



Phasing Out Oil Refining in California: Implications for Health and Workers

Siva Gunda

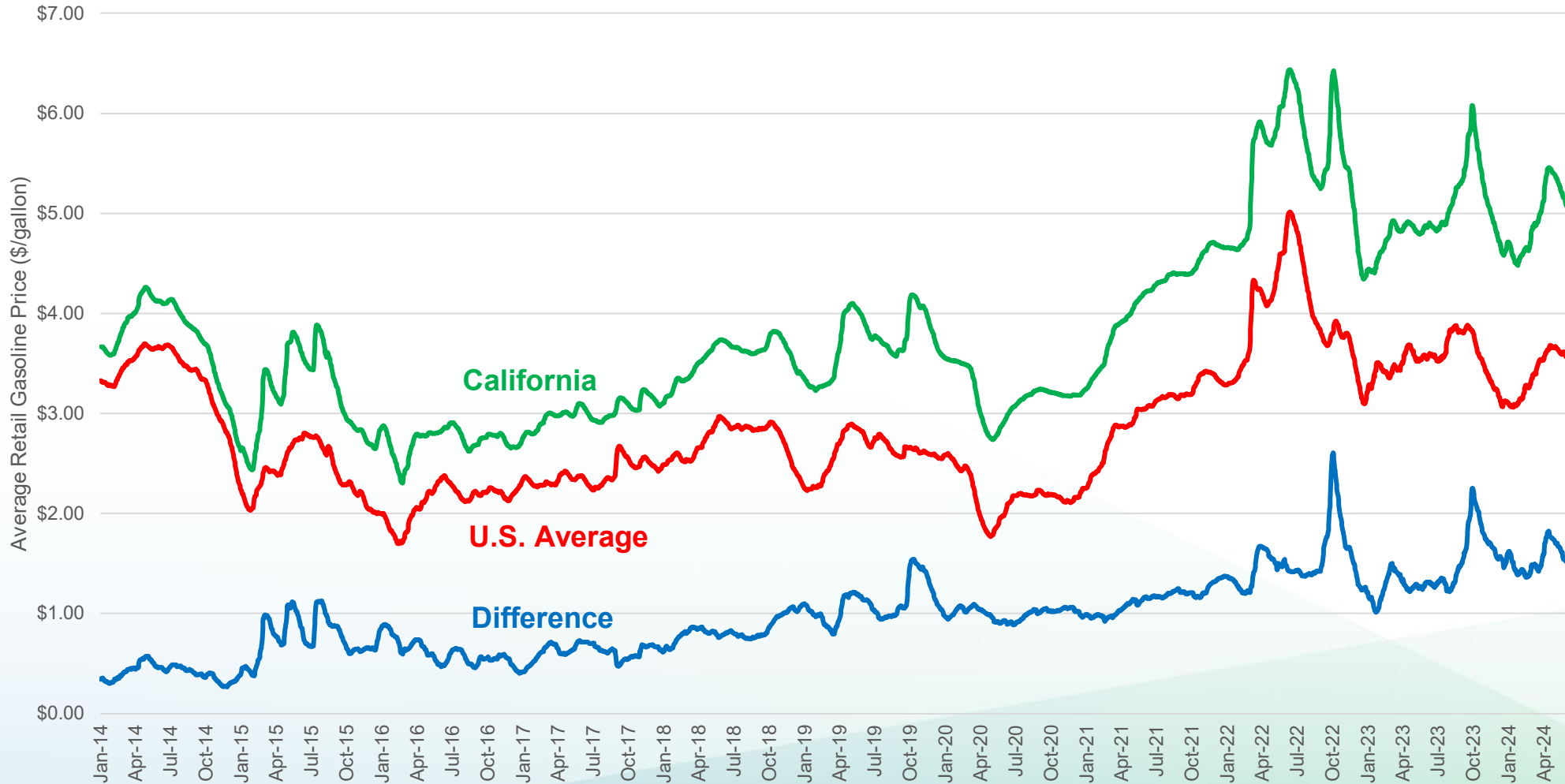
Vice Chair, California Energy Commission

July 25, 2024



California vs. U.S. Retail Gasoline Prices

California vs. U.S. Average Retail Gasoline Price (2014 - Current)





