



Technical Basis for PMAC's Gasoline Supply/Demand/Market Discussion

Prepared for PMAC
October 13, 2015

Stillwater's objective today is to provide a technical basis for the discussion



Agenda

1. EIA's PADD 5 Transportation Fuels Market Report
2. California regional gasoline supply/demand balances
3. Market structure descriptions

EIA's report was focused on supply, demand and distribution of transportation fuels

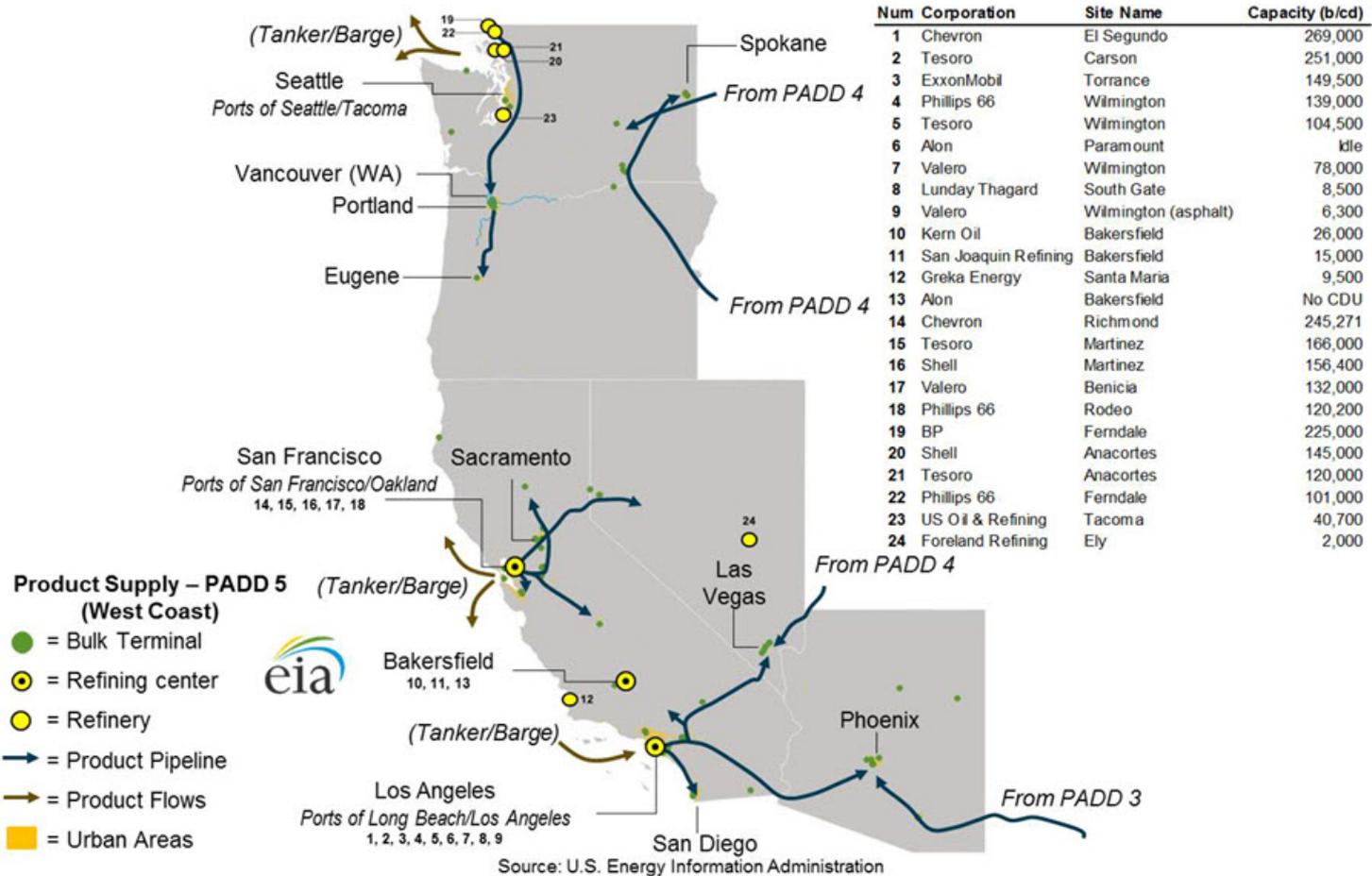


1. Study is “designed to inform its (EIA’s) analyses of petroleum product markets, especially during periods of supply disruption and market change.”
2. Stillwater was retained to do research and analysis
3. Stillwater met with stakeholders and analyzed EIA’s data on product flows
