

## DOCKETED

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# California's Gasoline Prices 2010 to 2016

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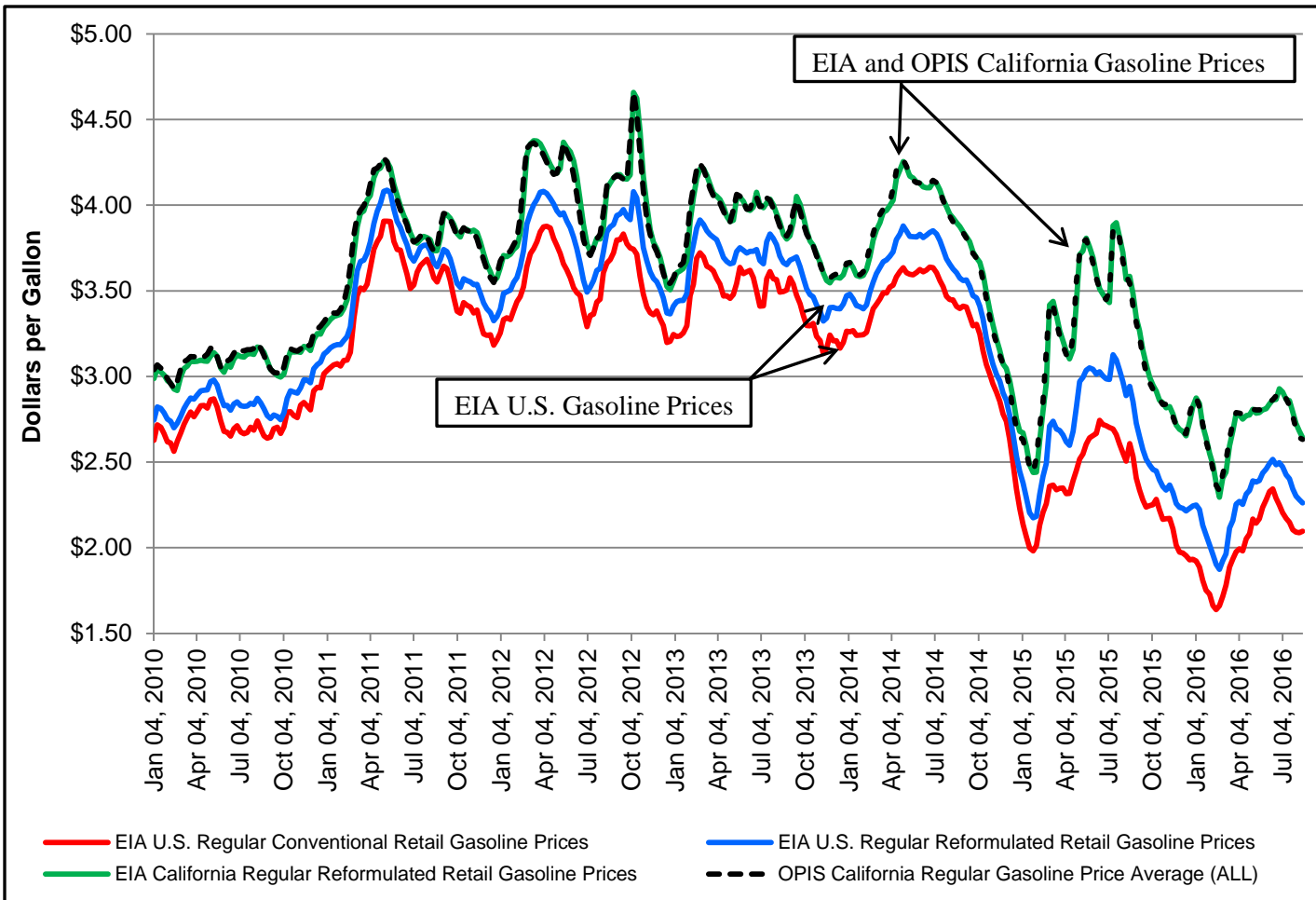
Petroleum Market Advisory Committee  
Rosenfeld Hearing Room  
November 29, 2016



# General Retail Gasoline Pricing Trends



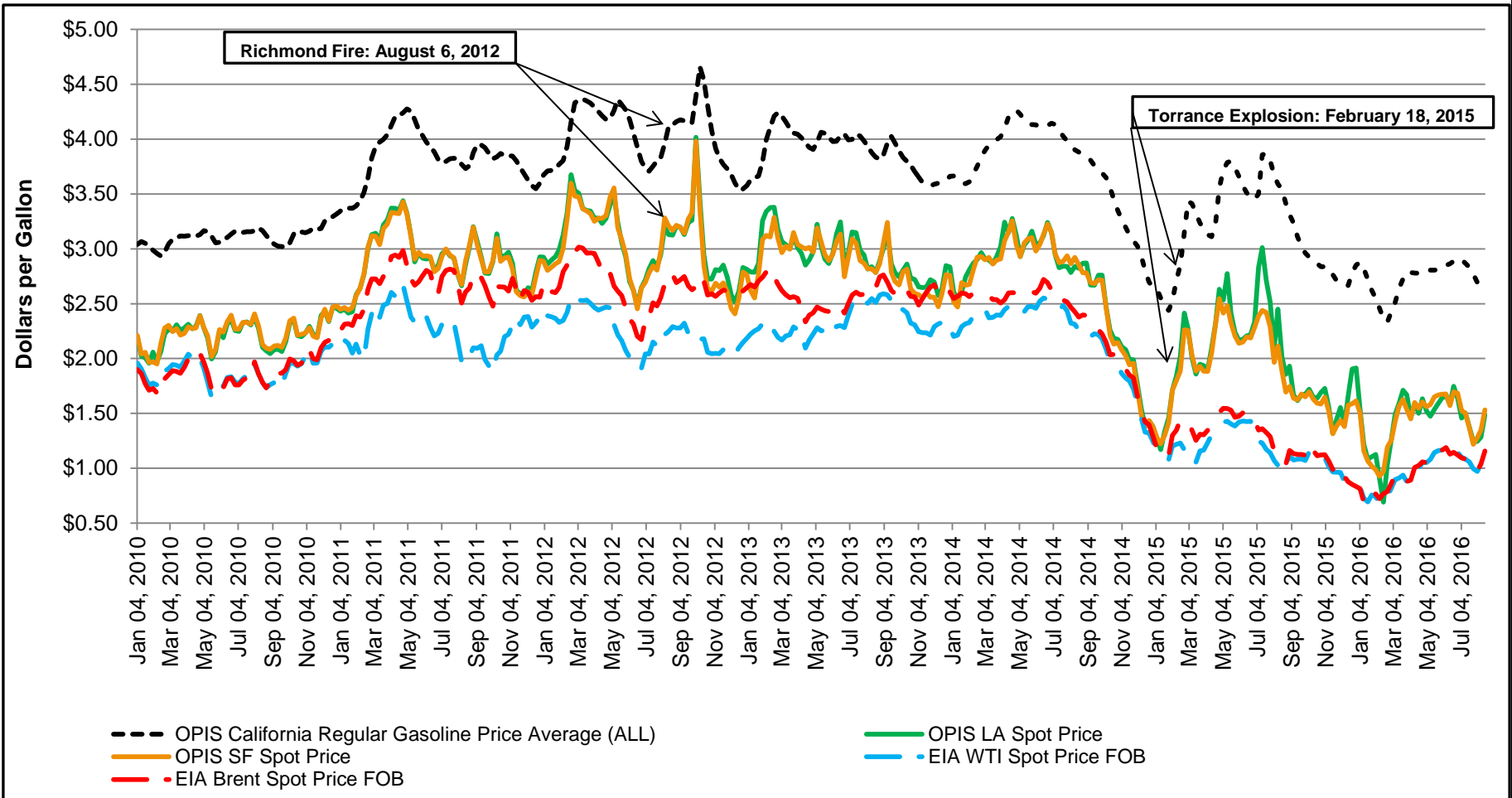
# Sources of Retail Gasoline Price Data -EIA versus OPIS



- California EIA and OPIS gasoline price differences averaged \$0.01
- EIA data collected via survey, while OPIS data collected station by station via credit card swipes

