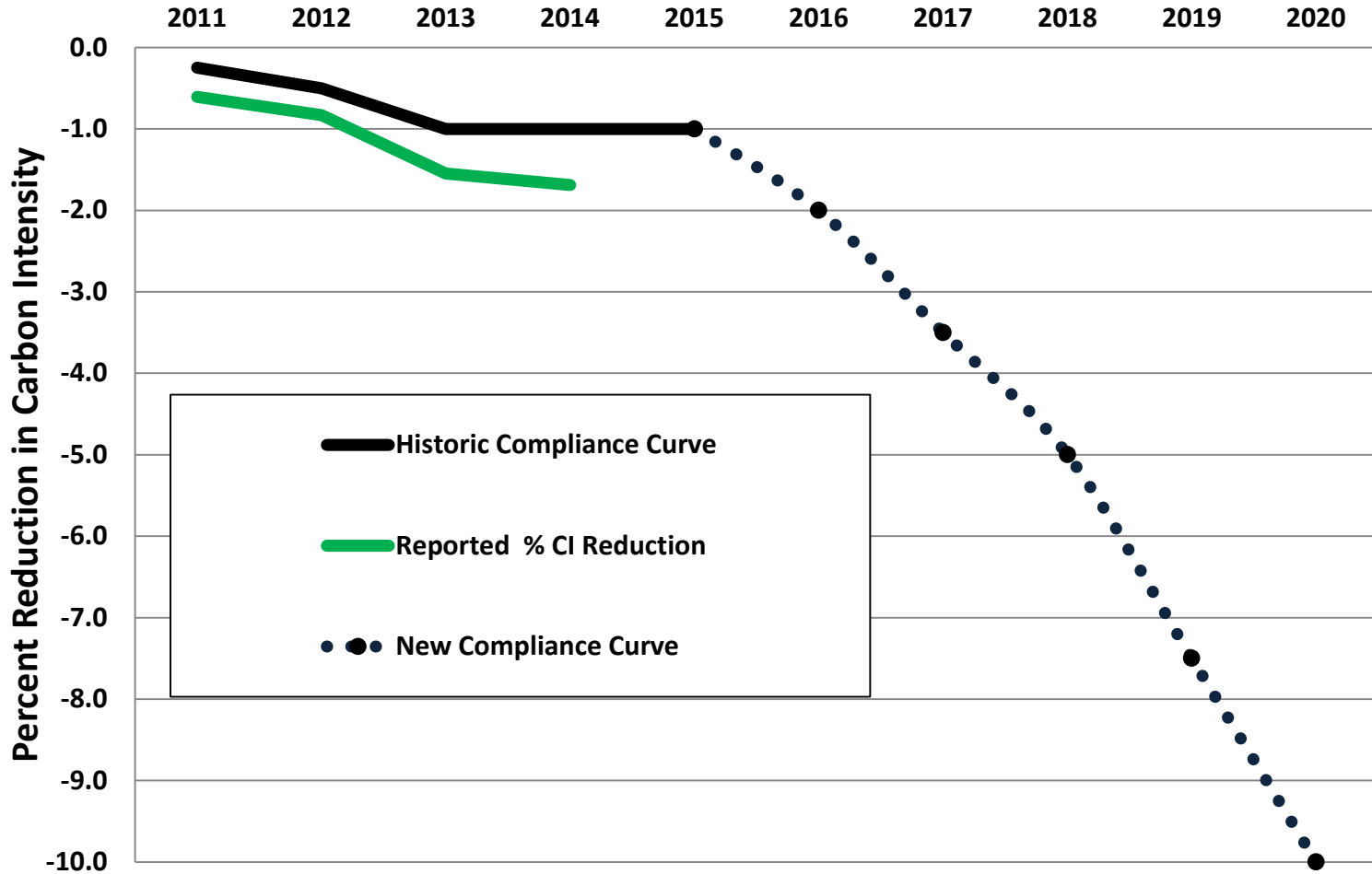
Total Credits and Deficits for All Fuels Reported and Cumulative Credit Bank

