



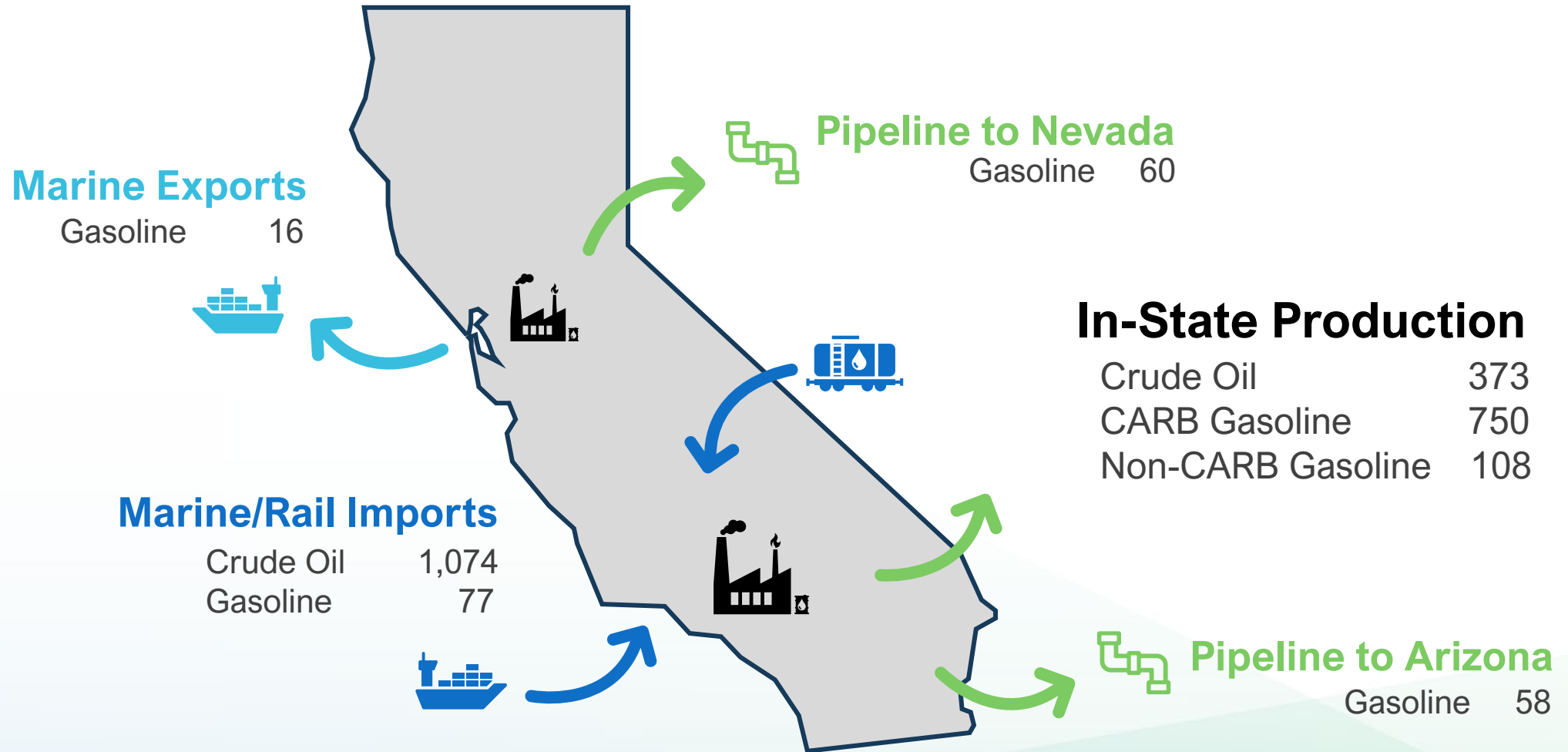
# California's Transportation Fuel Transition