SB X1-2 – *Requirements Overview*



Data Collection &
Monitoring



Market Oversight
Analysis



Transportation Fuels
Assessment



Refinery Maintenance
Monitoring



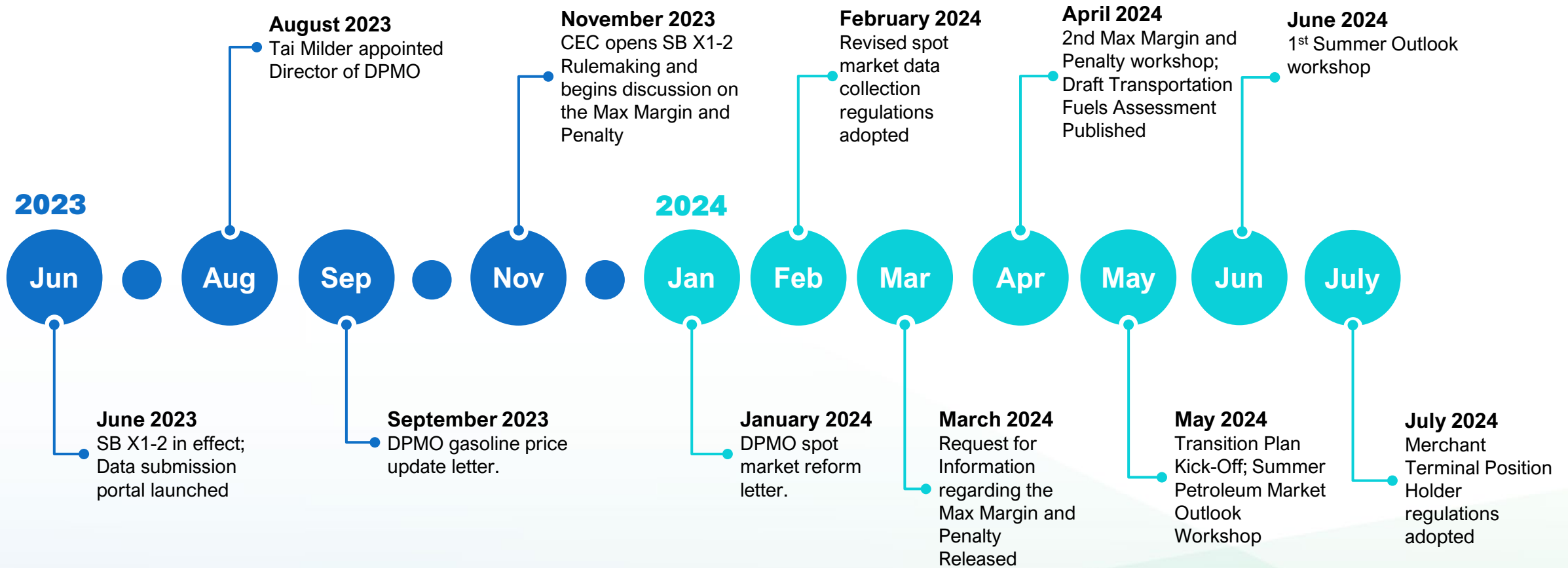
Refining Margin
Establishment and
Penalty Determination



Fuels Transition Plan
(w/ CARB)