Q1 2011 – Q3 2015



Proposed Dashboard Figure

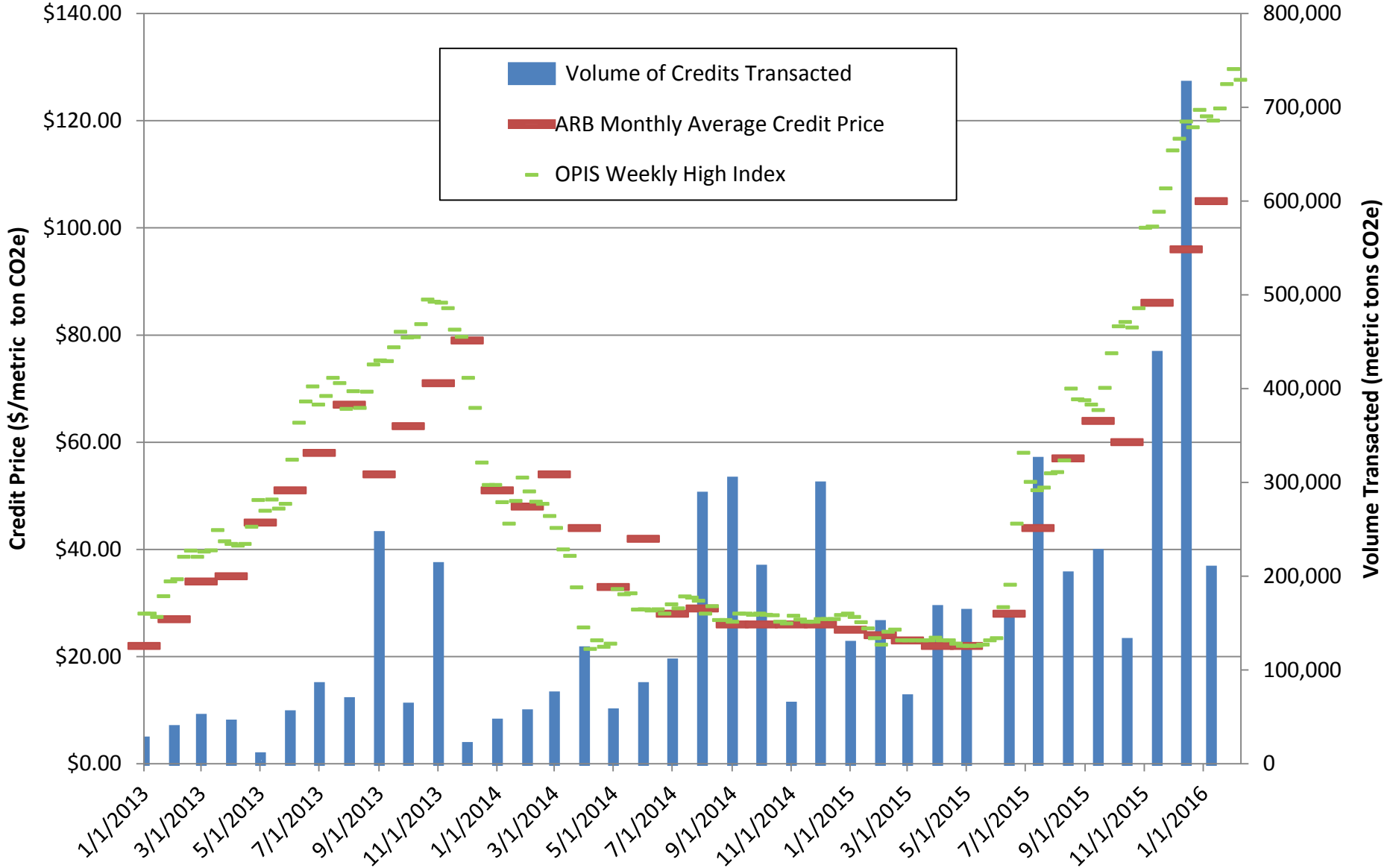
2011-2014 Performance of the Low Carbon Fuel Standard