4. Organized the PADD into 6 separate regions including:
 - Northern California/Northern Nevada (NCNV)
 - Southern California/Southern Nevada (SCSN)
 - Oregon & Washington – Pacific Northwest (PNW)
 - Arizona
 - Alaska
 - Hawaii

There are 3 Mainland refining centers in PADD 5



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PNW, NCNN, and SCSN are only connected by tanker or barge

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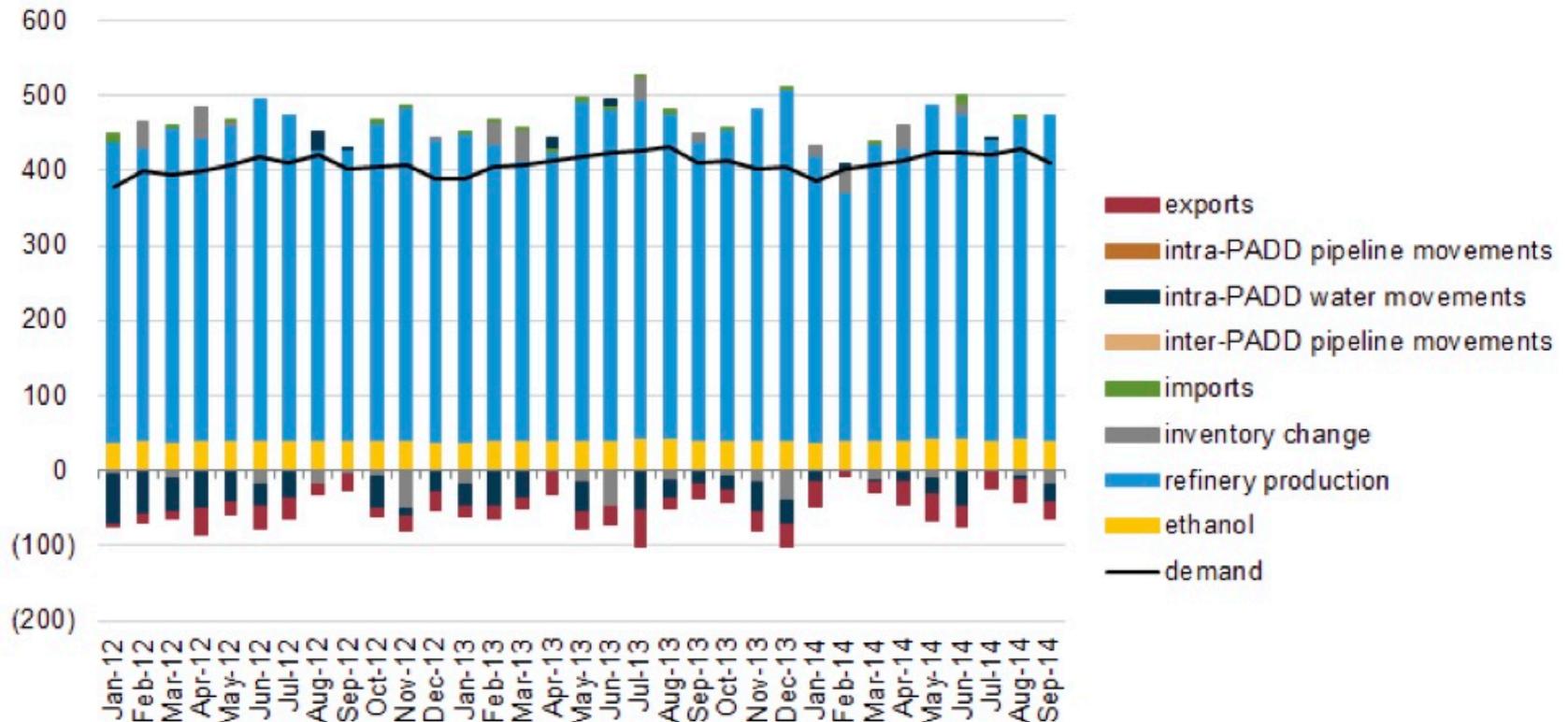
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NCNV Motor Gasoline Supply/Demand Balance

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thousand barrels per day



Note: All movements are on a net basis.