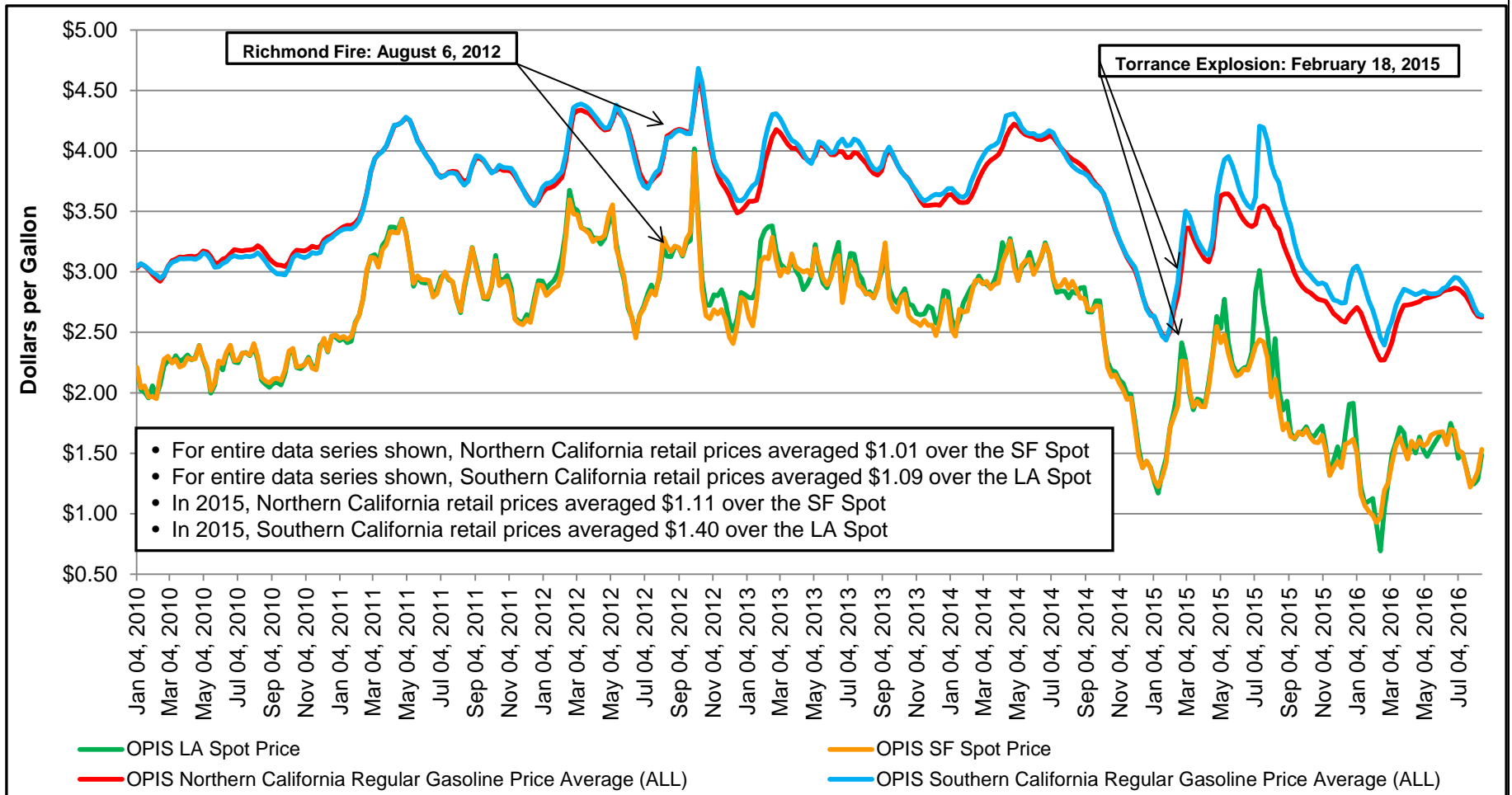


# California Retail Gasoline versus Spot





# Regional Retail Gasoline versus Spot





## Take-away:

- OPIS and EIA California retail gasoline price data show roughly similar trends (average \$0.01 difference).
- The California retail price trend over the displayed time period are largely similar to national movements, except for spikes on weeks of October 8, 2012, March 2, 2015, May 18, 2015, and July 20, 2015 (peak points).
- San Francisco and Los Angeles spot price movements are largely similar in 2015, with exception for the July 20, 2015 spike (2015 movements not a result of crude oil price changes).
- Northern and Southern California retail prices responded differently to the February Torrance Refinery outage (Southern prices grew more).
- Southern Californian retail price difference to Los Angeles spot grew \$0.31 over average.



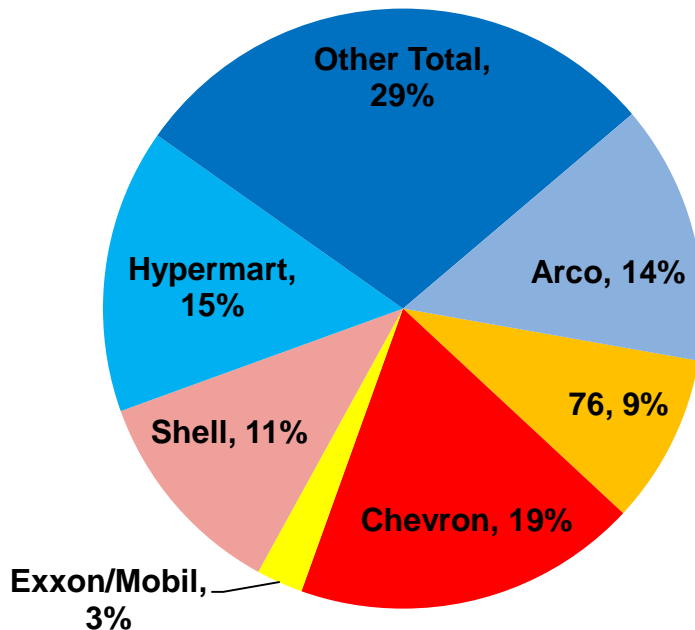
# Retail Gasoline Pricing By Brand And Region





# 2015 Annual Retail Fuel Outlet Report (CEC-A15)

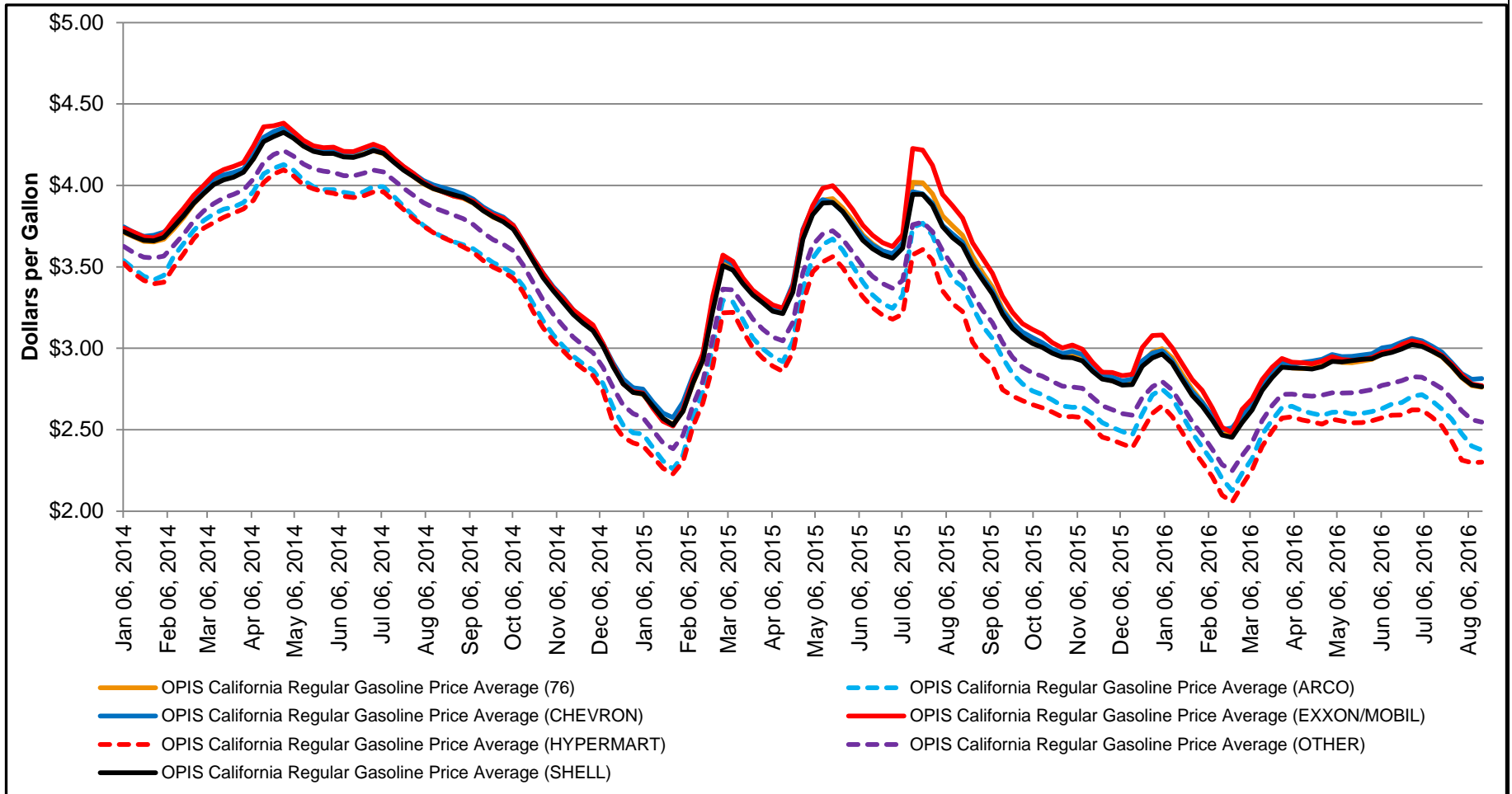
**2015 California Fuel Sales by Brand**



- CEC-A15 in 2015 accounted for 80 percent of all gasoline sales in California
- 58 percent of these sales were Hypermart, Arco, and “Other” brands
- BOE reported 15 billion gallons of gasoline sold in 2015