Example uses carbon intensities based on composite of gasoline and diesel fuels

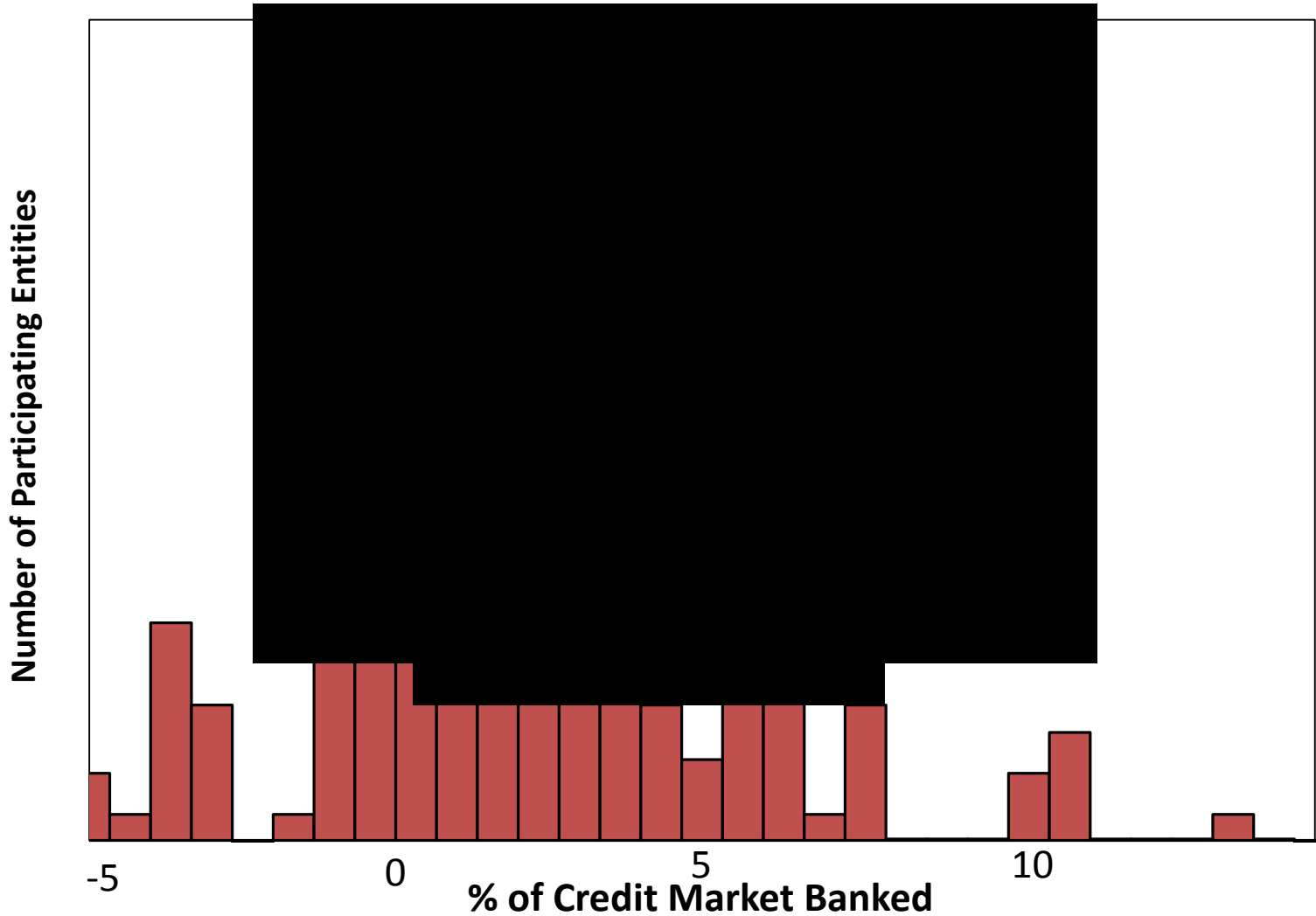
Proposed Dashboard Figure

LCFS Credit Price and Credit Transaction Volume (2013-2016)