California Energy Commission & California Air Resources Board

September 18, 2024

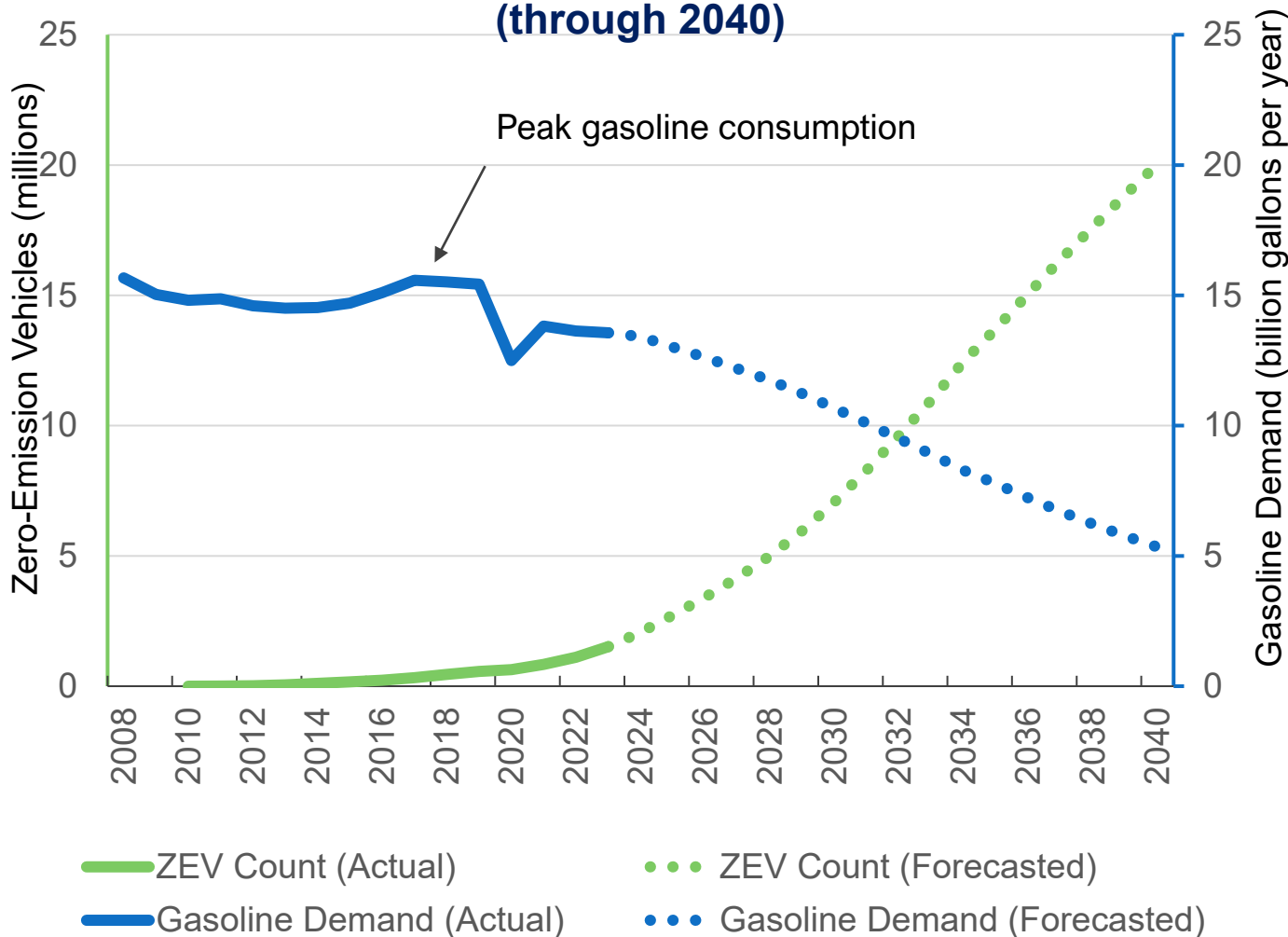


# California's Fuel Flows



(Amounts shown in thousands of barrels per day)

**Zero-Emission Vehicle Count vs. Gasoline Demand (through 2040)**



- California’s world-leading greenhouse gas emission reduction targets, air quality improvement requirements and subsequent programs are reducing dependence on petroleum-based fuels by stimulating demand for cleaner alternatives – e.g., electric vehicles.
- Tens of Billions of dollars in public health and economic benefits realized from climate and air quality program investments, especially for the states more disadvantaged communities.

# The Road to Zero Emissions

CARB has put a roadmap in place to drastically reduce our dependence on petroleum in the transportation sector by 2045.

AB 32

Requires we cut GHGs. To reach goals, fuel use must be cut by 94%.

How cuts happen?  
Zero emission cars, trucks and fuels.



ACT

ACC

ACF

CARB rules that make that possible:  
Advanced Clean Trucks, Advanced Clean Cars, Advanced Clean Fleets

- ACT: Phases out sale of most fuel-powered trucks by 2035
- ACC: 100% ZEV sales requirement by 2035
- ACF: Requires that trucks in CA be zero emissions by 2045

LCFS

All together, these actions will help us build a cleaner, healthier California for current and future generations.

