



# Recent Trends for Retail Gasoline and Diesel Fuel Prices

Petroleum Market Advisory Committee Meeting

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# Purpose

- Provide information to PMAC about how retail prices are trending
- Provide preliminary CEC analysis of retail prices in the context of Fuels Under the Cap
- Seek PMAC input and discussion about preliminary estimates, how to analyze the impact of Fuels Under the Cap, and next steps

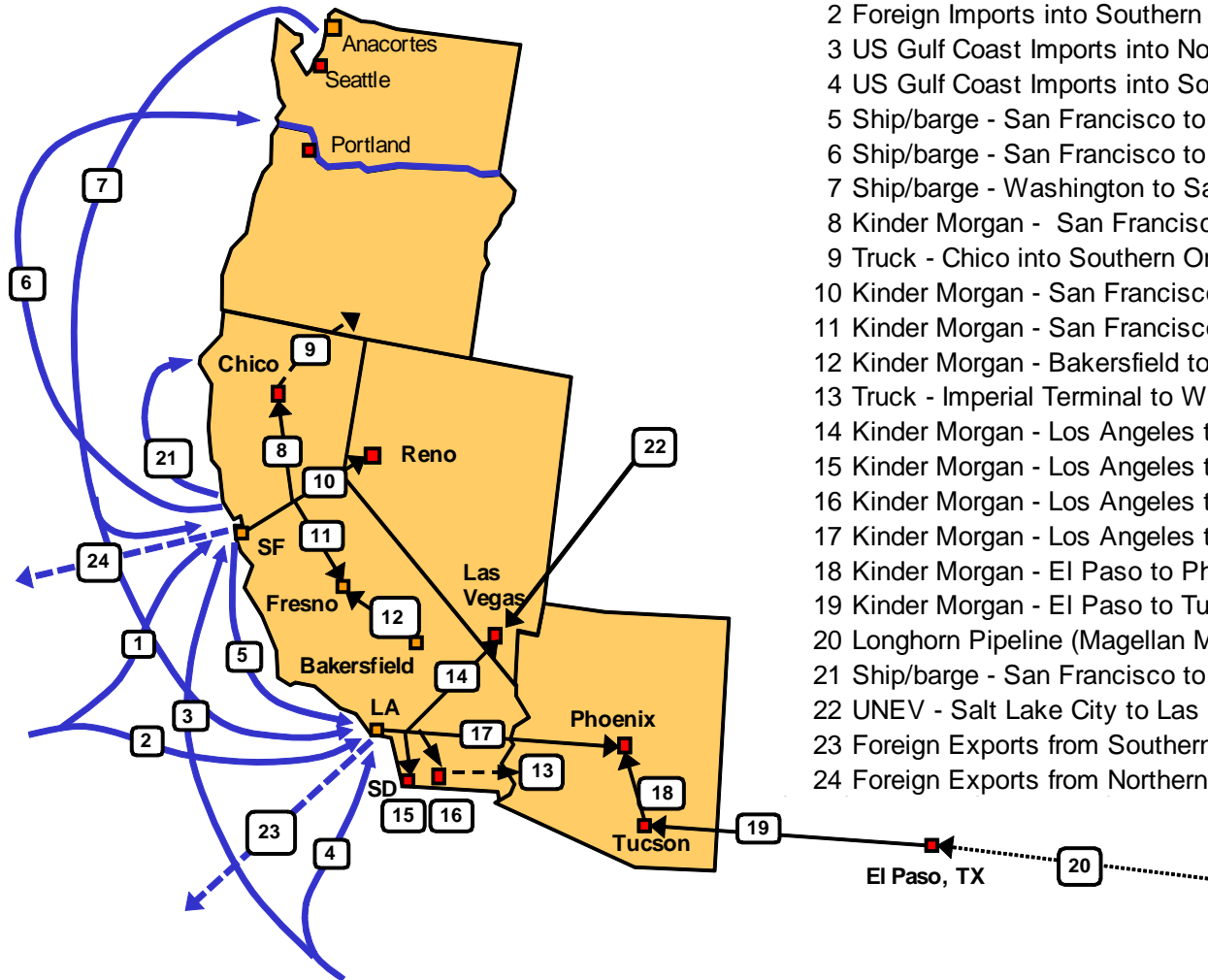


# California Fuels Market - Isolated

- California's transportation fuels market is nearly self-sufficient, so imports from outside of California are not routinely needed to balance out supply with demand
  - Imports normally account for only 3 to 6 percent of supply
- The California market is geographically isolated from other locations in the United States that produce refined products
- Pipelines connect California refining centers to distribution terminals in Nevada and Arizona, but these pipelines only operate in one direction – sending gasoline and other transportation fuels to these neighboring states
- California market is isolated by time and distance from alternative sources of re-supply during unplanned refinery outages