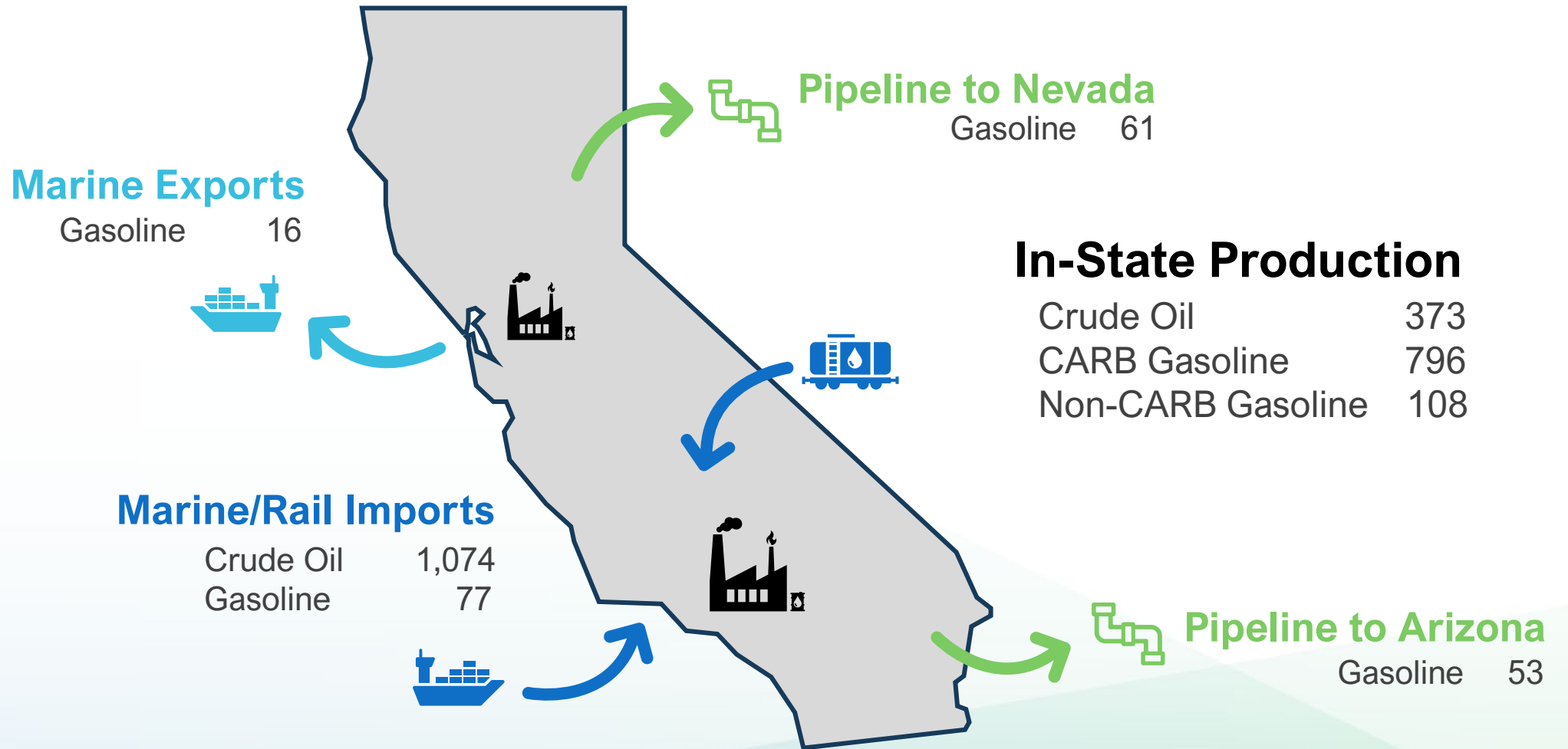


SB X1-2 - *Timeline*





California's Fuel Flows

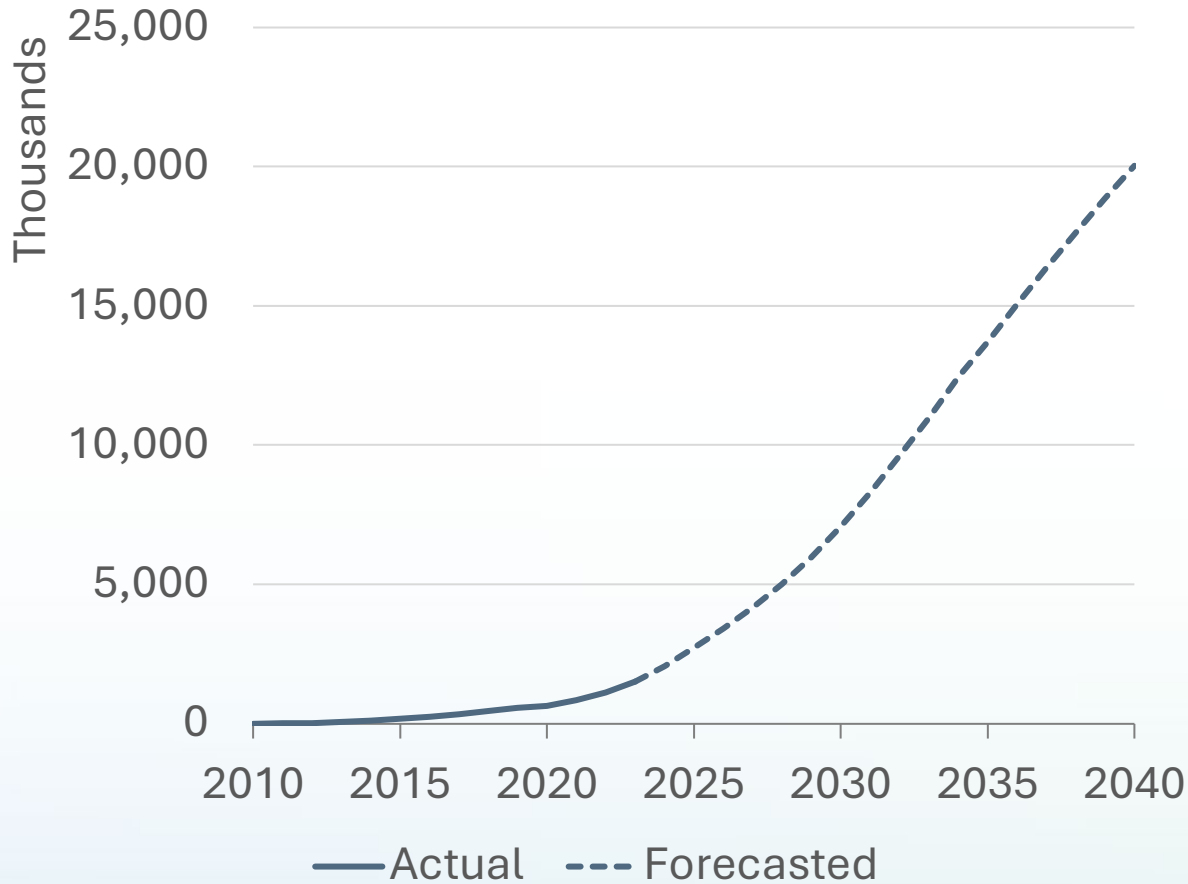


(Amounts shown in thousands of barrels per day)