Governor Newsom creates new oversight committee to monitor oil companies



Makes fuel less polluting and encourages production of cleaner alternatives

How it works:

Dirty Fuel



PAY

Cleaner Fuel



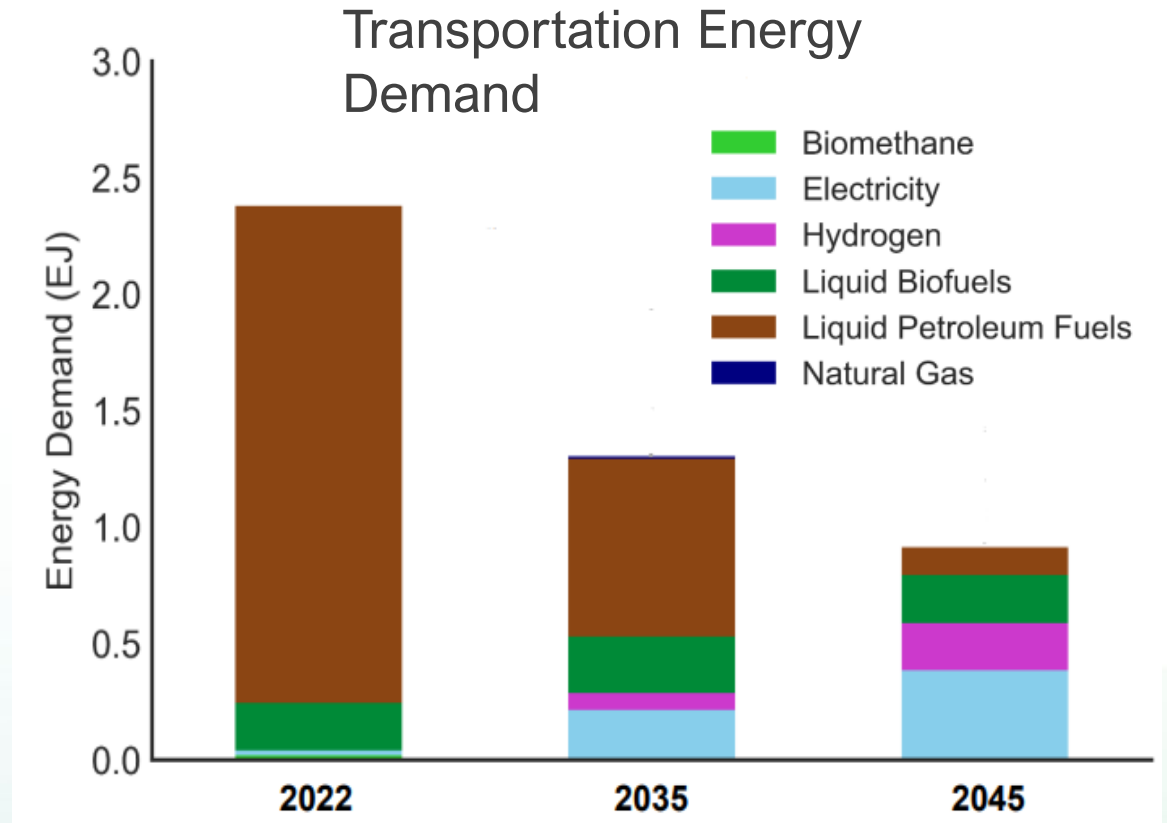
EARN



# Key Outcomes for Transportation Sector



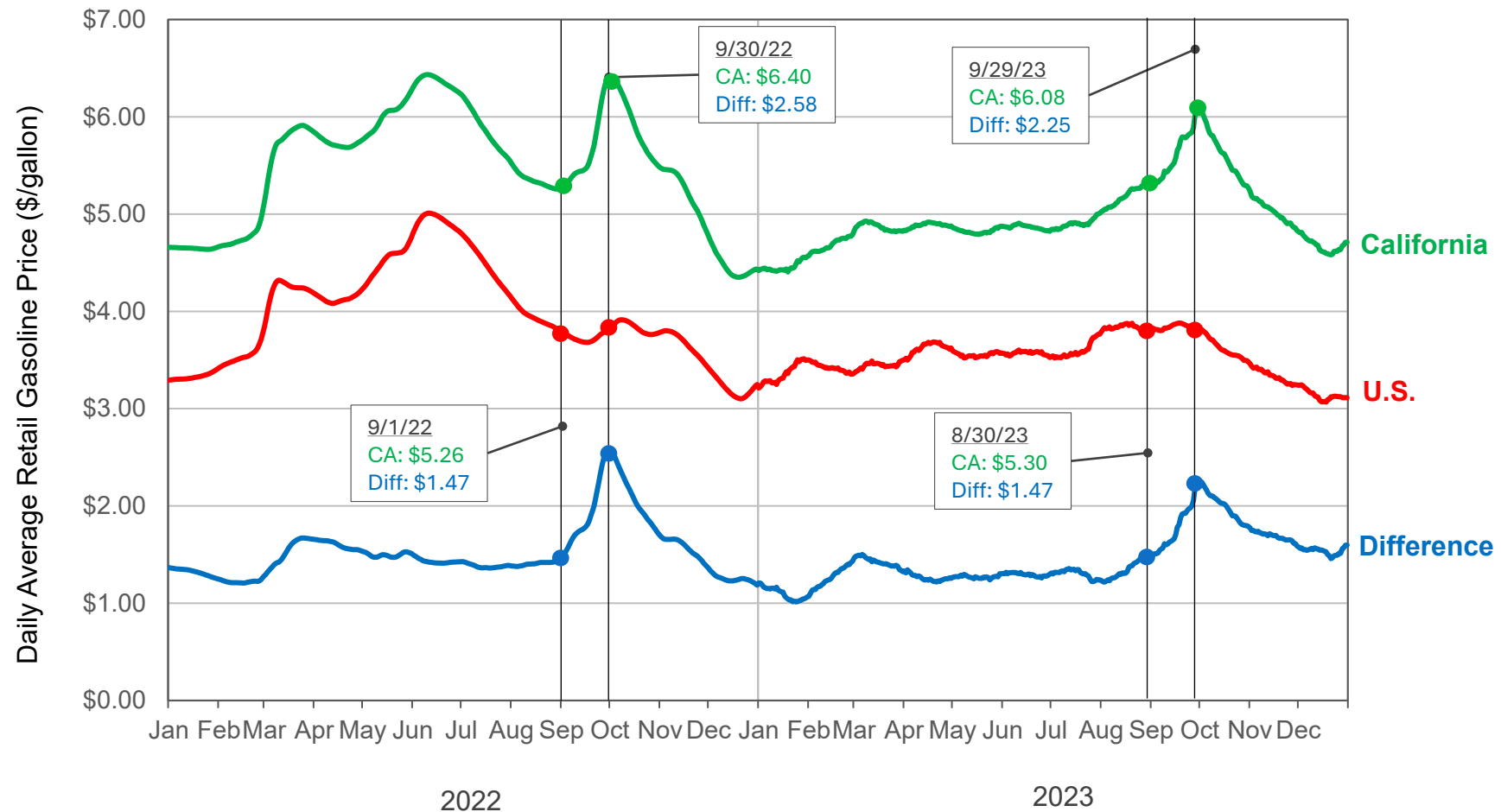
- 2022 Scoping Plan identifies key outcomes to achieve carbon neutrality by 2045,