# Western States – Fuel Flows



- 1 Foreign Imports into Northern California
- 2 Foreign Imports into Southern California
- 3 US Gulf Coast Imports into Northern California
- 4 US Gulf Coast Imports into Southern California
- 5 Ship/barge - San Francisco to Los Angeles
- 6 Ship/barge - San Francisco to Portland
- 7 Ship/barge - Washington to San Francisco and Los Angeles
- 8 Kinder Morgan - San Francisco to Chico
- 9 Truck - Chico into Southern Oregon
- 10 Kinder Morgan - San Francisco to Reno
- 11 Kinder Morgan - San Francisco to Fresno
- 12 Kinder Morgan - Bakersfield to Fresno
- 13 Truck - Imperial Terminal to Western Arizona
- 14 Kinder Morgan - Los Angeles to Las Vegas
- 15 Kinder Morgan - Los Angeles to San Diego
- 16 Kinder Morgan - Los Angeles to Imperial
- 17 Kinder Morgan - Los Angeles to Phoenix
- 18 Kinder Morgan - El Paso to Phoenix
- 19 Kinder Morgan - El Paso to Tucson
- 20 Longhorn Pipeline (Magellan Midstream Partners, L.P.)
- 21 Ship/barge - San Francisco to Eureka
- 22 UNEV - Salt Lake City to Las Vegas
- 23 Foreign Exports from Southern California
- 24 Foreign Exports from Northern California

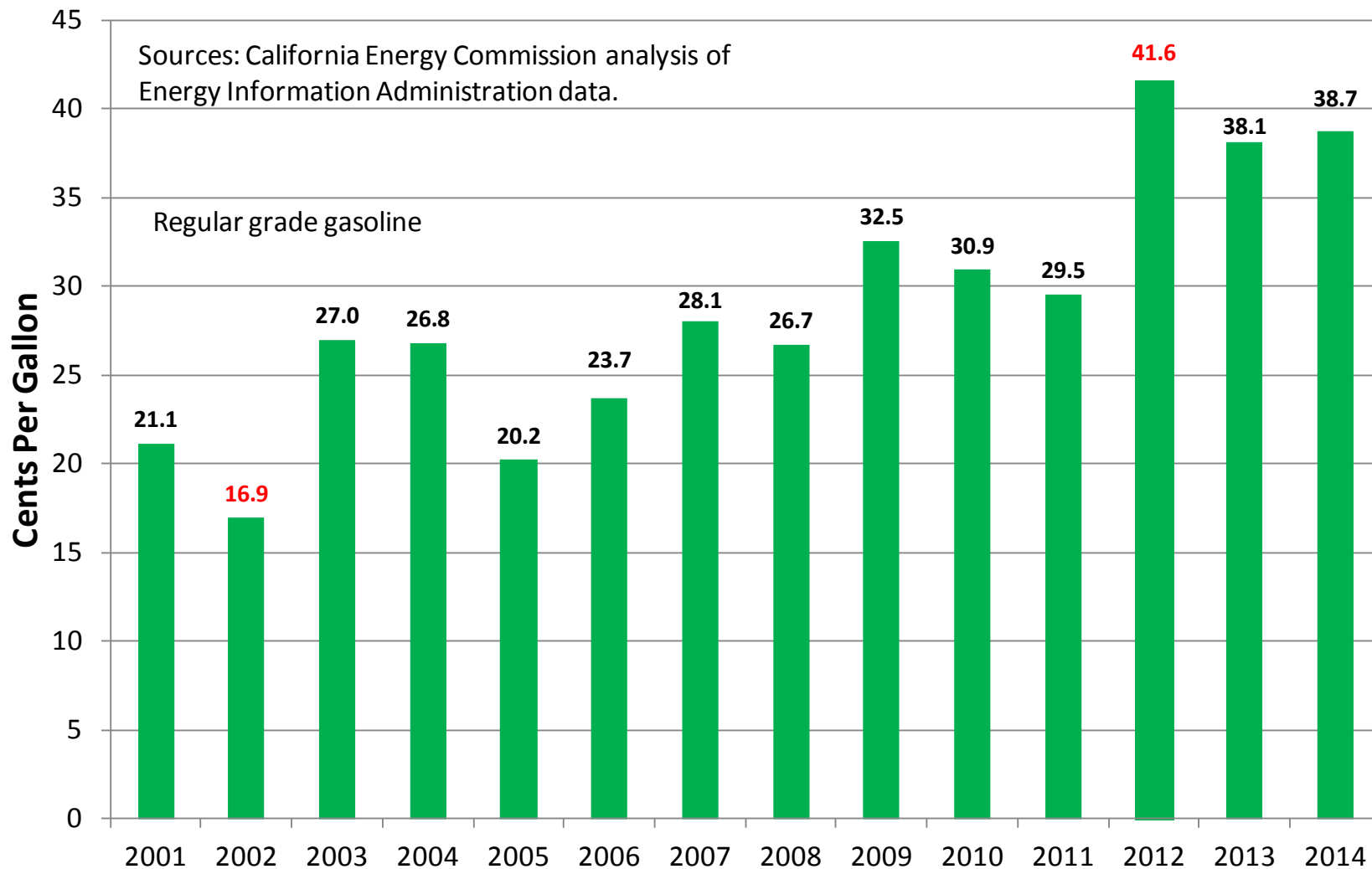


# California Fuels Market - Expensive

- California has one of the more expensive retail gasoline and diesel fuel prices in the United States
- There are three reasons why California retail prices are more expensive:
  - Greater tax burden,
  - Higher production costs, and
  - An isolated market
- Since January of 2001, annual average prices are *at least*:
  - 17 cents per gallon higher than the average U.S. retail gasoline price
  - 12 cents per gallon higher than the average U.S. retail diesel price
- Between 2009 and 2014, differentials have averaged
  - 35.2 cents per gallon higher for gasoline
  - 19.9 cents per gallon higher for diesel fuel