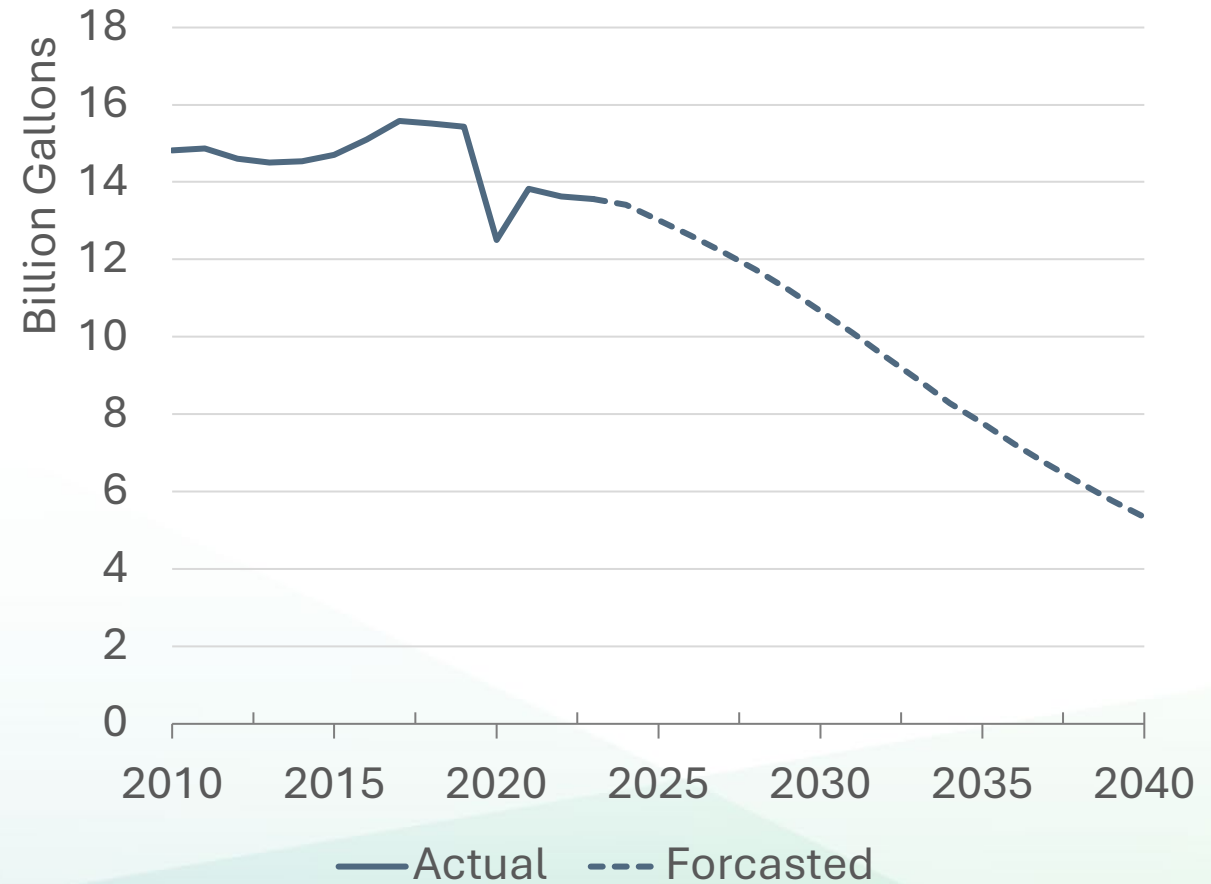


Towards a Zero-Emission Future

Zero-Emission Vehicles in California



Gasoline Consumption in California

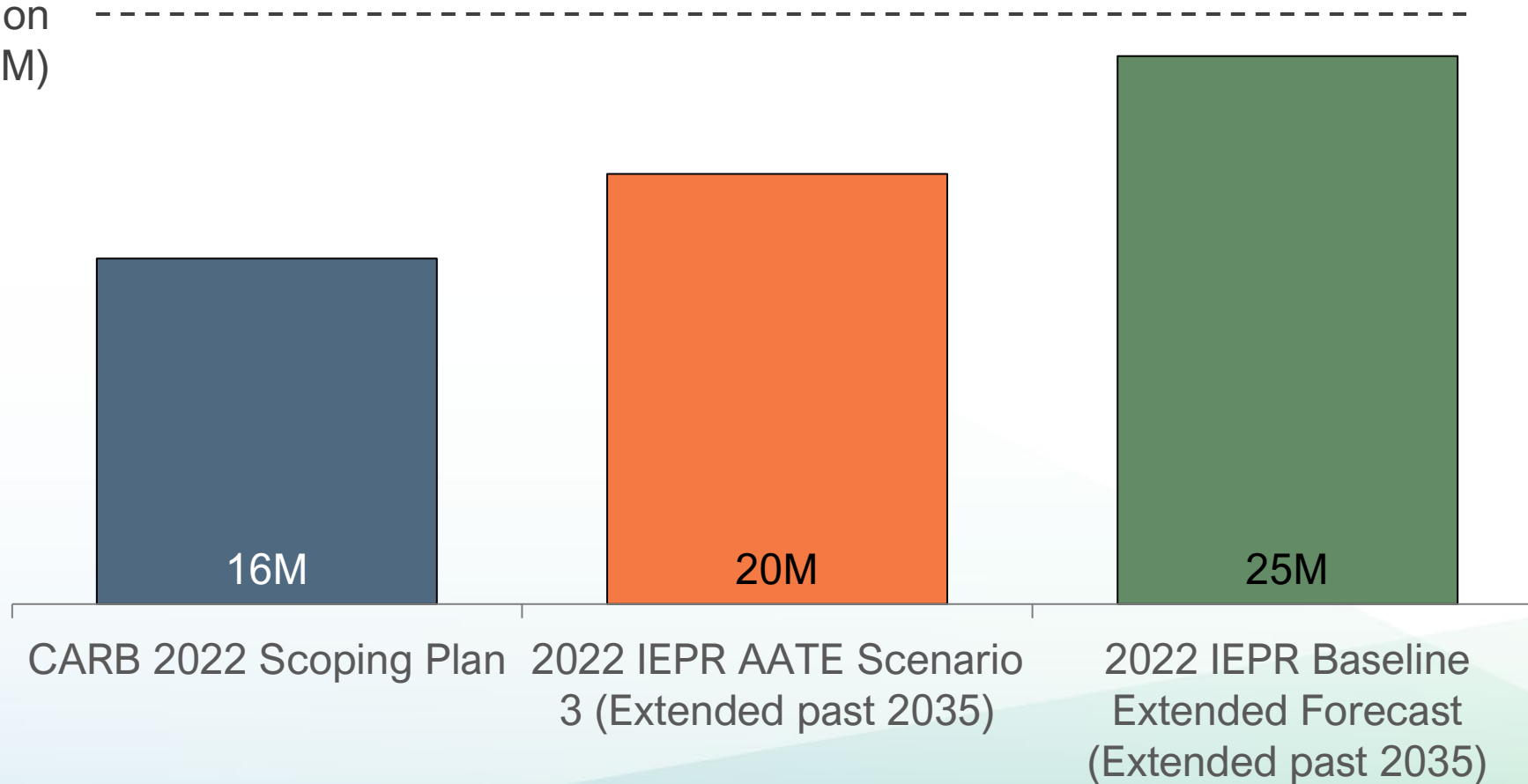




Combustion Vehicles will Phase Out but Need Fuel for Decades

2035 Light-Duty Combustion Vehicles on the Road

2022 DMV
Population
(27M)

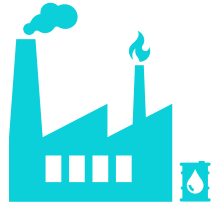




CA Specific Market Dynamics:

How many days of supply of refined fuel do we have?