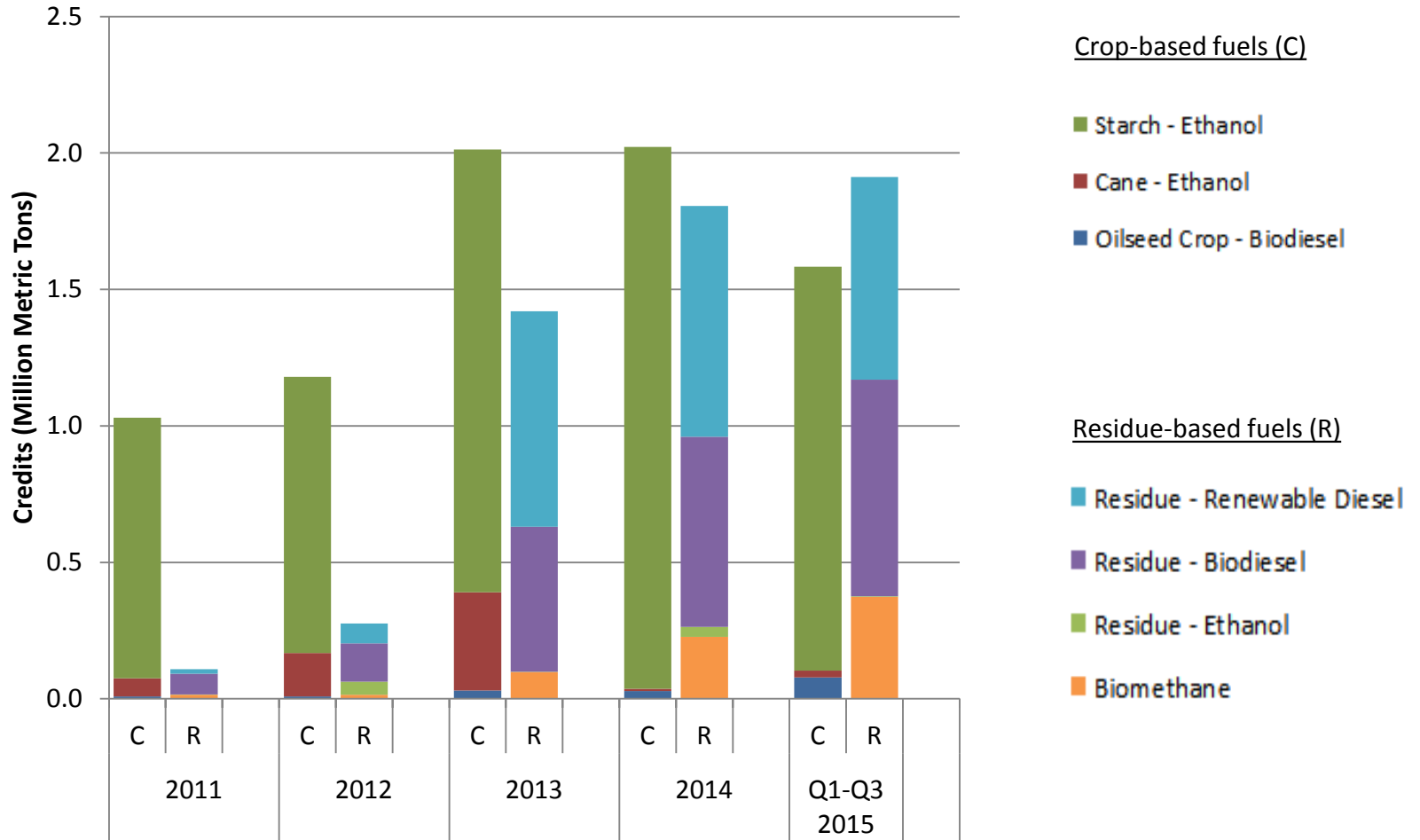
Proposed Dashboard Figure

Net Position Histogram



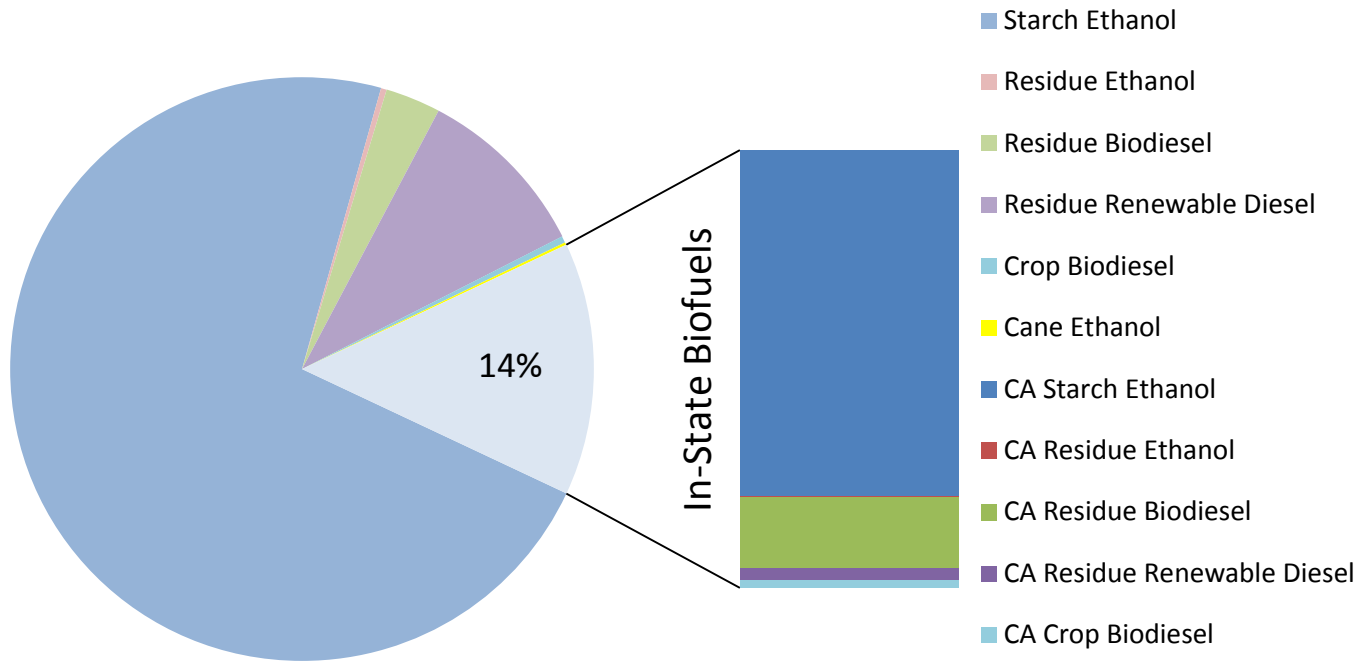
Proposed Dashboard Figure

Total Biofuel Credits by Feedstock Type: Crop or Residue (Q1 2011 – Q3 2015)