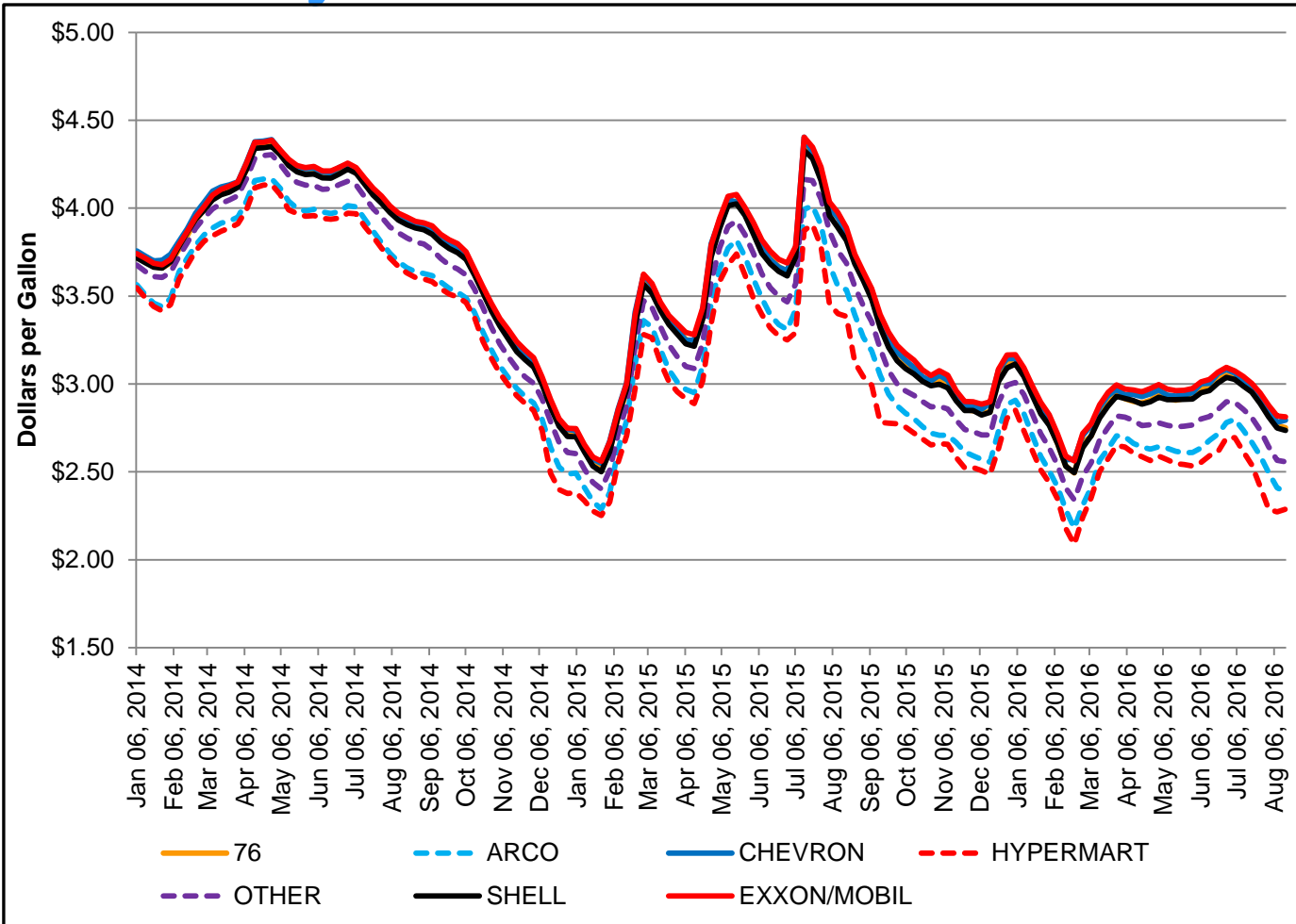


# California Gasoline Prices Vary by Brand





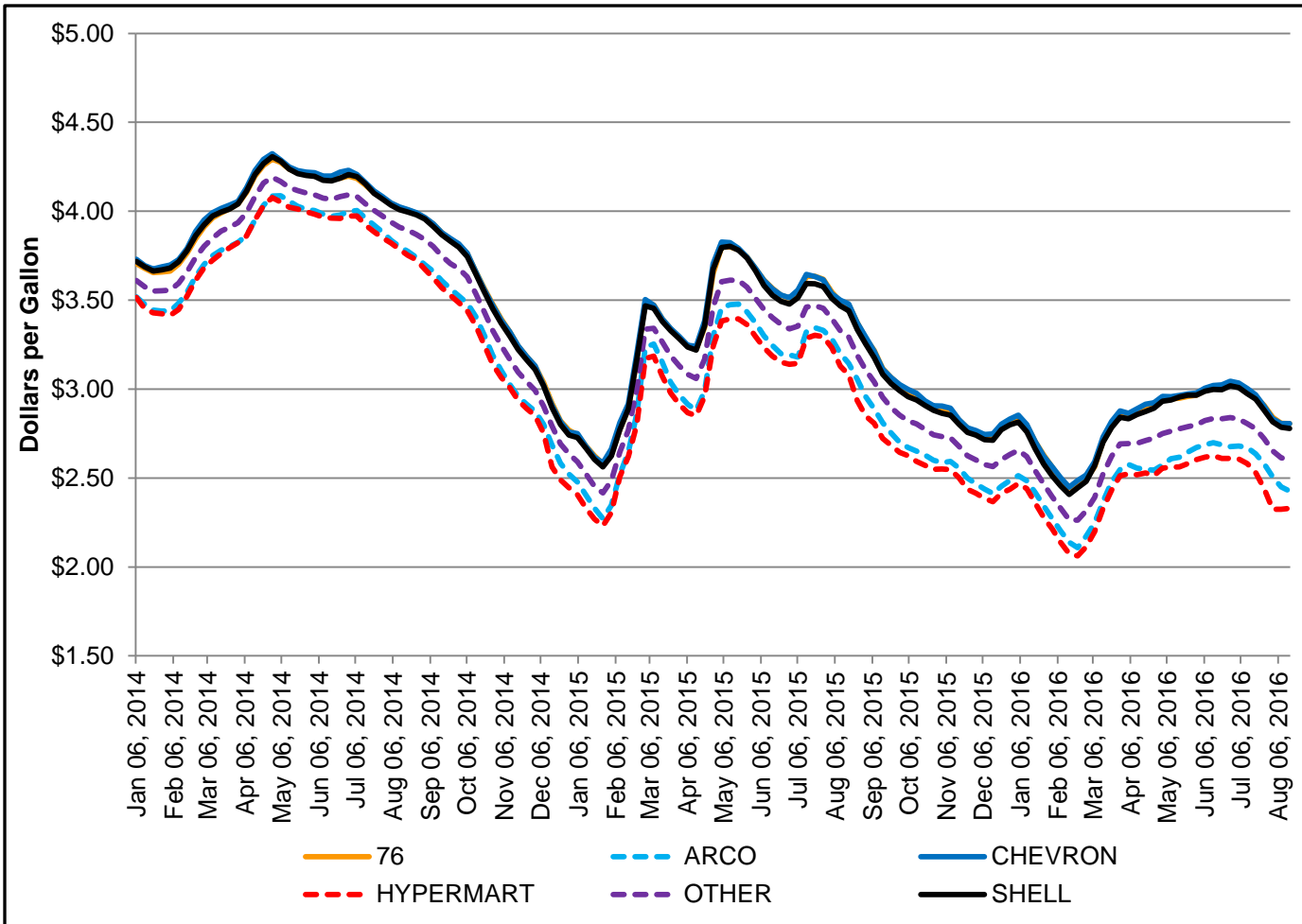
# Los Angeles Area Gasoline Prices by Brand



- Los Angeles, Orange, and Ventura Counties
- 2015 price peak \$4.40 week of July 13
- 2014 price peak \$4.39 week of April 28
- 2015 Chevron – Arco difference:
  - Average: \$0.27
  - Max: \$0.41
  - Min: \$0.17