SUPPLY



Refinery Production



Marine Imports



Gasoline Inventories

DEMAND

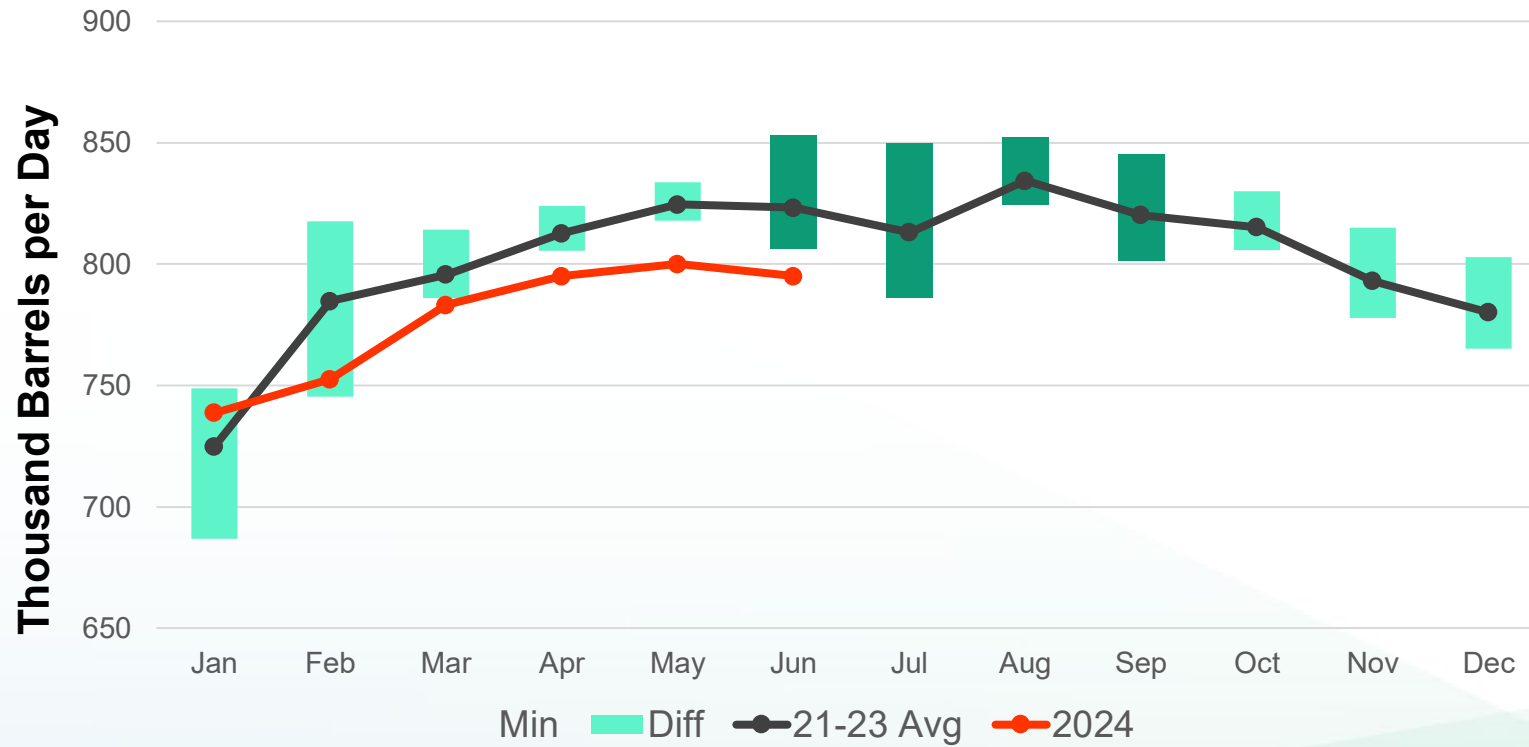


Gasoline Demand



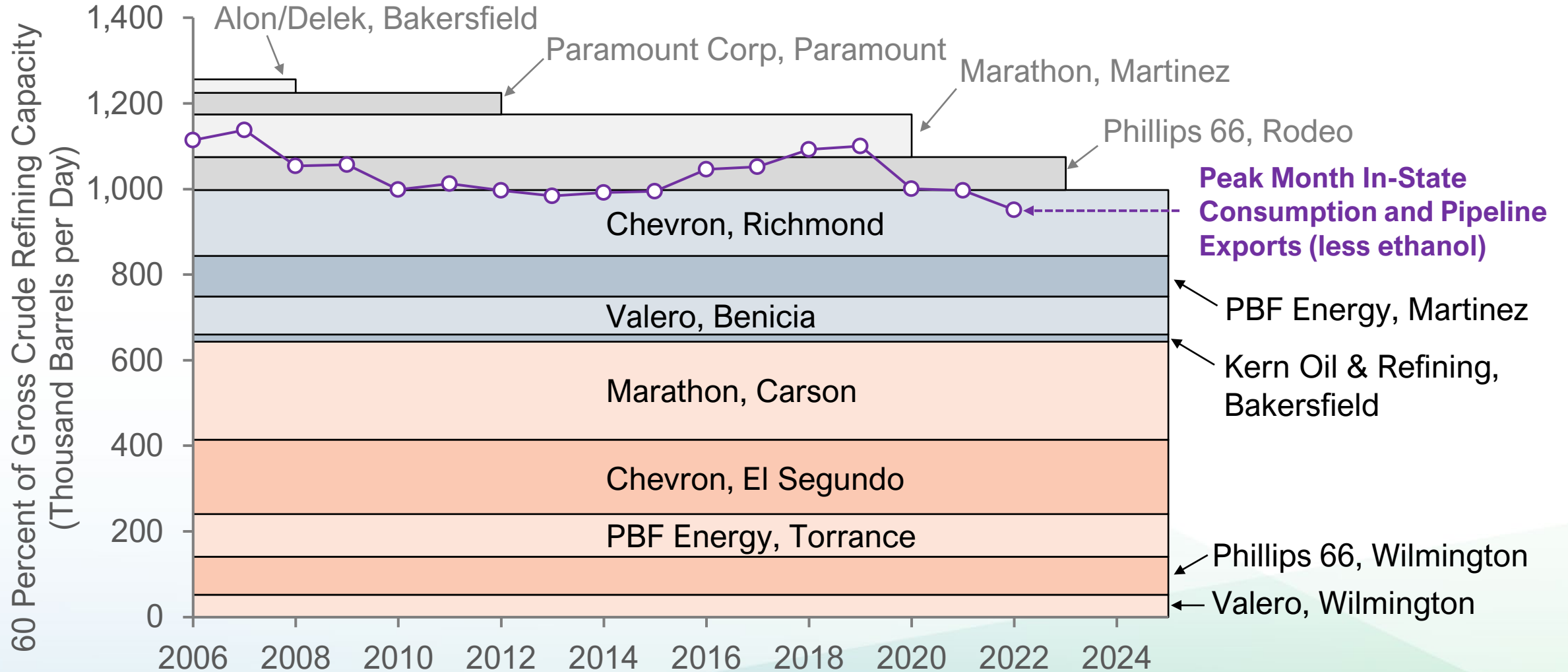
Average CARBOB Demand

Average Daily CARBOB Demand by Month (Jan 2021-Current)