Source: Stillwater Associates analysis of EIA data

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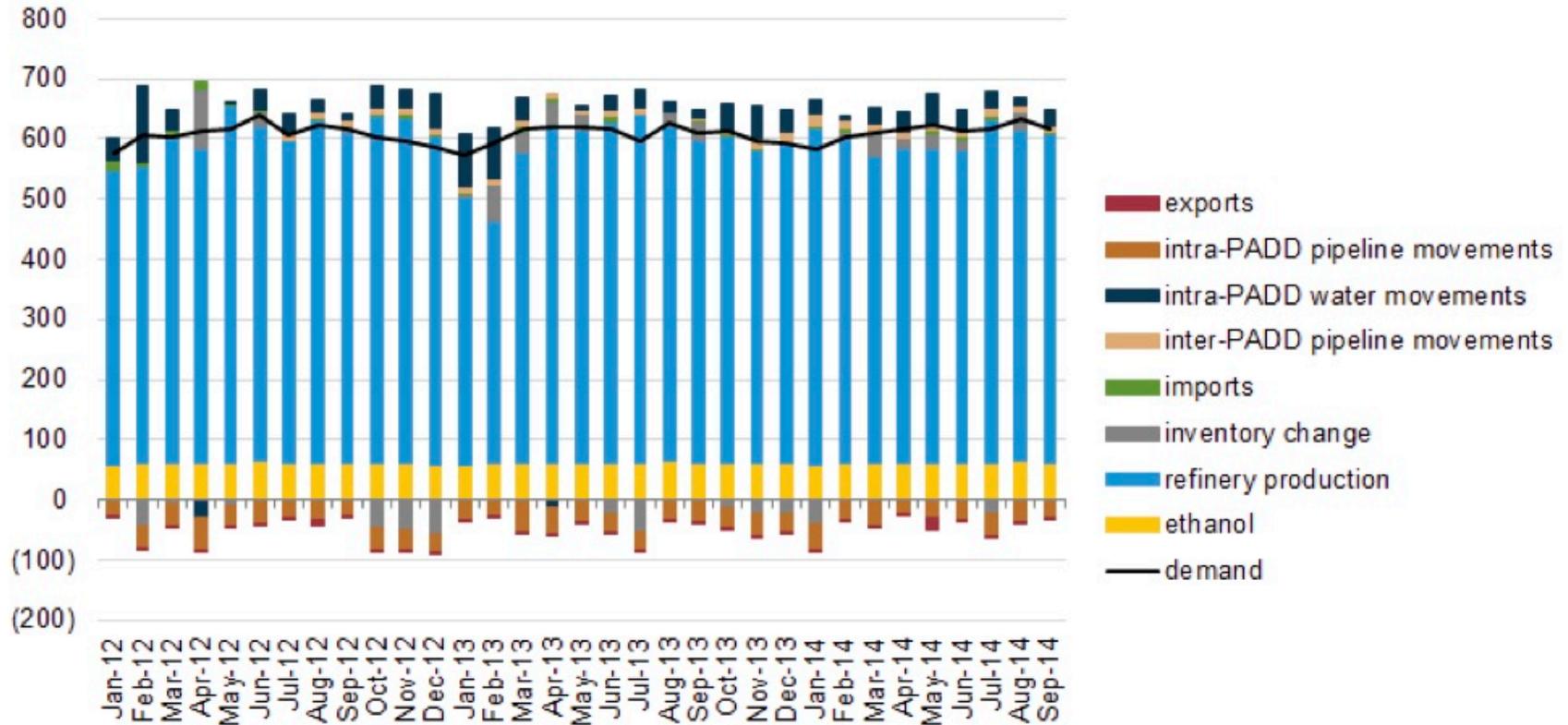
SF Bay refineries routinely tanker gasoline to SoCal or to foreign ports

SCSN Motor Gasoline Supply/Demand Balance



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thousand barrels per day



Note: All movements are on a net basis.