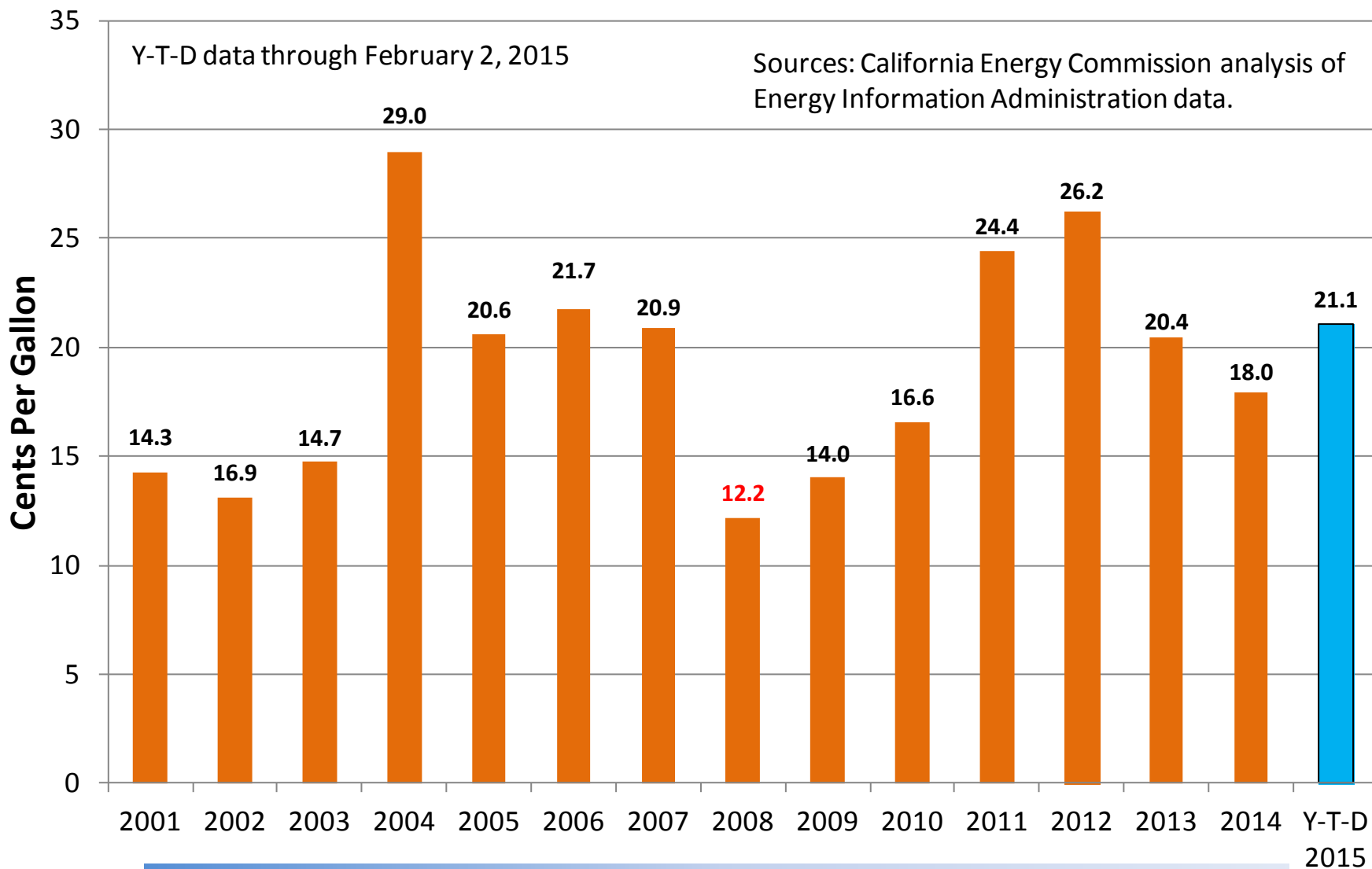


# Retail Gasoline Price Differences California Less U.S. Average





# Retail Diesel Fuel Price Differences California Less U.S. Average

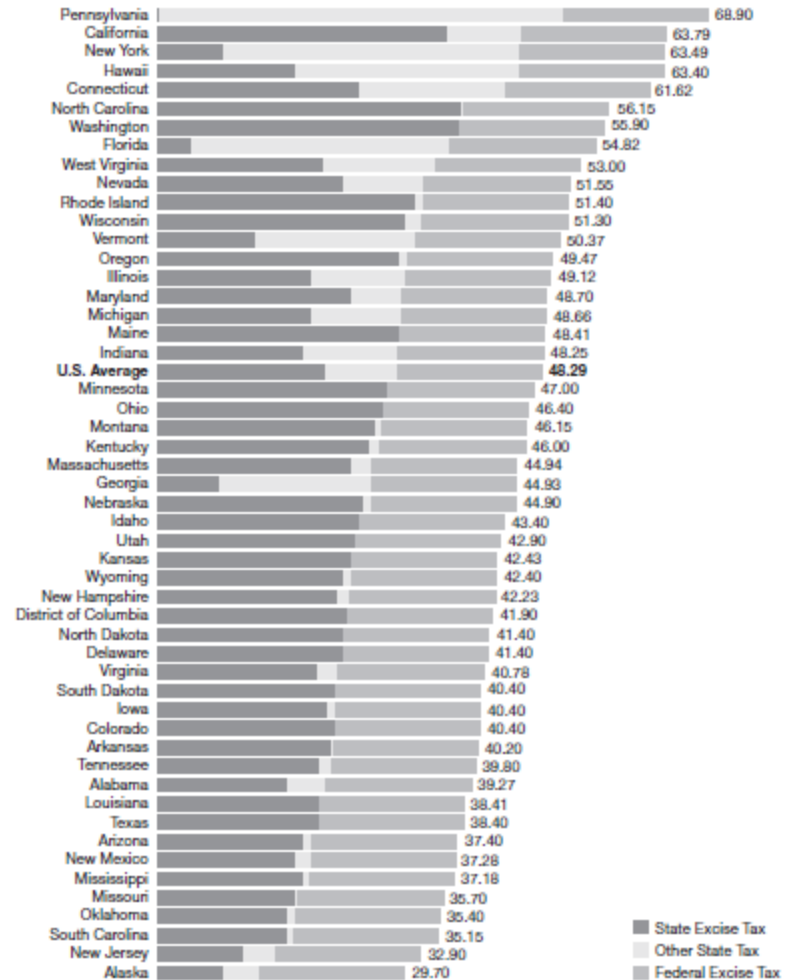




# California Gasoline Market - Taxes

- The amount of tax levied on a gallon of gasoline in California is usually higher than nearly every other state
- As of January 1, 2015, California retail gasoline taxes accounted for 63.8 cents per gallon
- The U.S. average was 48.3 cents per gallon so California's retail gasoline tax burden was 15.0 cents per gallon higher than the U.S. average