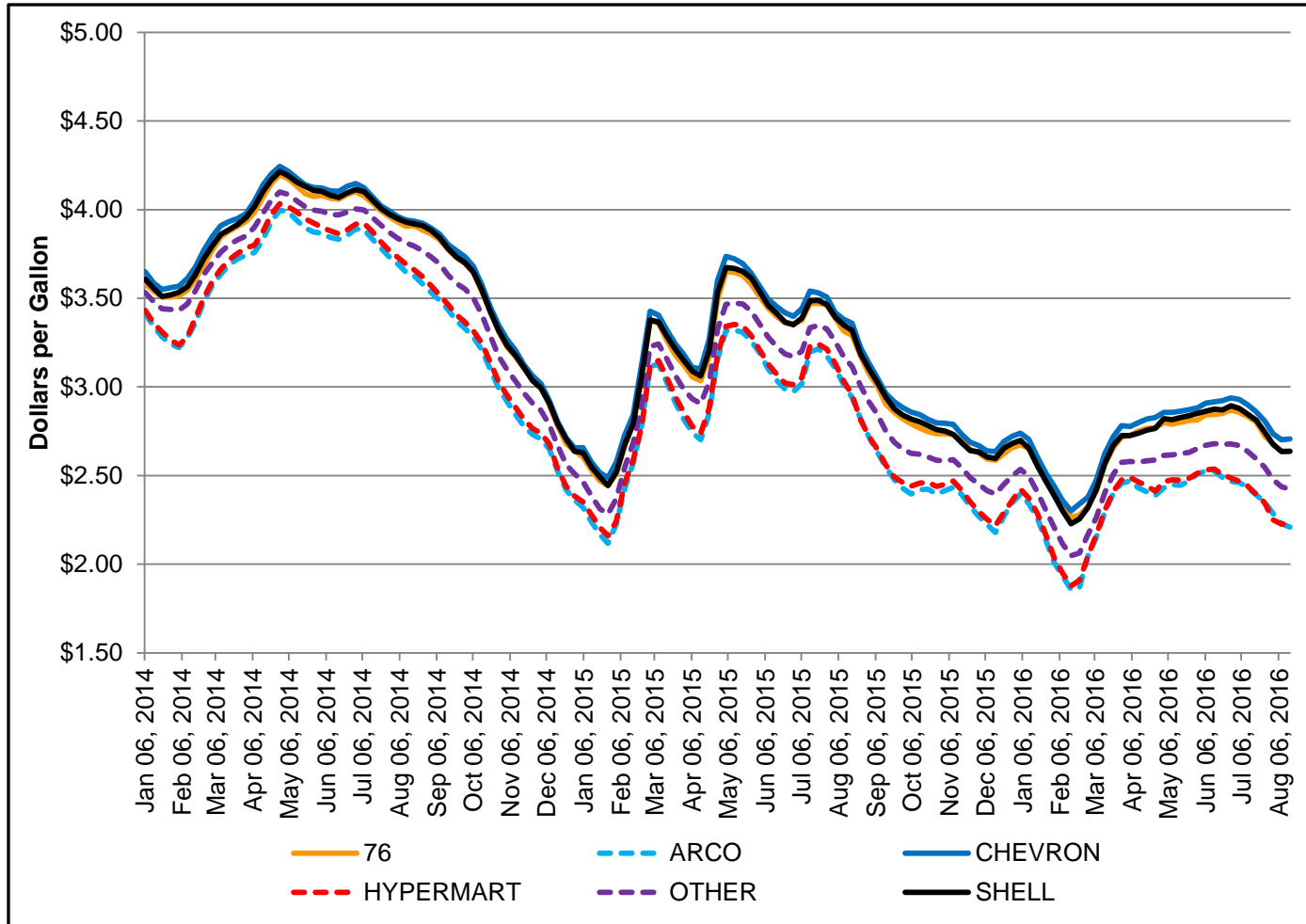
# Bay Area Gasoline Prices by Brand



- Counties from Santa Cruz to Napa
- 2015 price peak \$3.80 on the week of May 4
- 2015 Chevron – Arco difference:
  - Average: \$0.29
  - Max: \$0.41
  - Min: \$0.19



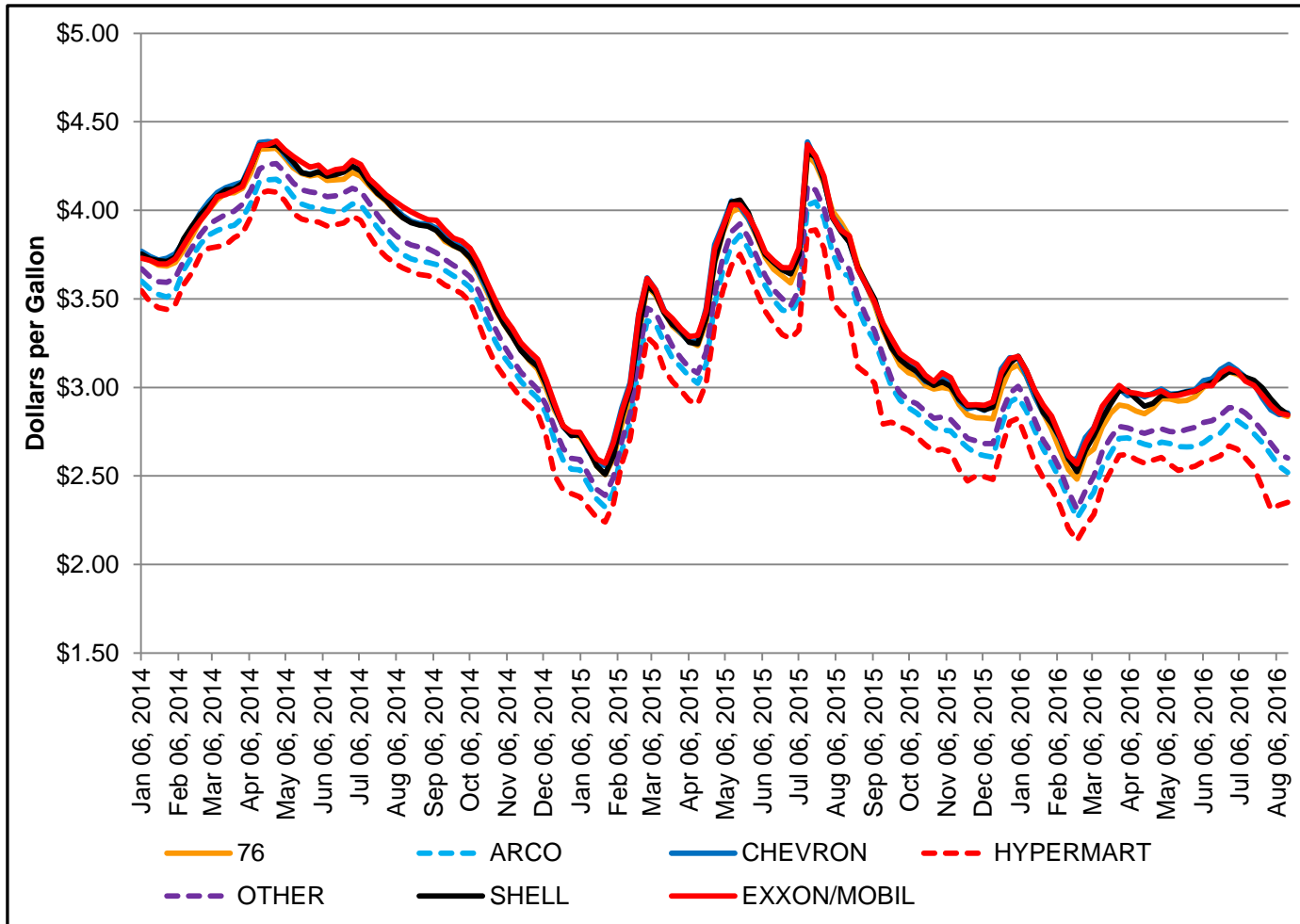
# Sacramento Area Gasoline Prices by Brand



- Sacramento, Yolo, Sutter, Placer and San Joaquin Counties
- 2015 price peak \$3.67 week of May 11
- 2015 Chevron – Arco difference:
  - Average: \$0.35
  - Max: \$0.50
  - Min: \$0.23



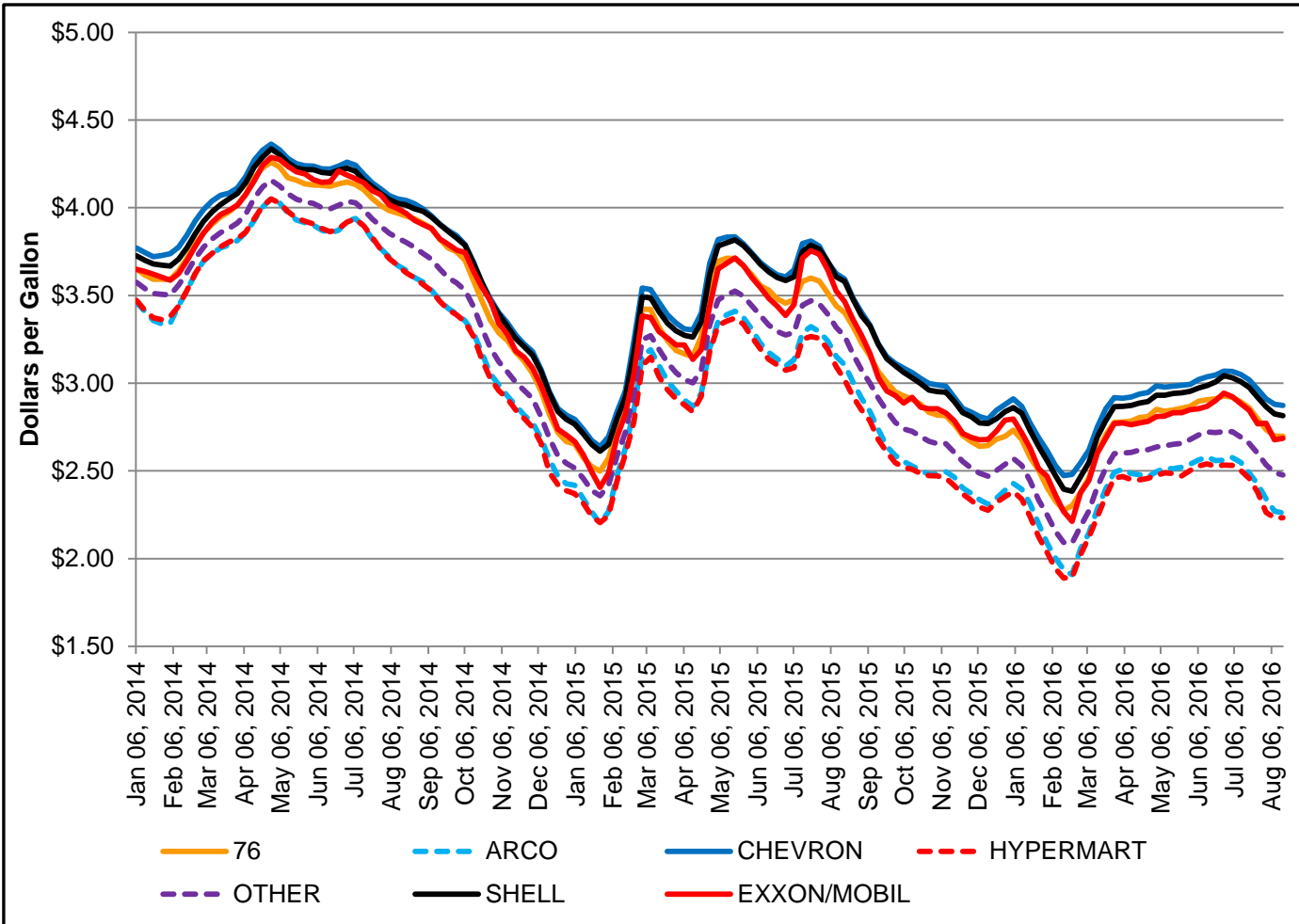
# San Diego Gasoline Prices by Brand



- San Diego County
- 2015 price peak \$4.37 week of July 13
- 2015 Chevron – Arco difference:
  - Average: \$0.23
  - Max: \$0.38
  - Min: \$0.16