Source: Stillwater Associates analysis of EIA data

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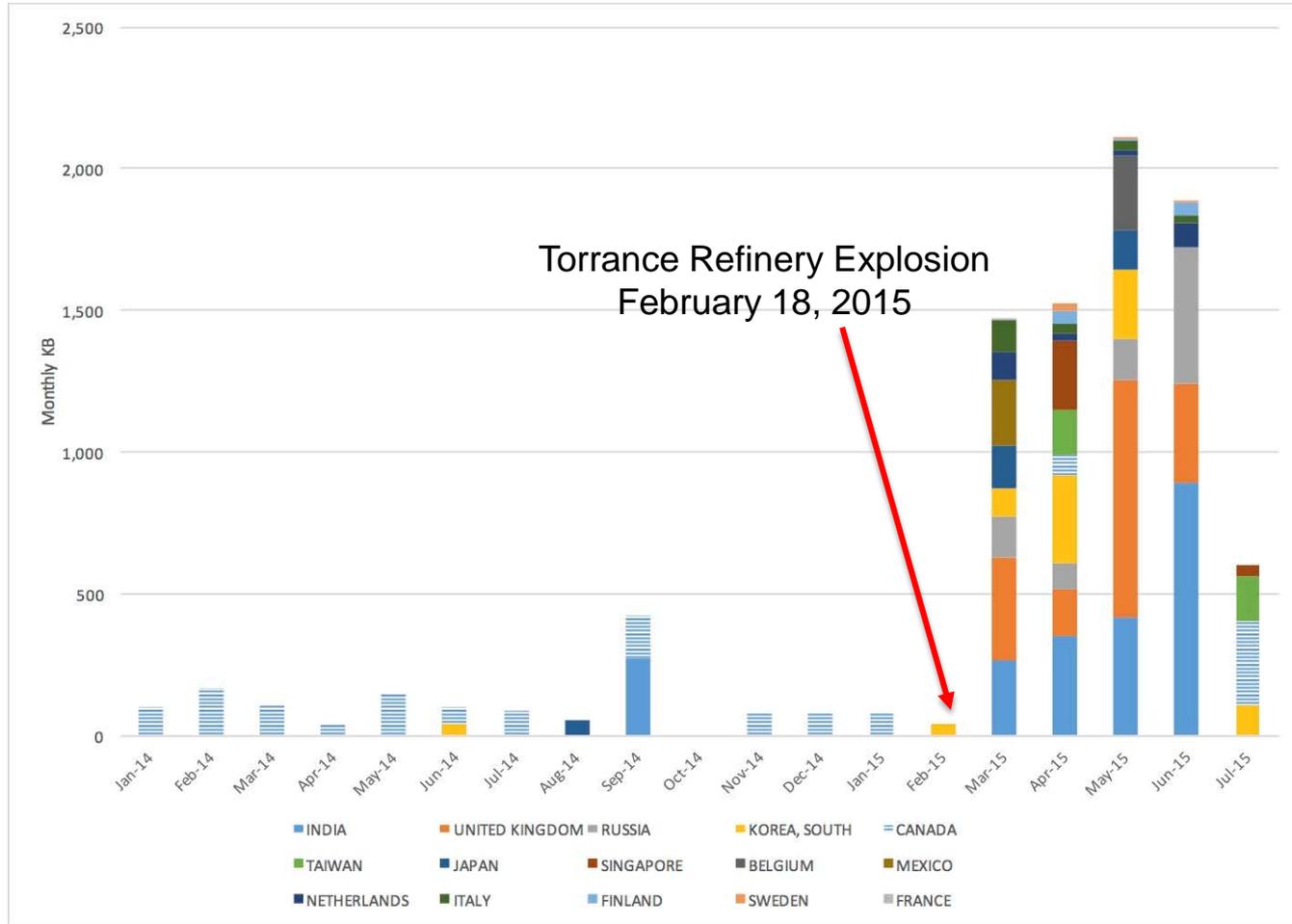


SCSN is short gasoline, demand is routinely met with movements from NCNV and PNW. More recently, SCSN has also been supplied from abroad.