Gasoline Motor Fuel Taxes as of January 1, 2015



Source: American Petroleum Institute



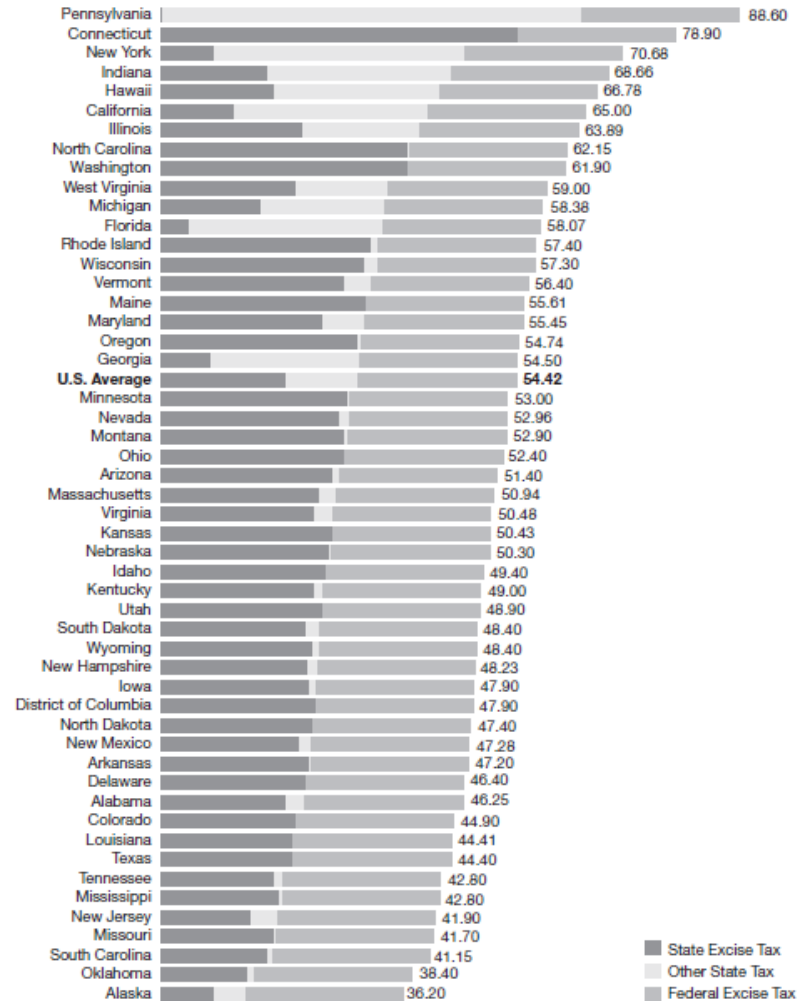


# California Diesel Fuel Market - Taxes

- The amount of tax levied on a gallon of diesel fuel in California is usually higher than nearly every other state
- As of January 1, 2015, California retail diesel fuel taxes accounted for 65.0 cents per gallon
- The U.S. average was 54.4 cents per gallon so California's retail gasoline tax burden was 10.6 cents per gallon higher than the U.S. average