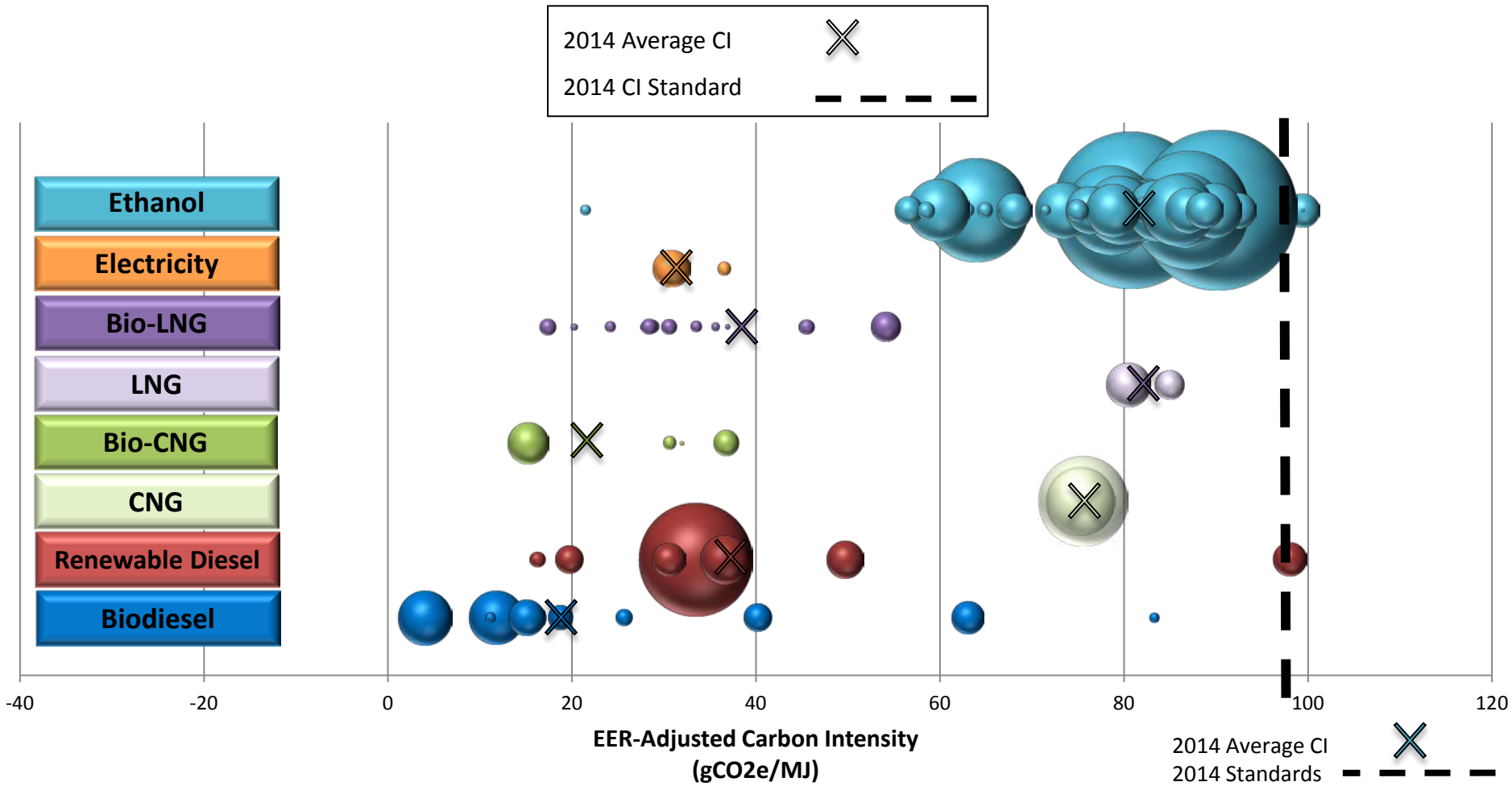
Proposed Dashboard Figure

2014 Share of Liquid Biofuels Produced In-State by Volume



Proposed Dashboard Figure

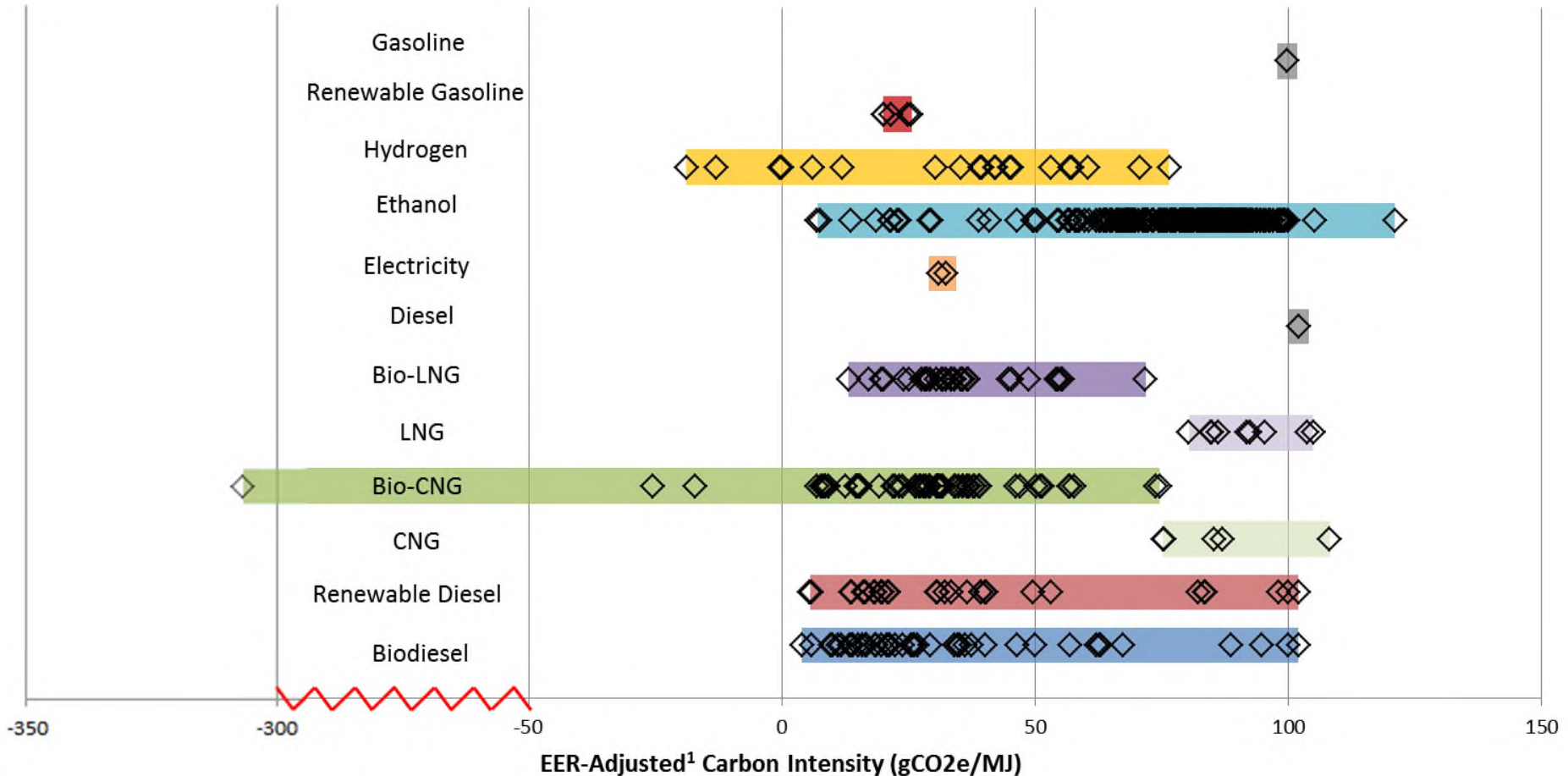
2014 Volume-Weighted Average Carbon Intensity by Fuel Type



¹ CI values are adjusted using the vehicle-fuel Energy Economy Ratio (EER) to an equivalent MJ of conventional fuel basis $\left(\frac{CI_{alternative\ fuel}}{EER}\right)$.