# Central Valley Gasoline Prices by Brand



- Kern to Stanislaus Counties
- 2015 price peak \$3.82 week of May 18
- 2015 Chevron – Arco difference:
  - Average: \$0.43
  - Max: \$0.61
  - Min: \$0.29



## Take-away:

- Retail gasoline prices vary by brand.
- Regionally retail prices vary within each brand group, but the relative order or “orbit” of each brand’s price seems to be maintained.
- Los Angeles and San Diego retail prices spiked three times in 2015 with spike peaks occurring on weeks of March 2, May 18, and July 20.
- Bay Area and Sacramento area retail prices only spiked twice in 2015 with spike peaks occurring on weeks of March 2 and May 18.
- Price differences between the Arco and Chevron brands appear similar across regions, with less densely populated regions exhibiting larger average differences.



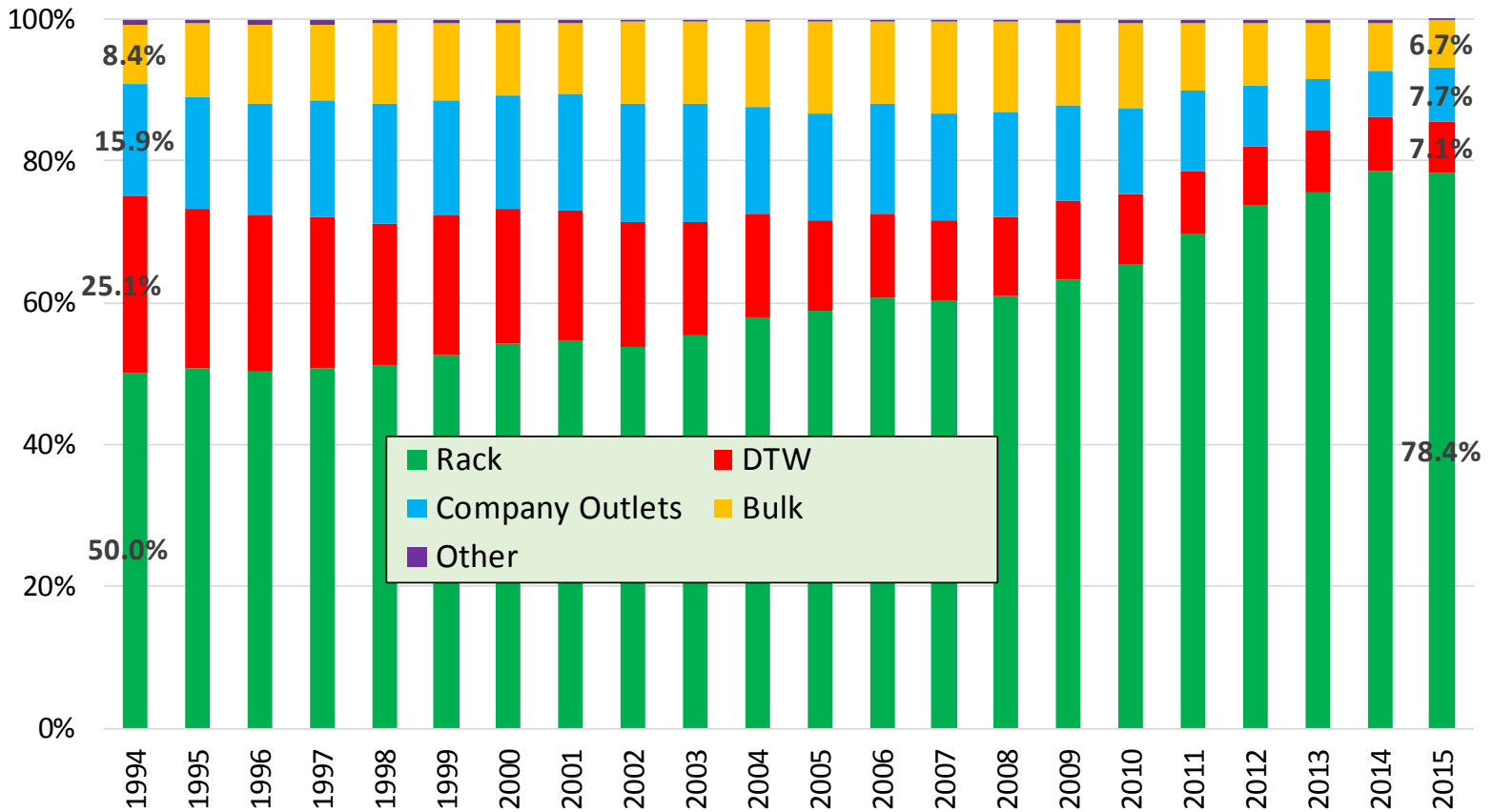


# Gasoline Retail And Refinery Margins



# U.S. Gasoline Sales Breakdown

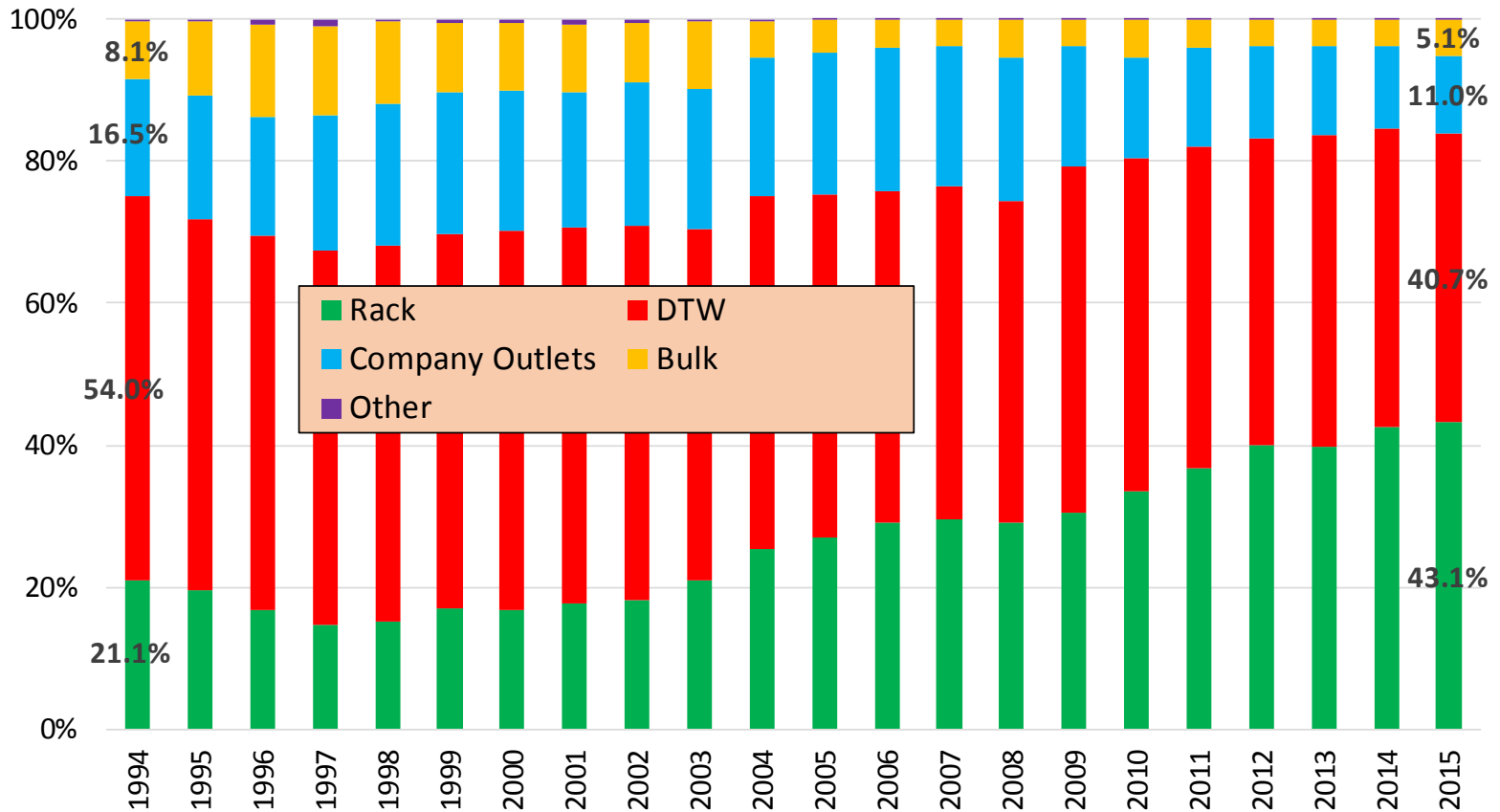
Source: California Energy Commission analysis of Energy Information Administration data.