Imports to SCSN came from around the world



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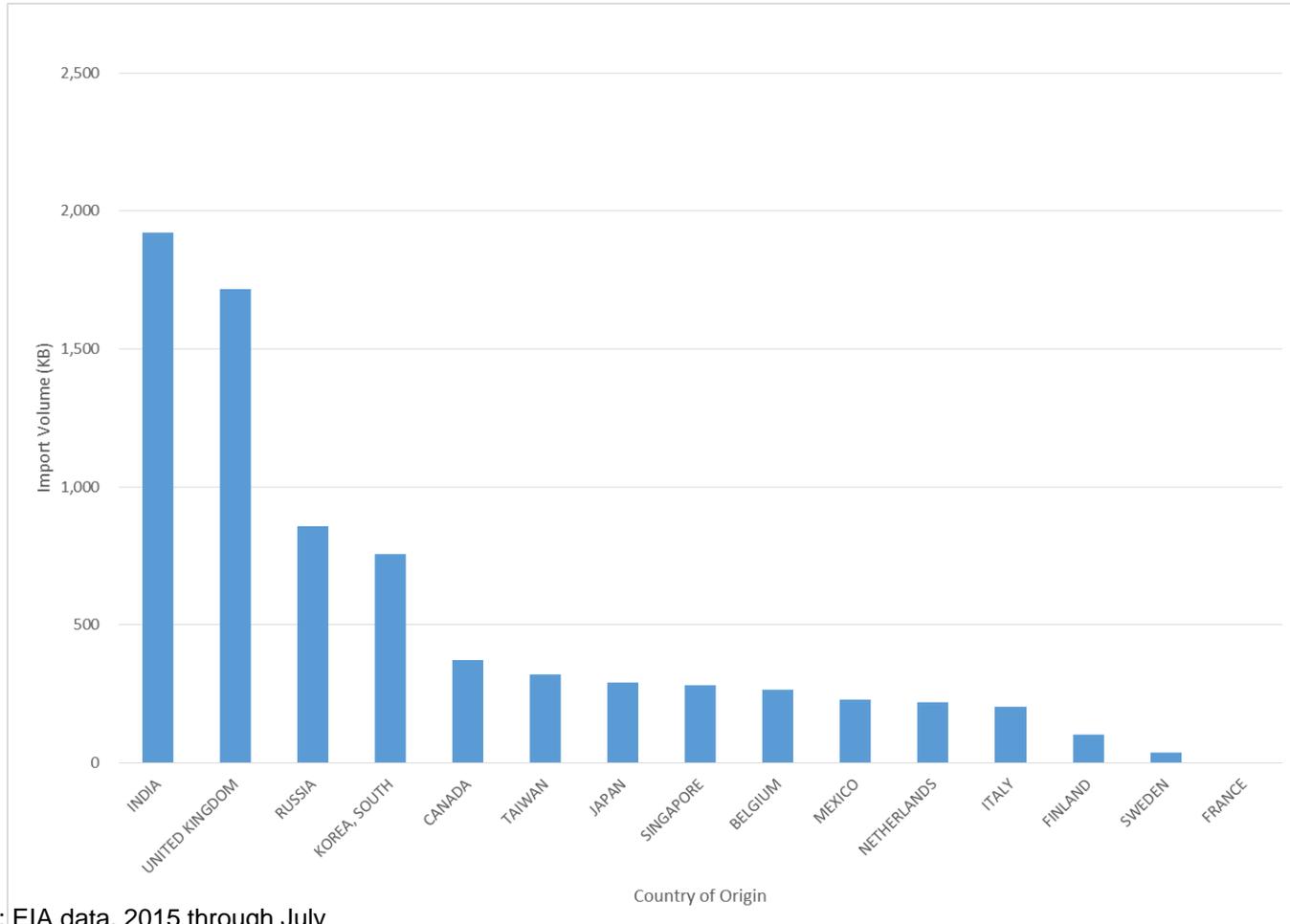


Most of the volume is components, rather than CARBOB.