  - 30x increase in ZEVs on the road by 2045 relative to 2022
  - Continued role for liquid biofuels
- Low Carbon Fuel Standard (LCFS) has tripled the volume of low-carbon fuels (2011-2023)
  - Over 50% of fossil diesel displaced by renewable diesel in 2023, resulting in PM and NOx benefits





# Breakdown of Gasoline Price Spikes

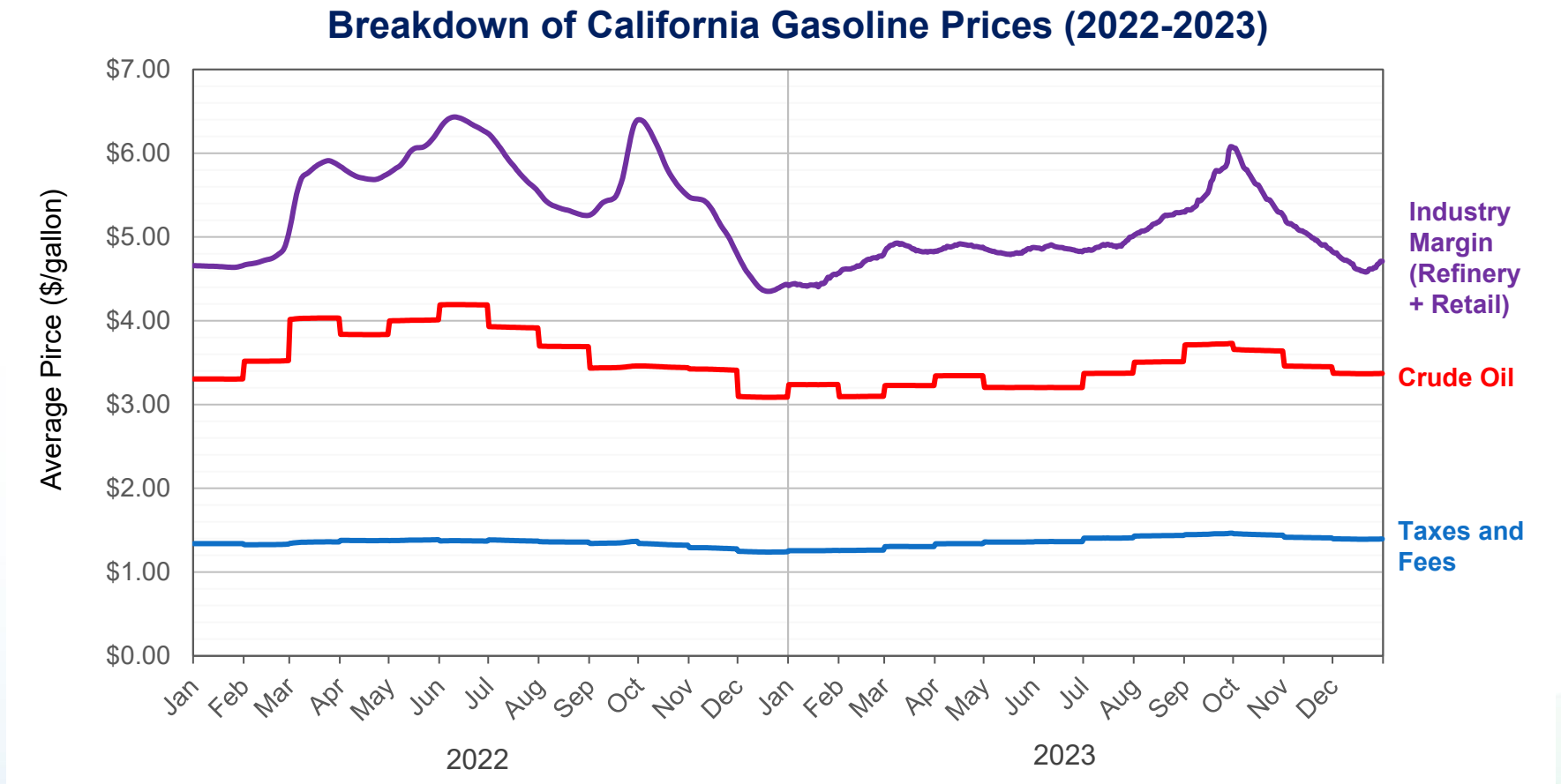
## CA vs. U.S. Average Retail Gasoline Price (2022-2023)