Source: American Petroleum Institute

**Diesel Motor Fuel Taxes as of January 1, 2015**





# Fuels-Under-the-Cap (FUTC) Tracking

- Fuels-Under-the-Cap regulation went into effect January 1, 2015
- The Oil Price Information Service (OPIS) calculates a value for the FUTC obligation each business day, California Cap-at-the-Rack (CAR)
- Assessment valuation uses price of carbon x carbon intensity of the transportation fuel
  - Winter CARB reformulated gasoline with 10 percent ethanol
  - Summer CARB reformulated gasoline with 10 percent ethanol
  - CARB diesel fuel
- Majority of fuel providers have elected to use the daily OPIS CAR calculation for inclusion in their bills of lading at the distribution terminal
  - Either as a line item or embedded in the price
- Some marketers are calculating their own FUTC assessment and including in the overall price of the fuel



# Fuels-Under-the-Cap (FUTC) Tracking

- Assuming a California Carbon Allowance price of \$11.80/mt
- CAR calculation for 1 gallon of **winter CARB gasoline** delivered at the rack would be:
  - $CAR = (((0.00891 \times 0.9) \times 11.80) + ((0.00022 \times 0.1) \times 11.80)) \times 100$
  - $CAR = 9.488\text{cts/gal}$
- CAR calculation for 1 gallon of **summer CARB gasoline** delivered at the rack would be:
  - $CAR = (((0.00893 \times 0.9) \times 11.80) + ((0.00022 \times 0.1) \times 11.80)) \times 100$
  - $CAR = 9.510\text{cts/gal}$
- CAR calculation for 1 gallon of **CARB diesel** delivered at the rack would be:
  - $CAR = (0.01024 \times 11.80) \times 100$
  - $CAR = 12.083\text{cts/gal}$