# California Gasoline Sales Breakdown

Source: California Energy Commission analysis of Energy Information Administration data.





# Energy Commission's Margins Table

	Branded							Unbranded								
	Distribution Cost, Marketing Costs and Profits	Crude Oil Cost	Refinery Cost and Profits	State Underground Storage Tank Fee	State and Local Sales Tax	State Excise Tax	Federal Excise Tax	Retail Prices	Distribution Cost, Marketing Costs and Profits	Crude Oil Cost	Refinery Cost and Profits	State Underground Storage Tank Fee	State and Local Sales Tax	State Excise Tax	Federal Excise Tax	Retail Prices
Sep 26	\$0.406	\$1.071	\$0.744	\$0.020	\$0.061	\$0.278	\$0.184	\$2.764	\$0.529	\$1.071	\$0.621	\$0.020	\$0.061	\$0.278	\$0.184	\$2.764
Sep 19	\$0.410	\$1.028	\$0.782	\$0.020	\$0.061	\$0.278	\$0.184	\$2.763	\$0.522	\$1.028	\$0.670	\$0.020	\$0.061	\$0.278	\$0.184	\$2.763
Sep 12	\$0.349	\$1.080	\$0.781	\$0.020	\$0.061	\$0.278	\$0.184	\$2.753	\$0.439	\$1.080	\$0.691	\$0.020	\$0.061	\$0.278	\$0.184	\$2.753
Sep 05	\$0.395	\$1.037	\$0.732	\$0.020	\$0.060	\$0.278	\$0.184	\$2.706	\$0.520	\$1.037	\$0.607	\$0.020	\$0.060	\$0.278	\$0.184	\$2.706
Aug 29	\$0.391	\$1.099	\$0.677	\$0.020	\$0.060	\$0.278	\$0.184	\$2.709	\$0.517	\$1.099	\$0.551	\$0.020	\$0.060	\$0.278	\$0.184	\$2.709
Aug 22	\$0.378	\$1.102	\$0.681	\$0.020	\$0.059	\$0.278	\$0.184	\$2.702	\$0.517	\$1.102	\$0.542	\$0.020	\$0.059	\$0.278	\$0.184	\$2.702
Aug 15	\$0.475	\$1.079	\$0.549	\$0.020	\$0.058	\$0.278	\$0.184	\$2.643	\$0.571	\$1.079	\$0.453	\$0.020	\$0.058	\$0.278	\$0.184	\$2.643
Aug 08	\$0.540	\$1.017	\$0.583	\$0.020	\$0.059	\$0.278	\$0.184	\$2.681	\$0.675	\$1.017	\$0.448	\$0.020	\$0.059	\$0.278	\$0.184	\$2.681

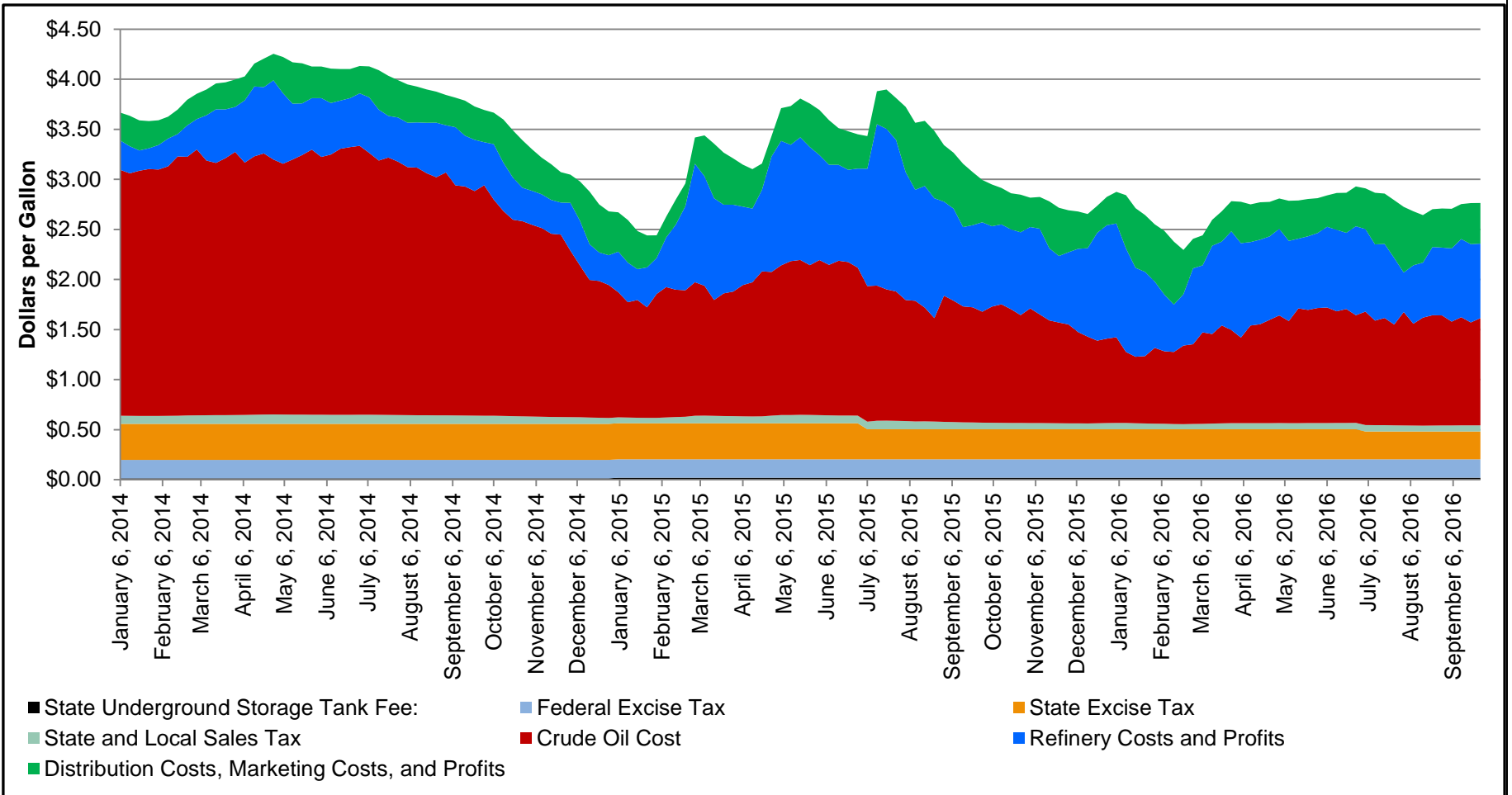


## Margins Data Explanation

- The Energy Commission posts gasoline “margins” at:  
[http://www.energy.ca.gov/almanac/transportation\\_data/gasoline/margins/](http://www.energy.ca.gov/almanac/transportation_data/gasoline/margins/)
- Margins tables posted back to 1999
- Estimates of different costs and profits experienced in bringing gasoline to retail
- Calculations created by using the Alaskan North Slope crude oil price, one state average retail gasoline price (EIA), and a state average branded and unbranded rack gasoline price.