Estimated Gasoline Refinery Capacity

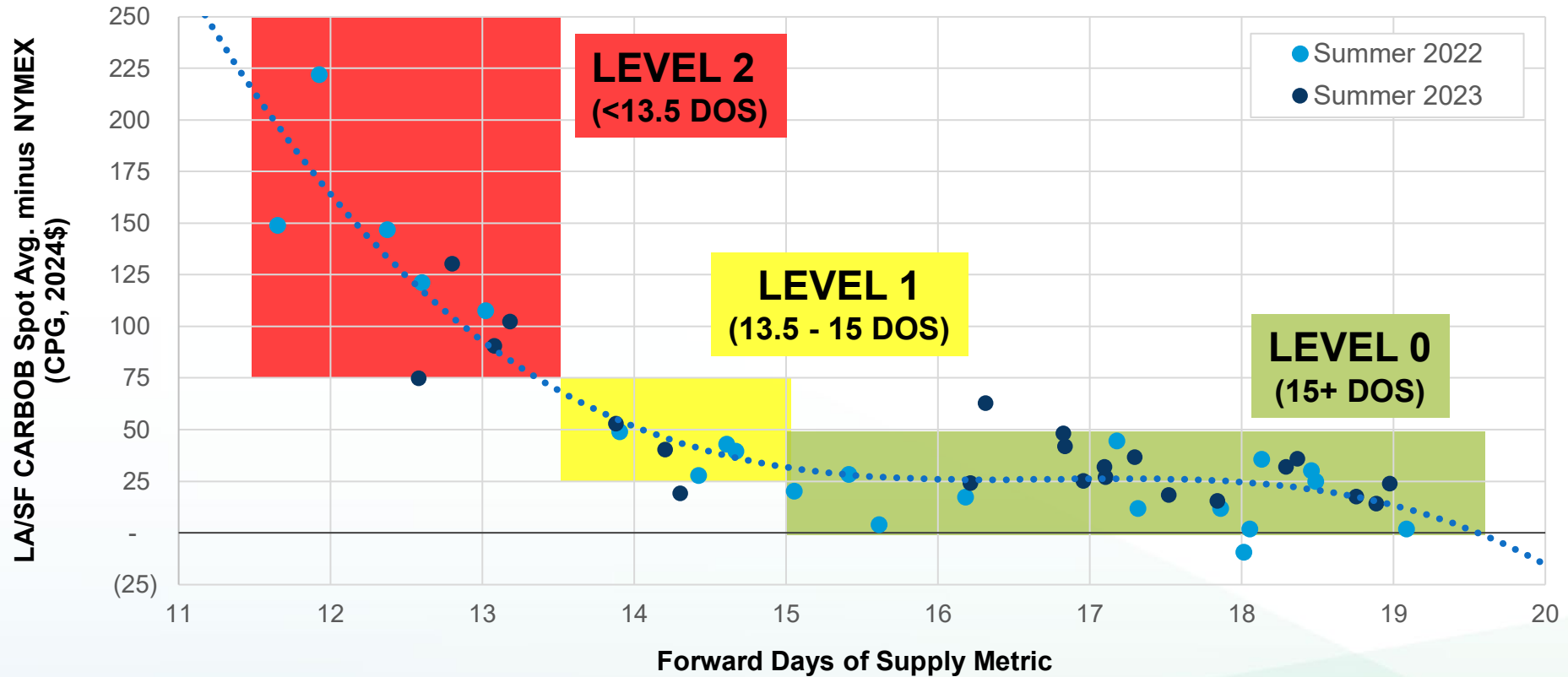




Establishing Price Risk Levels

...Price spreads increase

Summer 2022 and 2023 Price Spread vs. Days of Supply (DOS)

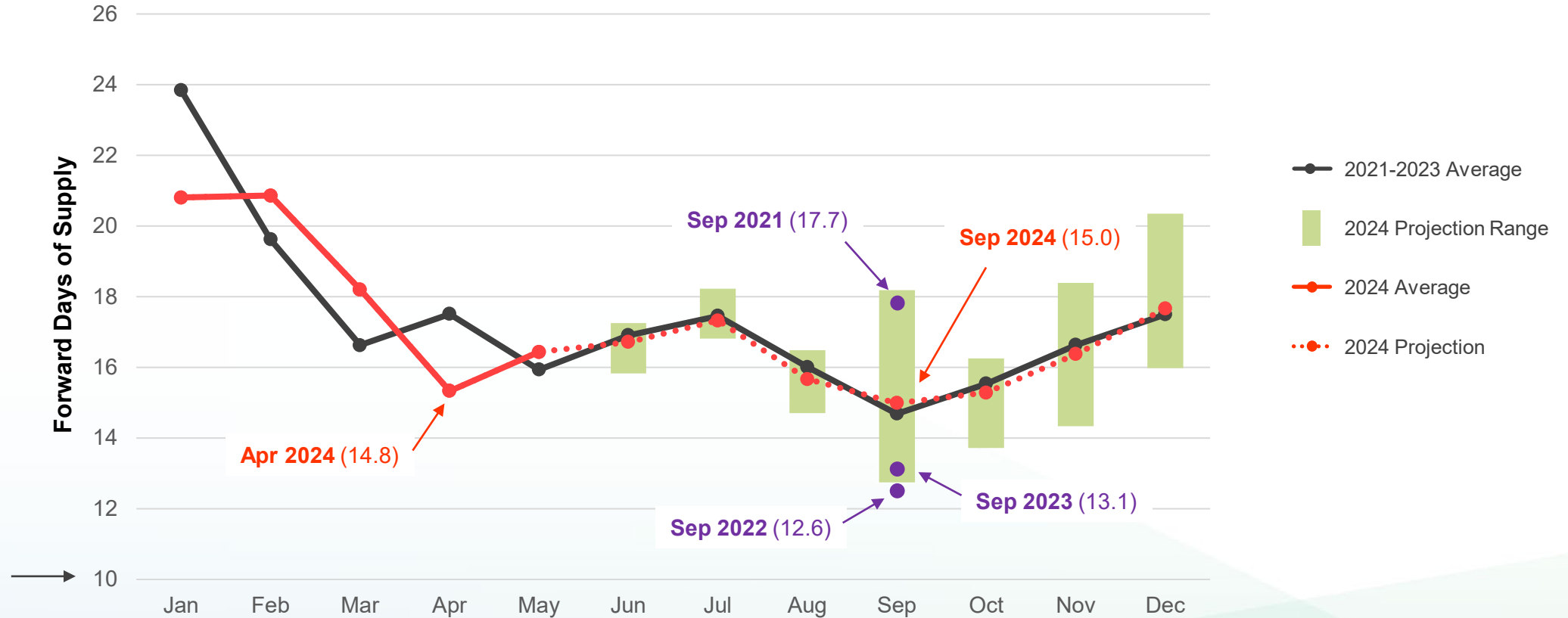


As Days of Supply fall...