Proposed Dashboard Figure

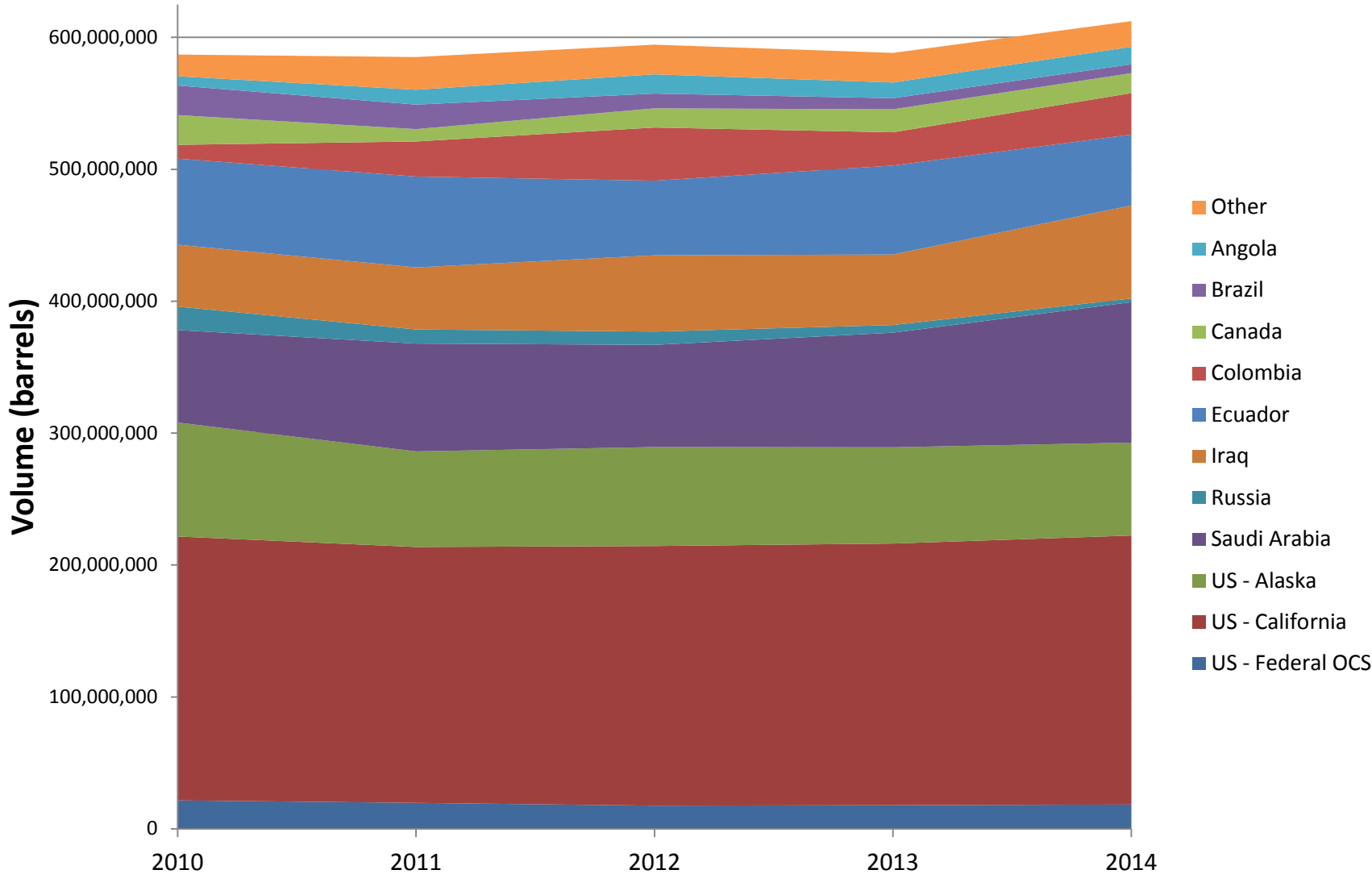
Carbon Intensity Values of All Certified Pathways (2011-2015).



¹ The alternative fuel's CI value is divided by its Energy Economy Ratio (EER) in order to obtain the EER-adjusted CI value, representing the emissions which occur from the alternative fuel *per MJ of conventional fuel displaced*. EER values for all vehicle-fuel combinations are provided in Table 4 of the Final Regulation Order (2015).

Proposed Dashboard Figure

Major Sources of Crude Supplied to California



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