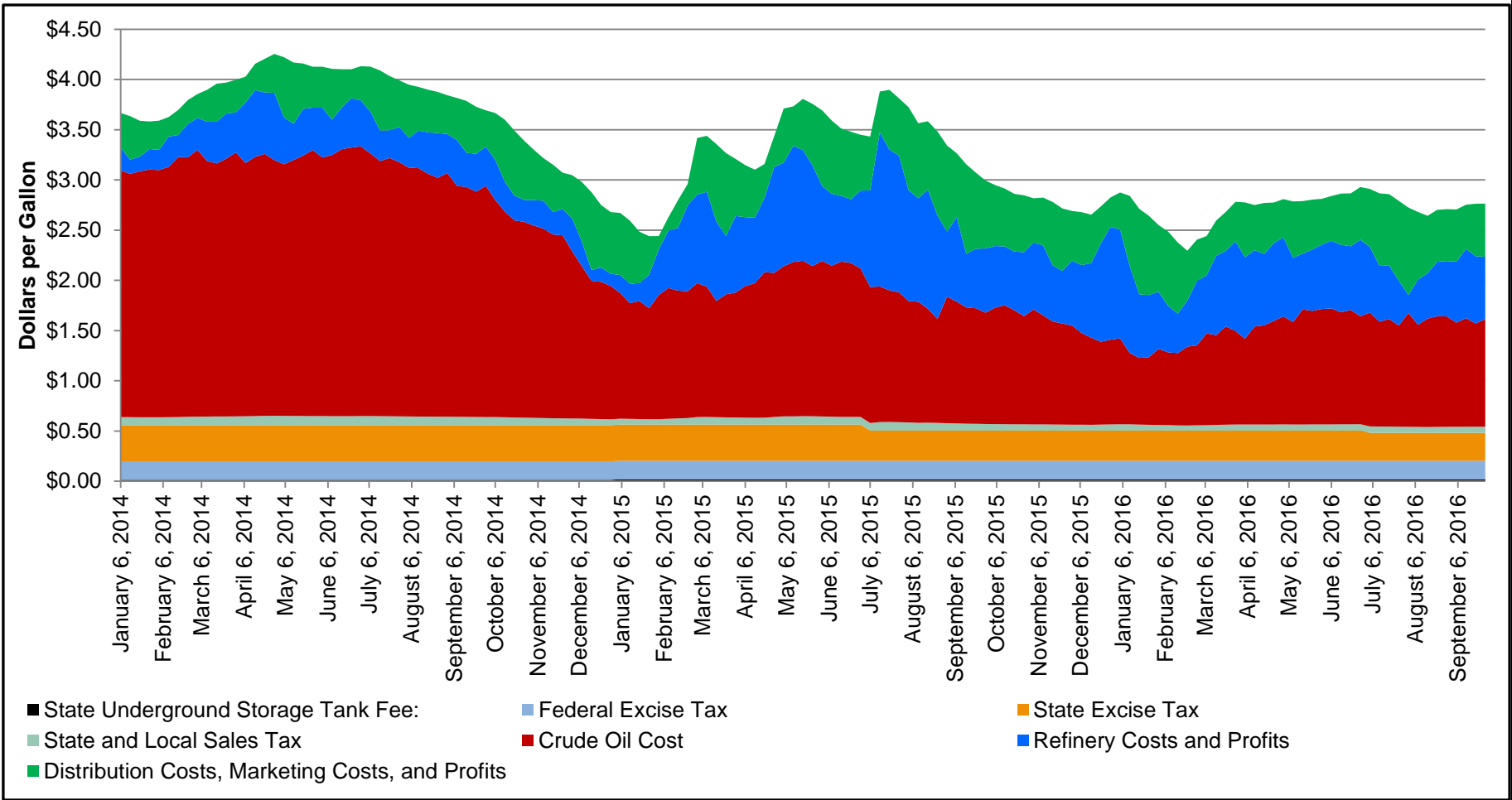


# Branded Margins



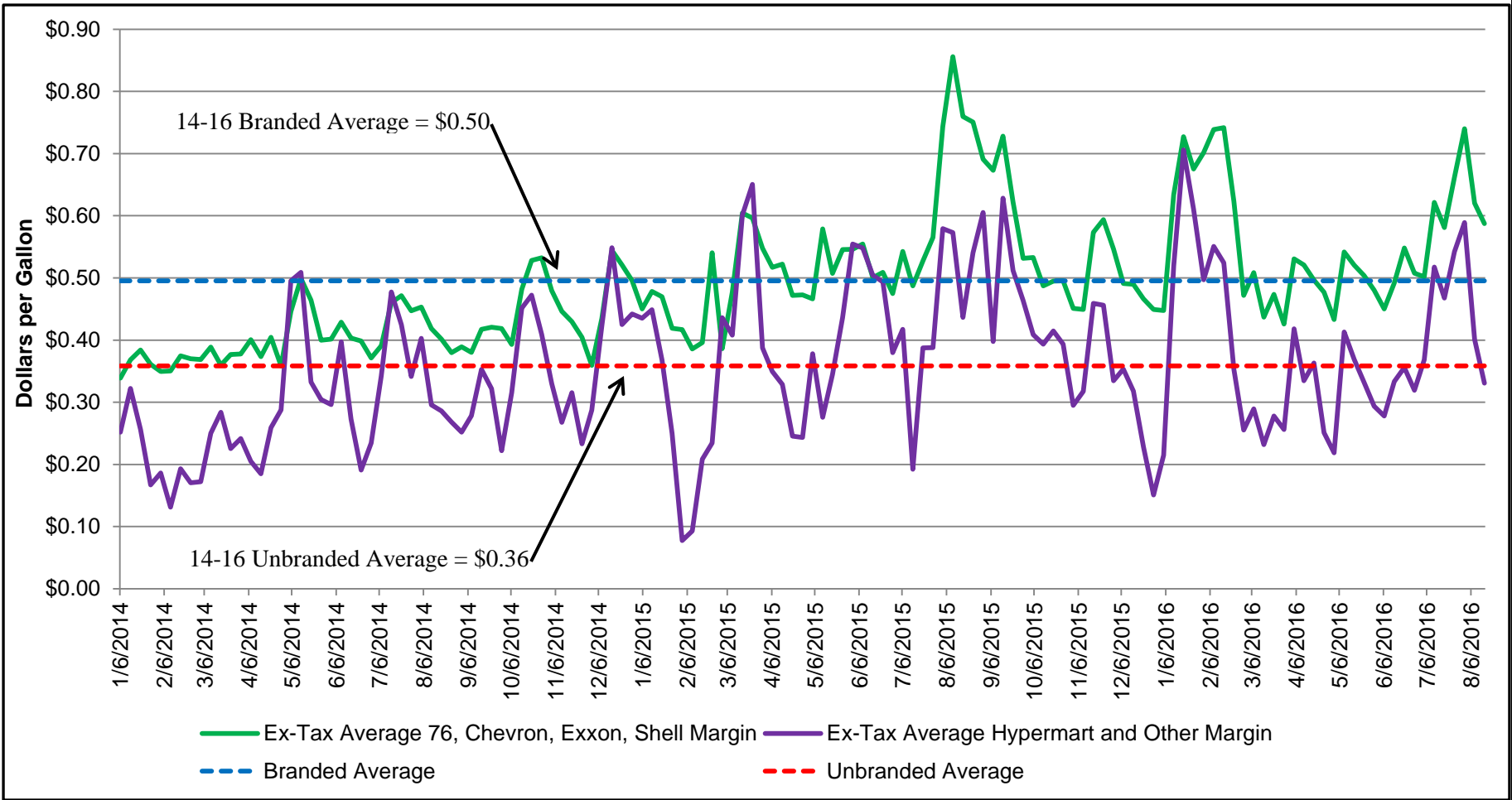


# Unbranded Margins





# State Retail versus Rack







## Take-away:

- Branded and Unbranded margins posted by the Energy Commission are trend metrics, designed to be used in comparison with one's self at different points in time.
- Spot prices are not used in designing product margins since the spot market is not directly part of the product distribution chain, even though spot prices are highly correlated with rack and retail prices.
- When compared to estimated branded and unbranded retail prices are compared to their respective rack prices, branded margins appear relatively more stable while unbranded appear more volatile.
- All margin calculations posted by the Energy Commission ignore costs, some of which are variable by time and region.