Days of Supply Projection

Average Days of Supply by Year (Jan 2021-Current)



Source: Production from CEC [Weekly Fuels Watch Dashboard](#).
Gasoline stocks from EIA [West Coast \(PADD 5\) Stocks of Crude Oil and Petroleum Products \(eia.gov\)](#)



Transportation Fuels Assessment



Policy Options



Storage

- State-supported storage
- Storage requirements



Fuel Blends

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



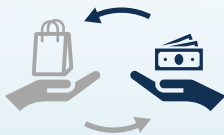
Highly Complex

- 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

Fuel demand scenarios and assessment framework



Workshop August 17

Confirm demand scenarios, price spike policy and mitigation options



Draft report published

Public workshop on May 3



Final report

The final report will be published in Q3



Draft Transition Plan Work Plan (in coordination with CARB)

Working Group	Community Meetings	Petroleum Refining Supply Technical Contract
		<ul style="list-style-type: none">ICF Contract Kickoff July 2024
WG Meeting #1: Assessing fuel supply strategies from CEC's Transportation Fuels Assessment		
WG Meeting #2: Supply and Demand-Planning for Diminished In-State Fuel Demand	Community Mtg #1 (Northern California)	<ul style="list-style-type: none">Draft range of fuel and export volumes
WG Meeting #3: Equitable Transition of the Workforce	Community Mtg #2 (Southern California)	<ul style="list-style-type: none">Final range of fuel and export volumesDraft analysis of staged refinery transitions

Thank You!



Siva Gunda
Vice Chair

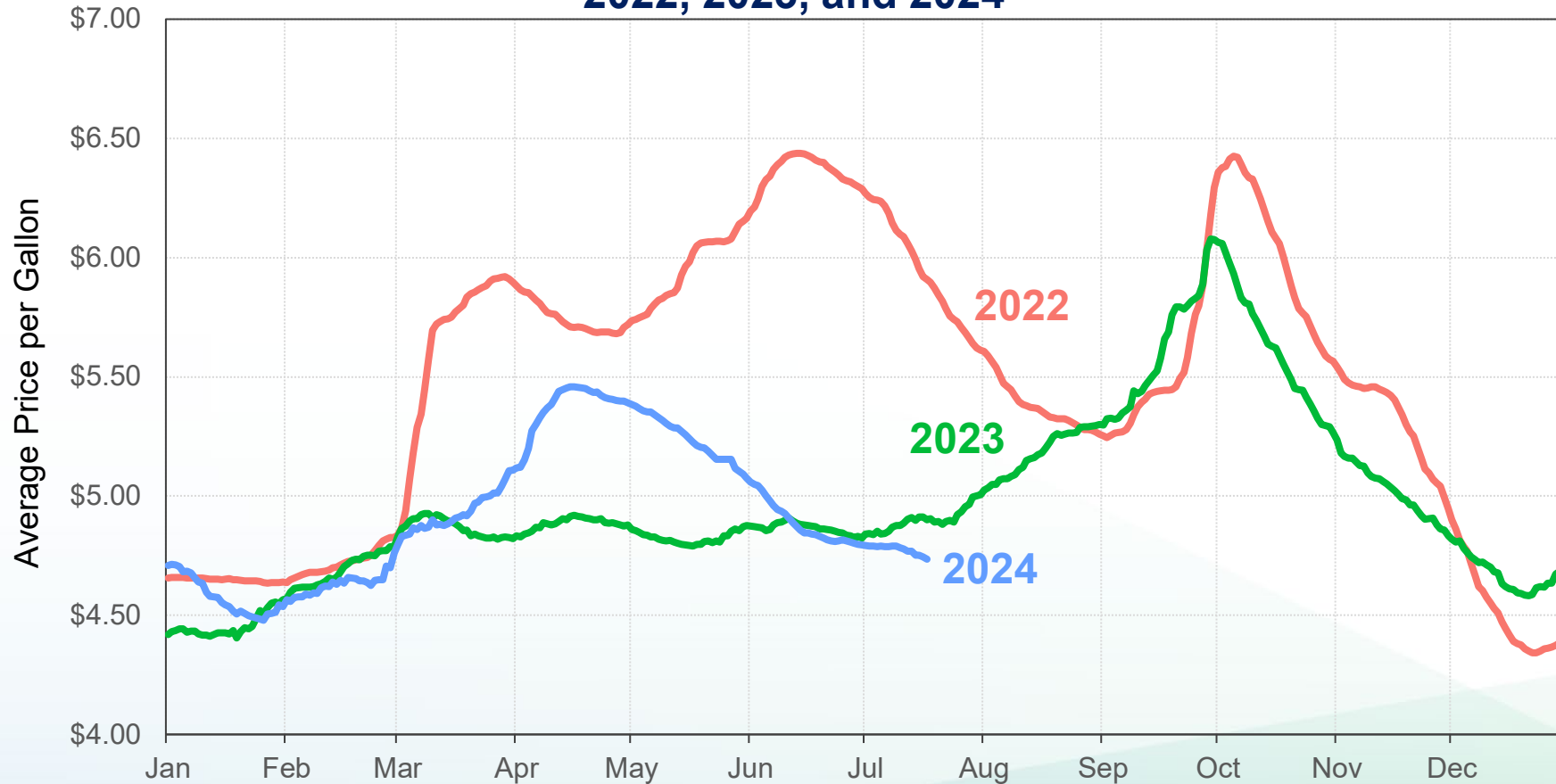
Extra Slides





California Gasoline Prices 2022-2024

California Gasoline Prices Compared 2022, 2023, and 2024



Source: AAA



“A reliable supply of affordable and safe transportation fuels in California”



Price Spike Risk Management



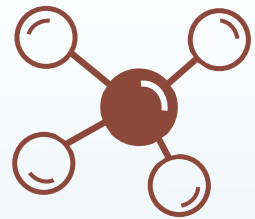
Refinery Dynamics



Branded and unbranded fuels



Multiple interval considerations for demand:
3-year
7-year
10-year
20-year



Fuel additives