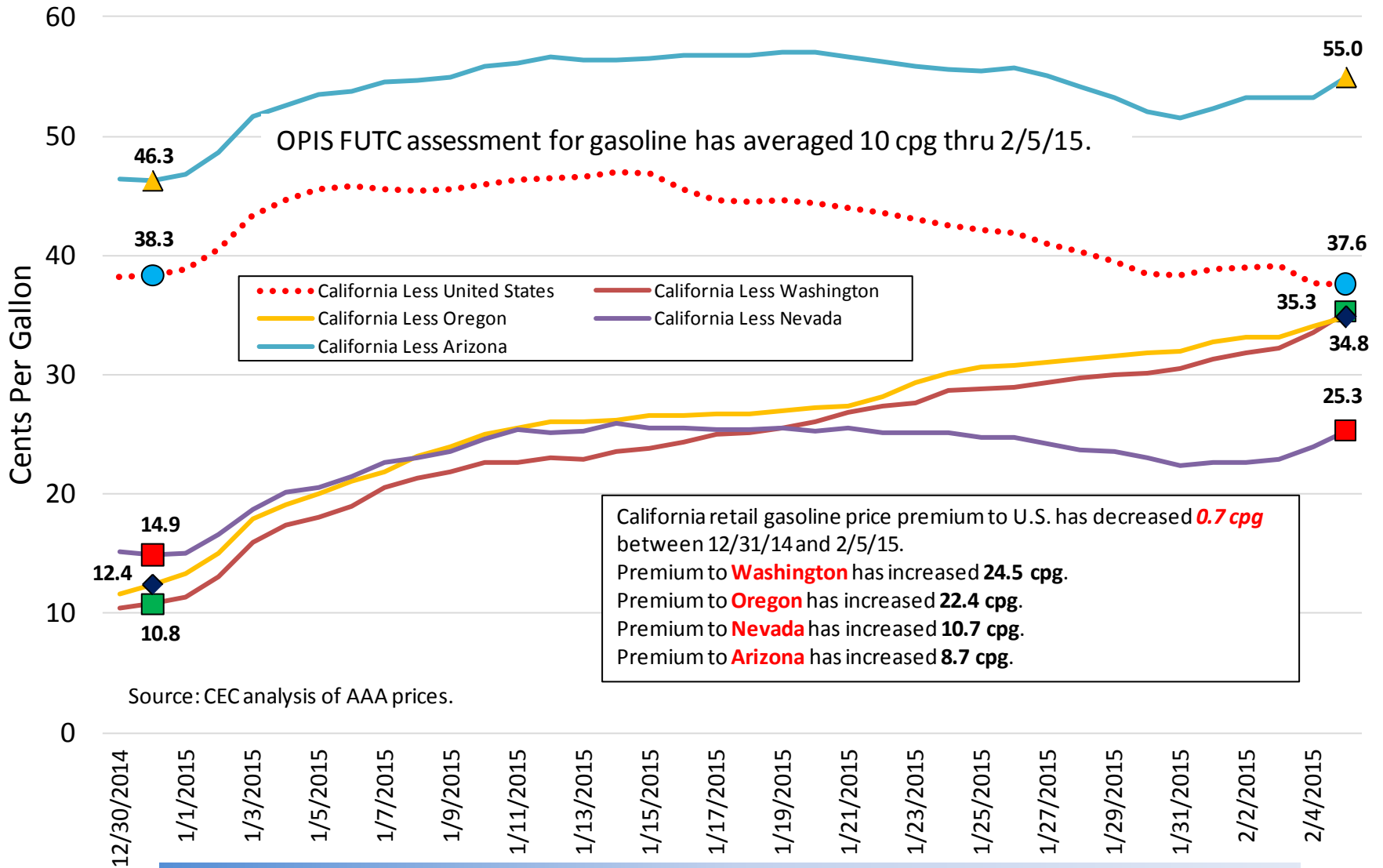


# Fuels-Under-the-Cap (FUTC) Tracking

- Energy Commission staff have been monitoring daily fuel prices
  - Refinery wholesale or “spot” prices
    - San Francisco, Los Angeles and Pacific Northwest
  - Retail prices in several states
    - California, Washington, Oregon, Nevada, Arizona, Texas, Illinois, Florida
- When prices are declining due to a drop in crude oil it is more difficult to observe an impact of an FUTC assessment being passed through to retail
  - One approach is to examine the difference in retail prices between California and other locations to see if a change has occurred and been sustained
  - Also helpful to examine regional refinery markets for potential changes in scarcity or relative abundance of supply