CEC analysis of OPIS data.



# Breakdown of Gasoline Price Spikes

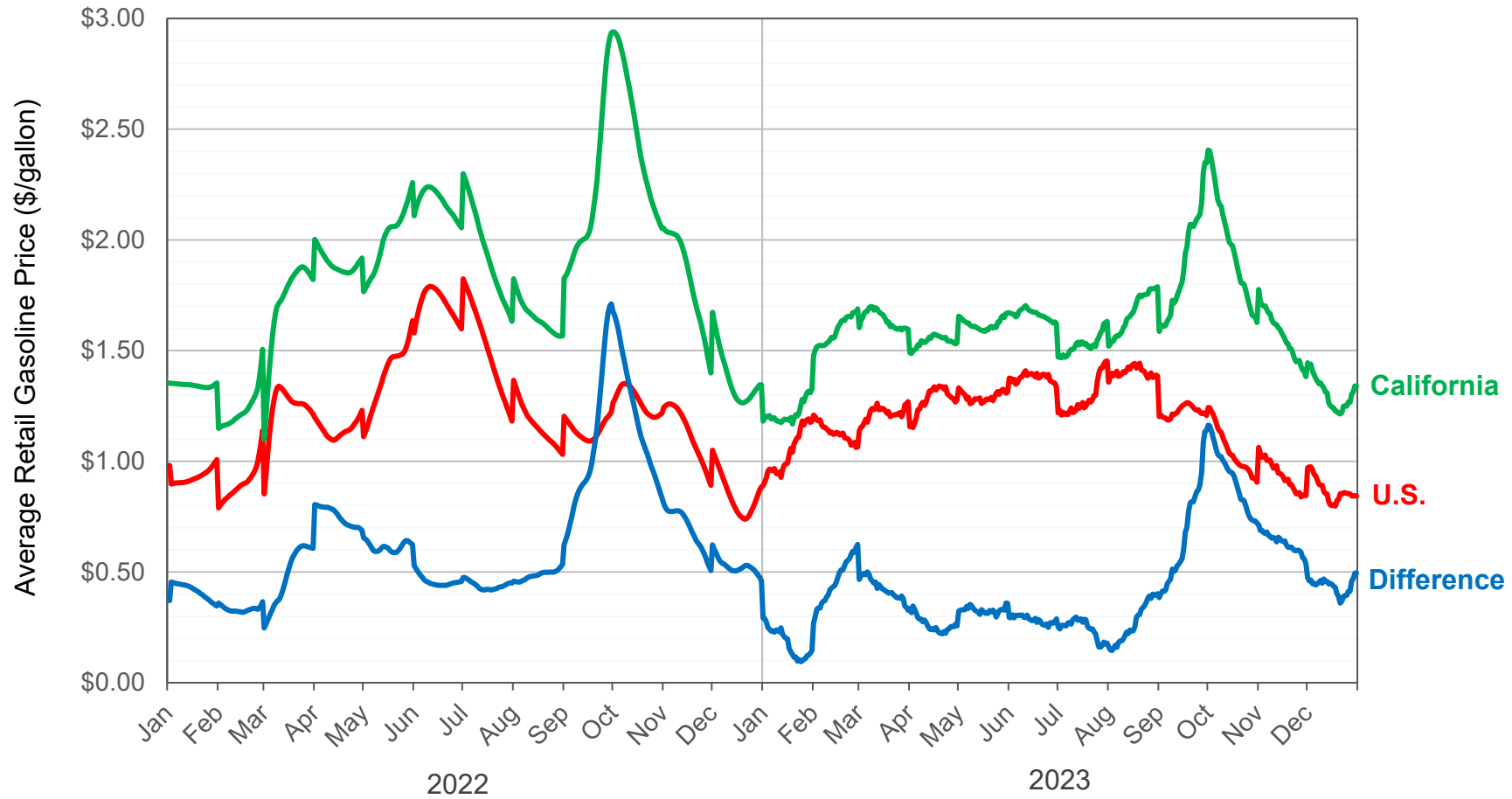


CEC analysis of OPIS and EIA data.



# Breakdown of Industry Margin (2022-2023)

## CA vs. U.S. Average Industry (Refinery + Retail) Margin (2022-2023)



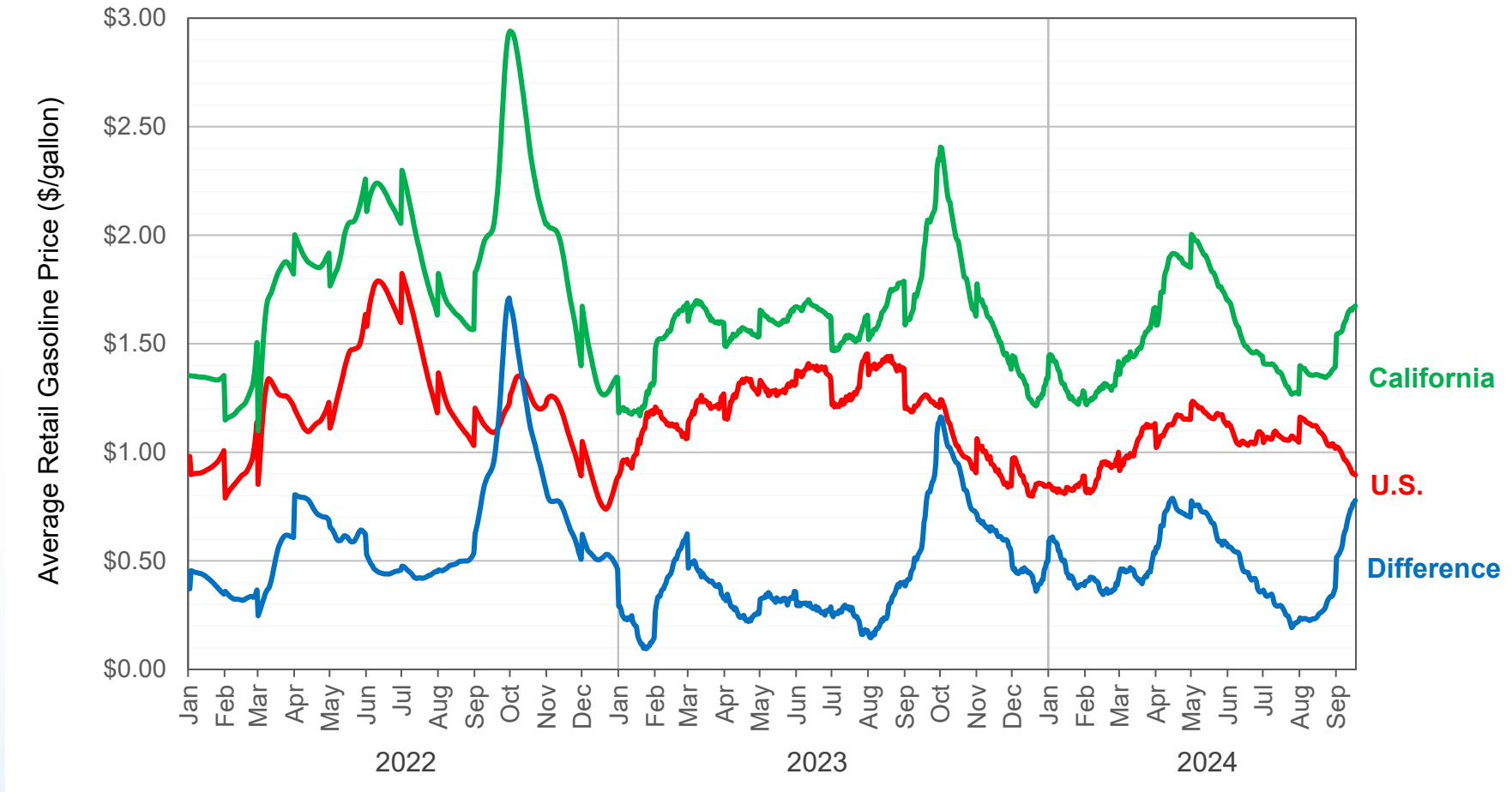
CEC analysis of OPIS, EIA, and CEC-M1322 data.