Most of the supply came from Asia and Europe



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Source: EIA data, 2015 through July

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The transit time from Asia and Europe is 3 to 4 weeks

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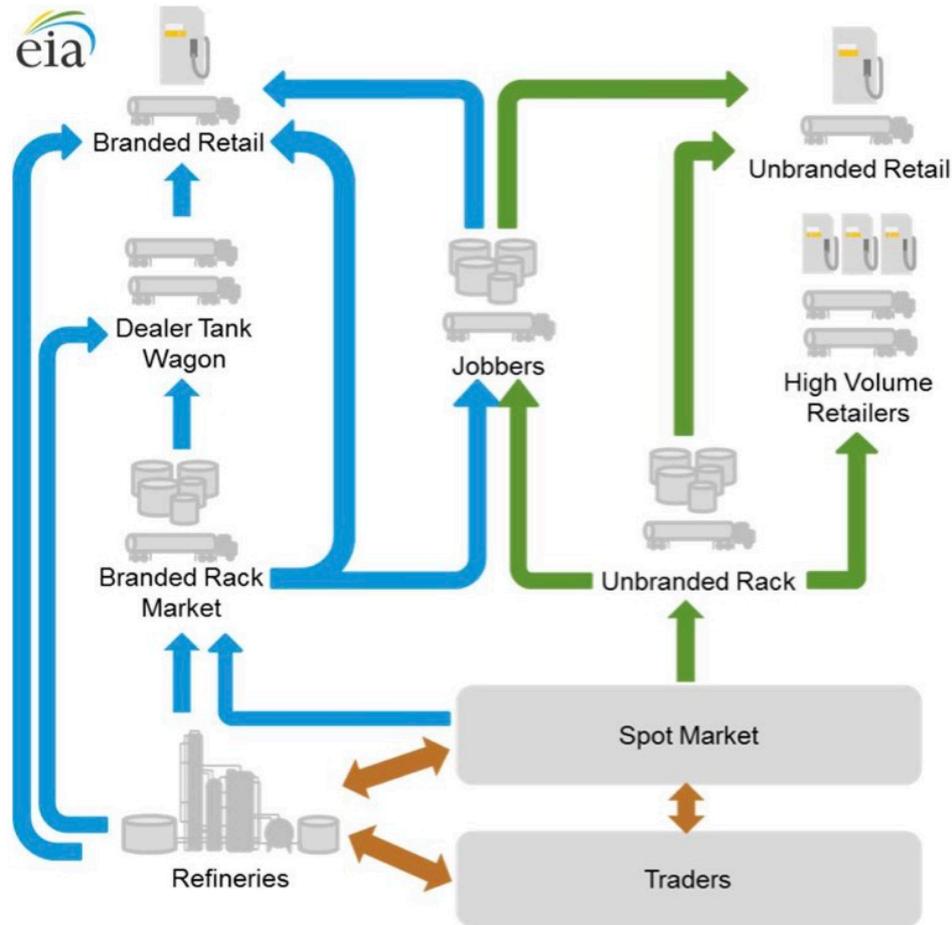
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1. Focus of EIA's PADD 5 Transportation Fuels Market Report
2. California regional gasoline supply/demand balances
3. Market structure descriptions

The gasoline market structure is multilayered



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Prices are created at spot, rack, DTW, and retail levels and are tracked by a number of different services like OPIS and Lundberg.

The market structure has changed over time



1. With the decrease in import requirements, the number of arbitrageurs (traders) decreased
2. The number of spot market participants has also decreased with the consolidation of refiners and the withdrawal of the traders
 - a. This reduces liquidity, making the spot market more volatile
3. Many of the refiners sold off their gas station chains to distributors
 - a. Retail pricing philosophies may have changed
4. High volume retailers have grown their share of the market
 - a. Costco and Safeway are examples

EIA's conclusions about the market



1. Geographic isolation
2. Unique product specifications
3. Reliance on in-region refinery production
4. Infrastructure limitations
5. When a disruption occurs, responses include:
 - a. Withdrawals from inventory, if available
 - b. Waterborne shipments from other local regions
 - c. Waterborne shipments from foreign sources
6. When PADD 5 fuel supply is disrupted:
 - a. Alternative supplies are far away
 - b. Wholesale prices increase more than in other PADDs



Questions?

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... experience runs deep

Presenter:

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