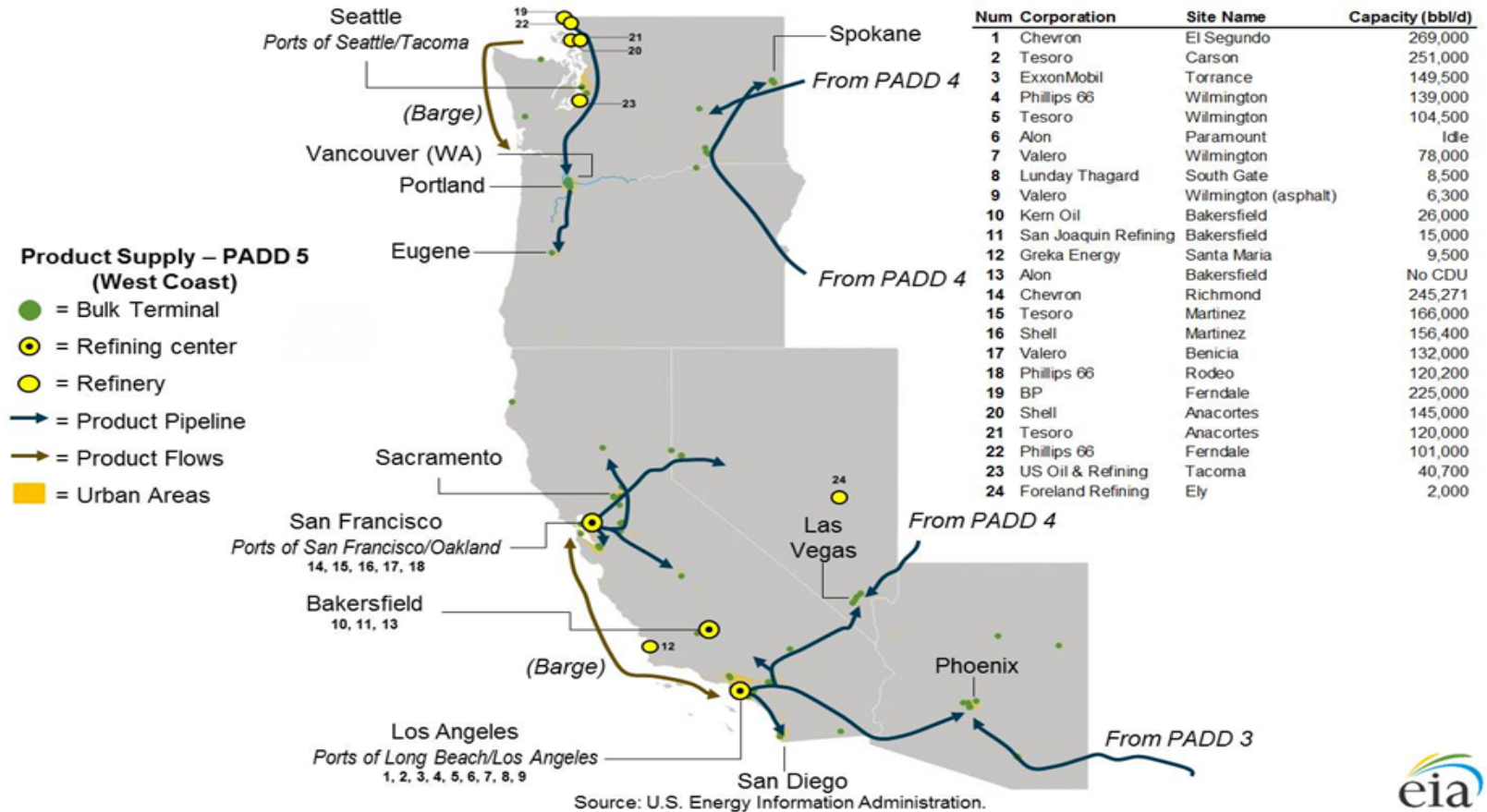


# Gasoline Retail Prices And Gasoline Product Imports



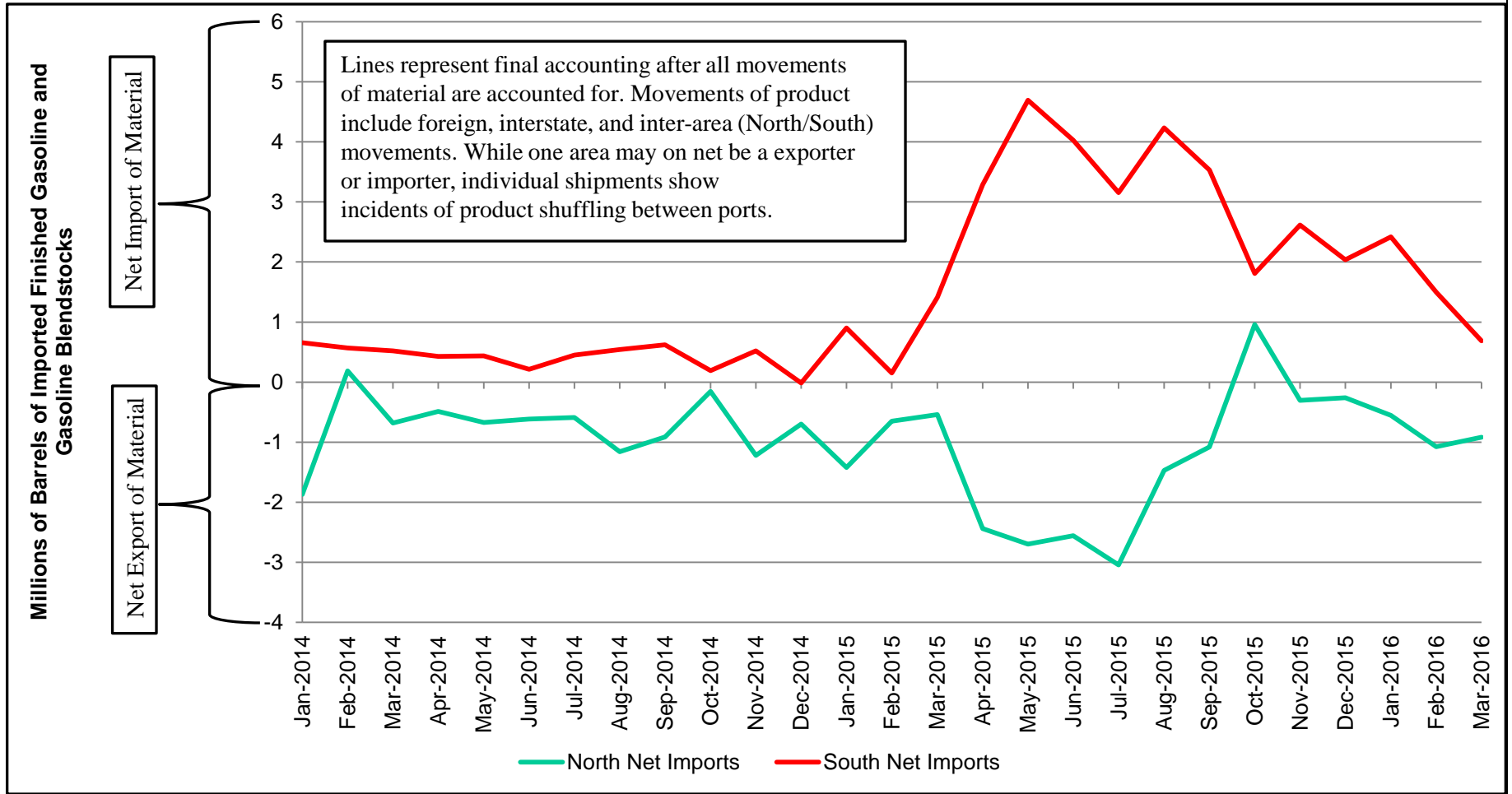
# PADD V Infrastructure Connections

Figure 1. West Coast petroleum product supply map



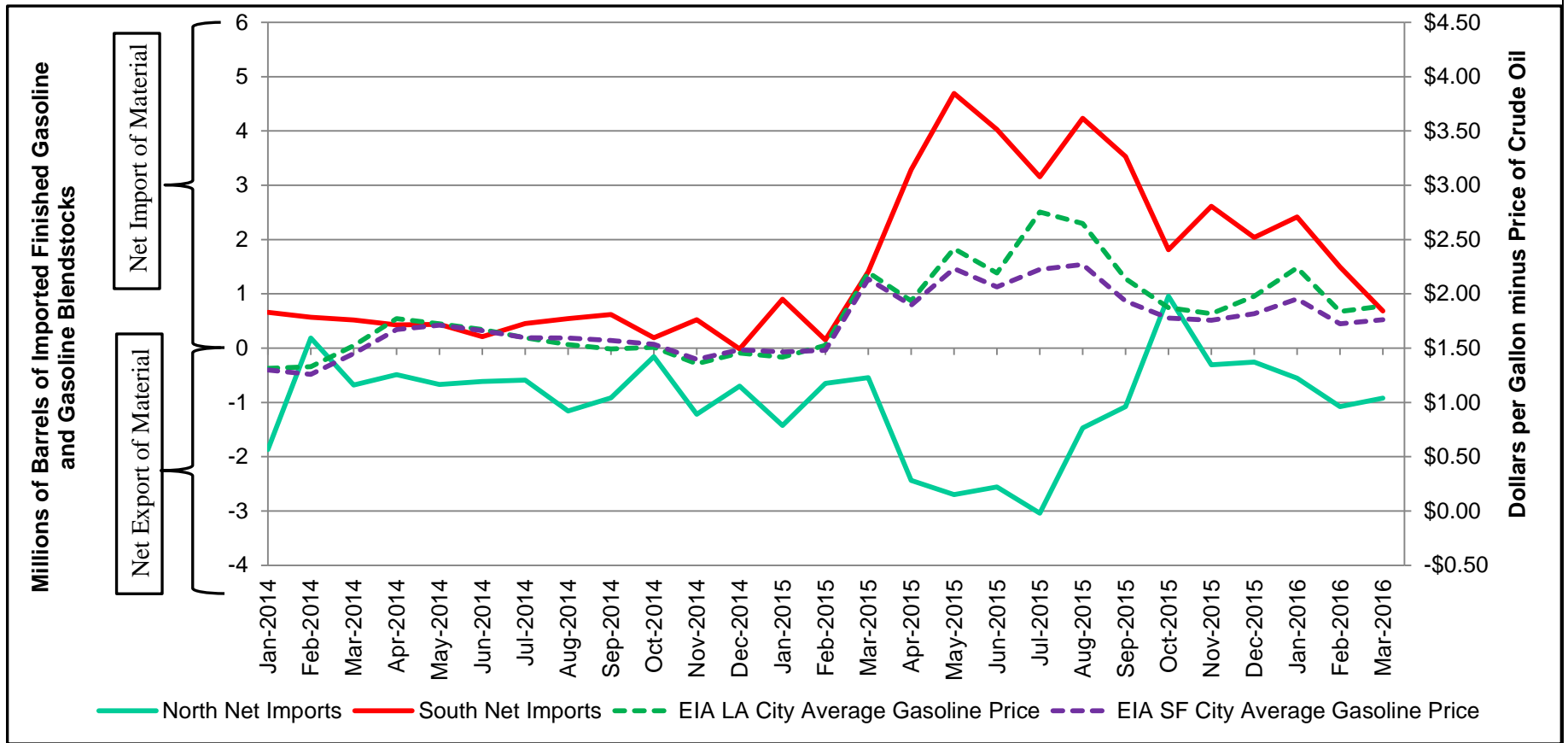


# Gasoline Net Import Numbers





# Gasoline Net Import Numbers with Gasoline Prices





## Take-away:

- Gasoline and gasoline blendstock imports into Southern California increased noticeably in 2015, reaching as high as 4.7 million barrels for the month of May.
- Southern California averaged 2.6 million barrels a month of imported gasoline and gasoline blendstock in 2015, up 2.1 million barrels from the 2014 average of 500,000 barrel a month.
- Northern California averaged 1.9 million barrels a month of exported gasoline and gasoline blendstock from May 2015 to September 2015, up 1.11 million barrels from the 2014 average of 790,000 barrel a month.
- It is unclear whether price signals caused the changes in imports/exports or the changes in imports/exports caused the changes in price.



- Questions and Comments:

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