# Breakdown of Industry Margins (2022-2024)

## CA vs. U.S. Average Industry (Refinery + Retail) Margin (2022-2024)



CEC analysis of OPIS, EIA, and CEC-M1322 data.



# California's Petroleum Market

## *Recent Issues & Challenges*

### **Price Spikes**

in California have occurred in 3 of the last 5 years.

### **Lack of transparency**

in the California transportation fuels market.

### **No market incentive to mitigate price spikes**

- Industry agrees future spikes are inevitable
- Industry does not disagree that price spikes yield large profits
- Industry has no strategy to protect consumers

### **Less Gasoline Supply**

as more refineries convert their production to renewable fuels.

**Decreasing competition** in the refining sector leads to higher prices.

### **Reduced refinery production**

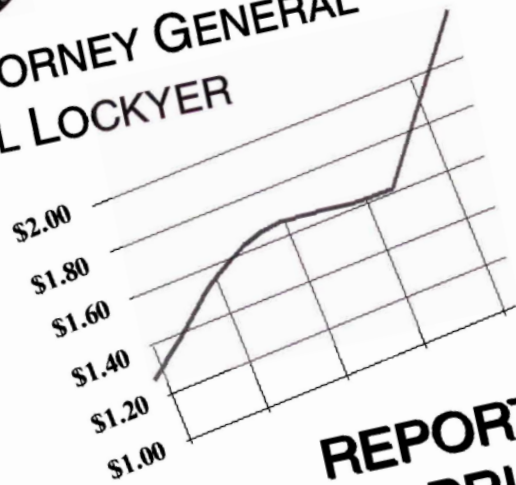
including closures, conversions, and maintenance events create price spike conditions as we transition away from petroleum fuels.



# This is an old issue



ATTORNEY GENERAL  
BILL LOCKYER



## REPORT ON GASOLINE PRICING IN CALIFORNIA

May 2000

California Energy Commission  
Edmund G. Brown Jr., Governor

September 2017 | CEC-200-2017-007



## Final Analysis on Gasoline Prices in California California Energy Commission October 21, 2019

### Petroleum Market Advisory Committee Final Report

December 2014 to  
November 2016

Prepared for: California Energy Commission  
Prepared by: Petroleum Market Advisory Committee

More per gallon of gasoline  
and Shell, than the  
others. This is equivalent to an

represent that they sell higher-  
quality than the high standards of all  
other same-brand stations, therefore, are  
not to be the same product. The CEC  
and retailers in response to a request  
to investigate claims. This is an issue the California  
CEC should investigate.



# SB X1-2 – *Requirements Overview*



Data Collection &  
Monitoring



Market Oversight  
Analysis



Transportation Fuels  
Assessment



Refinery Maintenance  
Monitoring



Refining Margin  
Establishment and  
Penalty Determination



Fuels Transition Plan  
(w/ CARB)