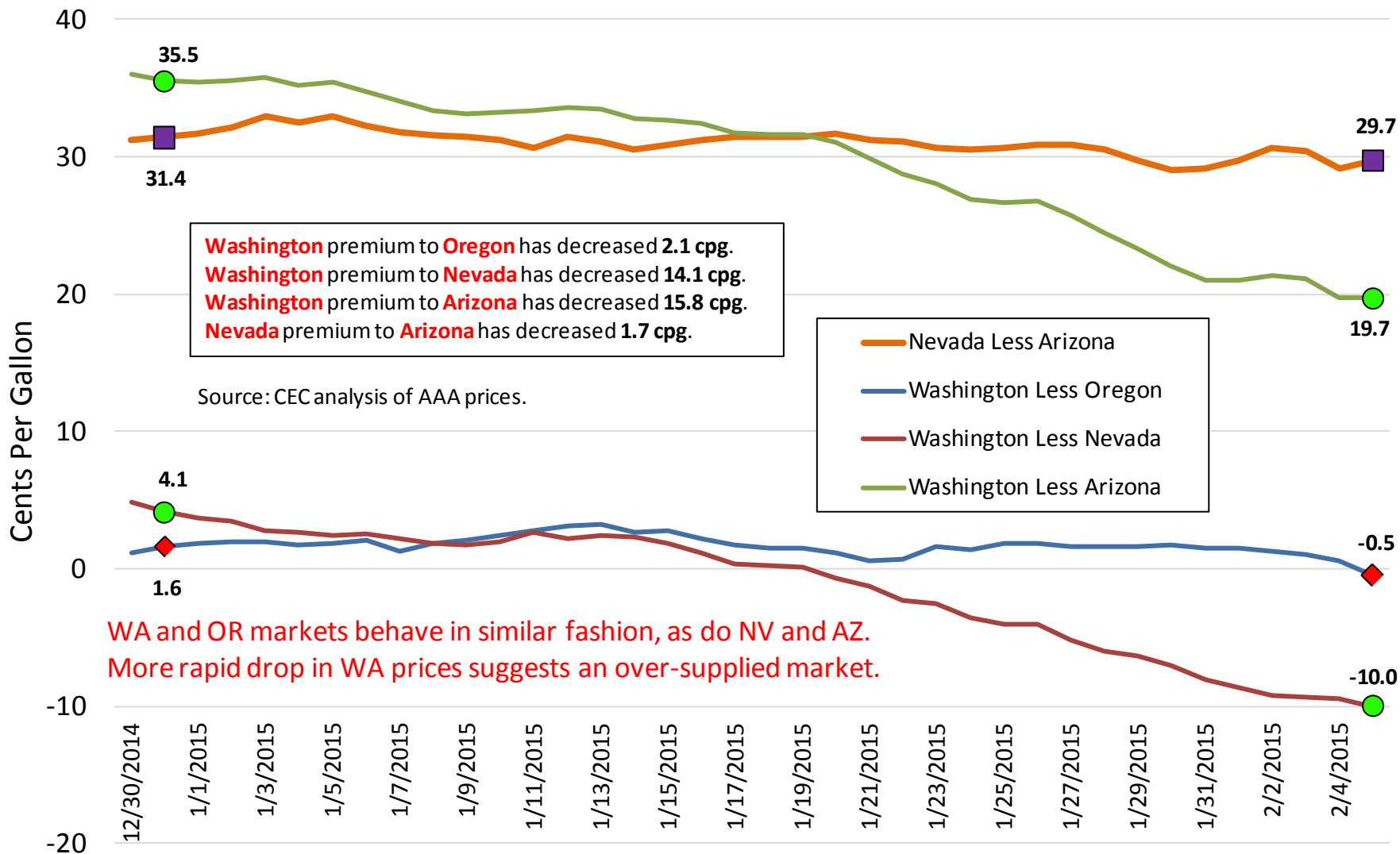


# Retail Gasoline Price Differences California vs. United States and Selected States





# Retail Gasoline Price Differences Comparison of Western States



Washington premium to Oregon has decreased 2.1 cpg.  
 Washington premium to Nevada has decreased 14.1 cpg.  
 Washington premium to Arizona has decreased 15.8 cpg.  
 Nevada premium to Arizona has decreased 1.7 cpg.

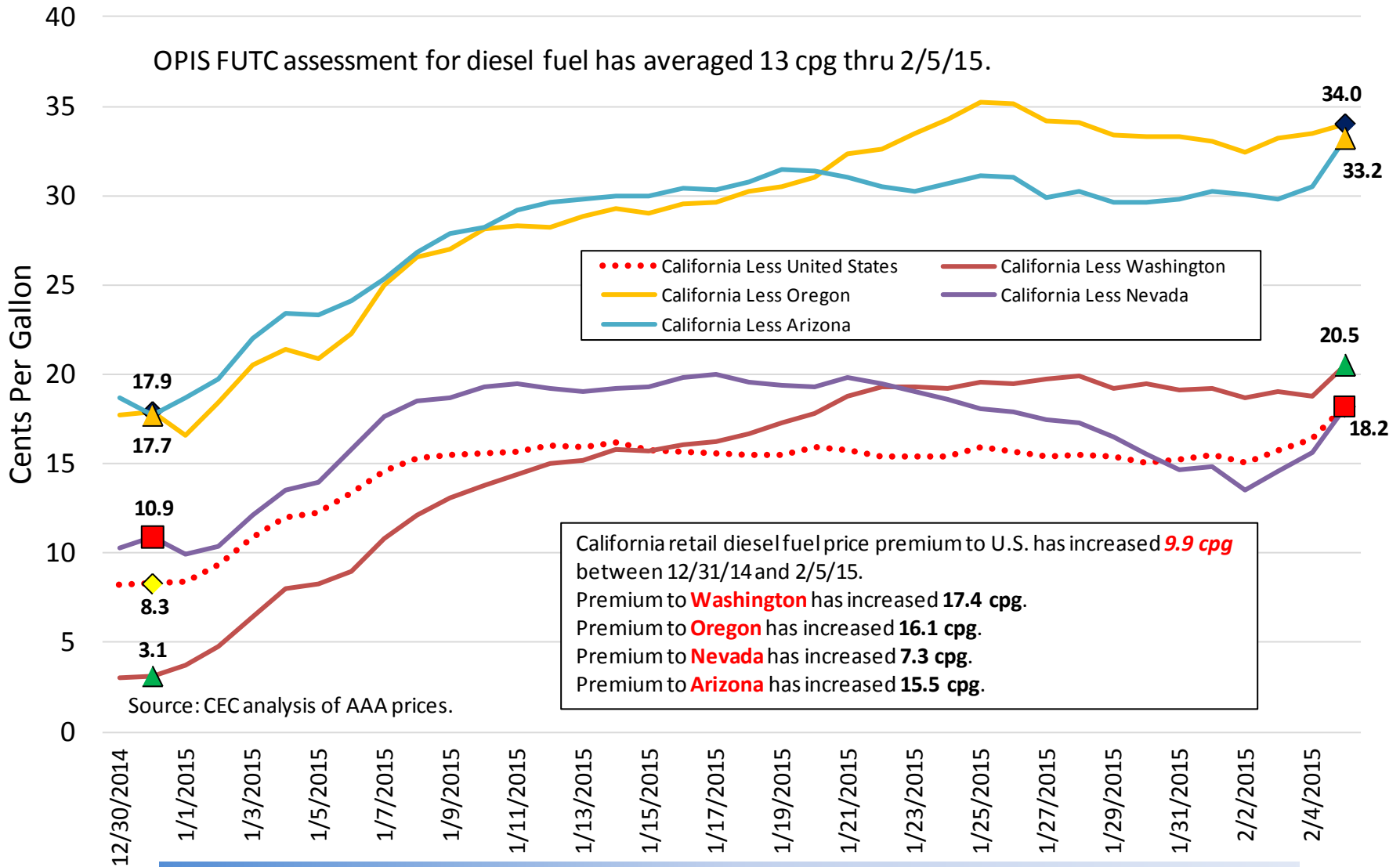
Source: CEC analysis of AAA prices.