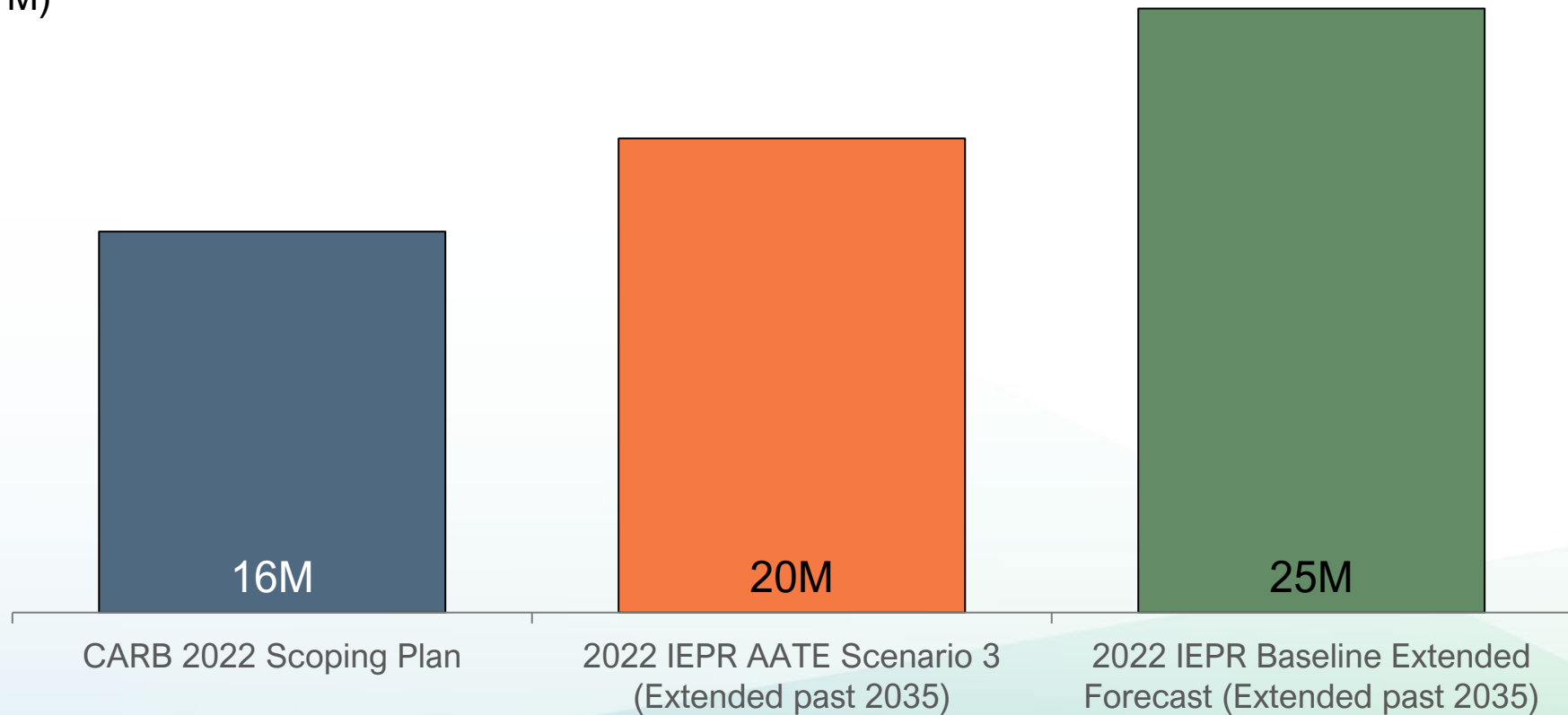


# Managing Petroleum Fuel to Meet Phased Decline



## 2035 Light-Duty Combustion Vehicles on the Road

2022 DMV  
Population  
(27M)





# Transportation Fuels Assessment



## Policy Options



### Storage

- State-supported storage
- Storage requirements



### Fuel Blends

- Fuel Blends: 15% Ethanol
- Regional Blends
- Non-CARBOB Blends



### Highly Complex

- Gas Price Stabilization Fund
- Public utility model
- State ownership



### Imports

- Resupply Compensation
- Railcar Replenishment
- State-managed imports



### Demand Strategies

- Enhanced ZEV Access
- VMT Reduction Strategies
- Fuel Conservation

## Progress



### Workshop May 16, 2023

Fuel demand scenarios and assessment framework



### Workshop August 17, 2023

Confirm demand scenarios, price spike policy and mitigation options



### Workshop on May 3, 2024

Draft report published on April 12



### Final report

The final report was published in August 2024



# Fuels Transition Plan (CEC/CARB)



## Requirements

CEC and CARB must develop and submit a Transportation Fuels Transition Plan by end of 2024.

This plan will discuss how to ensure that the supply of transportation fuels is affordable, reliable, equitable and adequate to meet the demand described in the 2022 Scoping Plan.

## Progress



**Host Joint-Agency Kick-Off Workshop**

May 3, 2024



**Meet with working group members to discuss the plan**

Ongoing throughout 2024



**Submit plan (w/ CARB)**

Due December 31, 2024



# Draft Transition Plan Work Plan



Working Group	Community Meetings	Petroleum Refining Supply Technical Contract
		<ul style="list-style-type: none"> <li>ICF Contract Kickoff July 2024</li> </ul>
<p><b>August 27, 2024 - WG Meeting #1:</b> Assessing fuel supply strategies from CEC’s Transportation Fuels Assessment</p>		
<p><b>October 1, 2024 - WG Meeting #2:</b> Supply and Demand-Planning for Diminished In-State Fuel Demand</p>	<p>Community Mtg #1 (Northern California)</p>	<ul style="list-style-type: none"> <li>Draft range of fuel and export volumes</li> </ul>
<p>WG Meeting #3: Equitable Transition of the Workforce</p>	<p>Community Mtg #2 (Southern California)</p>	<ul style="list-style-type: none"> <li>Final range of fuel and export volumes</li> <li>Draft analysis of staged refinery transitions</li> </ul>
<p>WG Meeting #4: Discuss Draft Scenarios and Feedback Received to Date</p>		



# Thank You!



Siva Gunda  
Vice Chair