Nevada Less Arizona  
 Washington Less Oregon  
 Washington Less Nevada  
 Washington Less Arizona

WA and OR markets behave in similar fashion, as do NV and AZ.  
 More rapid drop in WA prices suggests an over-supplied market.

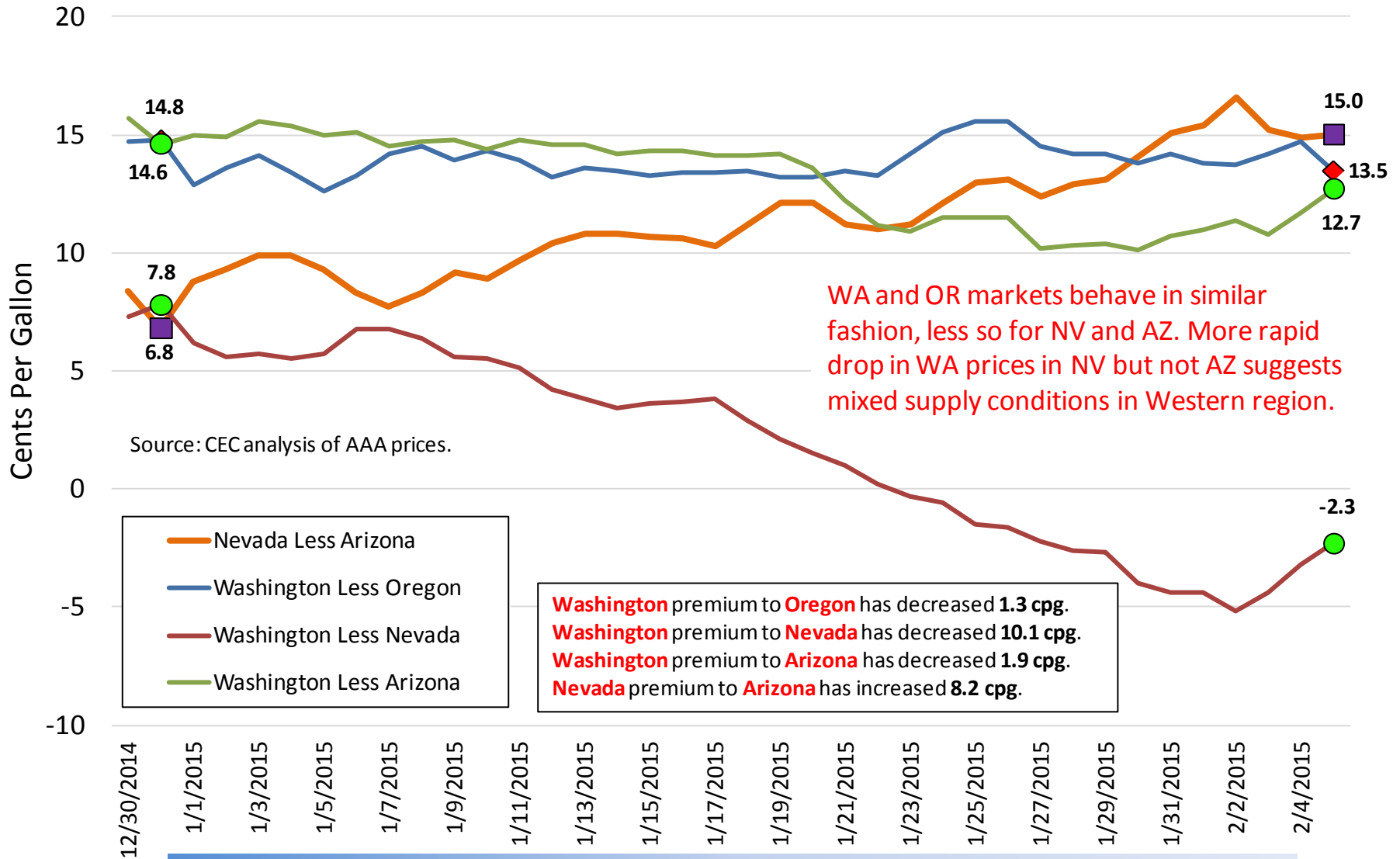


# Retail Diesel Fuel Price Differences California vs. United States and Selected States





# Retail Diesel Fuel Price Differences Comparison of Western States







# Retail Fuel Price Tracking Observations

- Gasoline
  - The gap between California retail gasoline prices and other Western states has increased between 8.7 and 24.5 cents per gallon from December 31, 2014 to February 5, 2015
  - The calculated FUTC assessment by OPIS has averaged 10 cents per gallon over the same period and lies within the range of increased retail price differential
- Diesel Fuel
  - The gap between California retail diesel fuel prices and other Western states has increased between 7.3 and 17.4 cents per gallon from December 31, 2014 to February 5, 2015
  - The calculated FUTC assessment by OPIS has averaged 13 cents per gallon over the same period and lies within the range of increased retail price differential