



Pending Closure of Shell – Bakersfield Overview & Potential Supply Impacts

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Presentation Topics

- Overview of California's petroleum market
 - Refineries & distribution
 - Demand & supply outlook
 - Imports & infrastructure
 - Price issues
- Shell Bakersfield closure
 - Overview
 - Potential supply impacts
 - Logistical issues
 - Other issues



Overview – Refineries and Distribution



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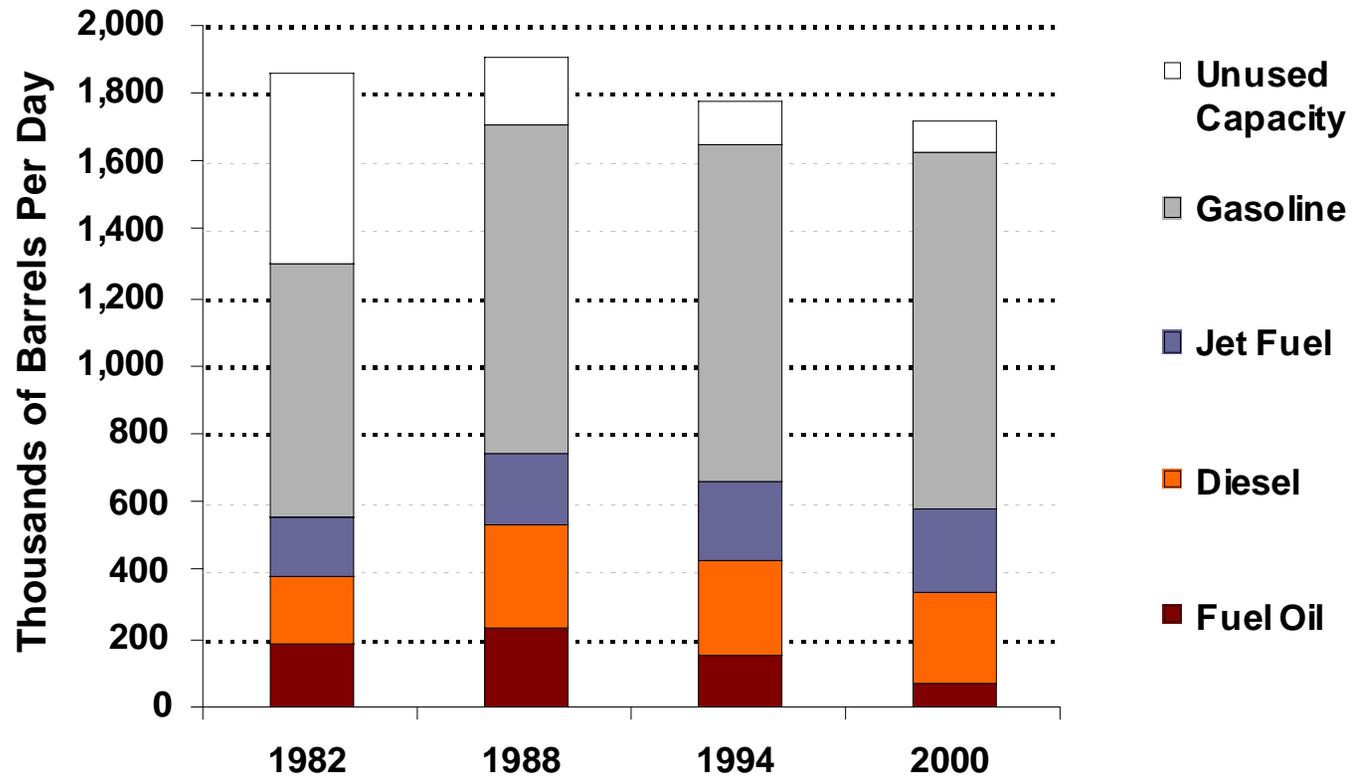


Overview - Refineries

- 13 refineries in California produce reformulated gasoline
- 9 smaller facilities produce diesel, jet fuel and asphalt
- California refineries are at or near capacity, especially during the summer months
- 1969 was the last time a new “grass roots” refinery was constructed in the United States – Benicia facility in Northern California previously owned by Exxon
- Independent refiners have increased their presence in California
- Expansion projects are possible. Permits and emission offsets are difficult to obtain
- Through the Integrated Energy Policy Report process, the Energy Commission recommended that the State take steps to streamline permitting



California Refinery Capacity



CA refinery runs and gasoline production at maximum capacity

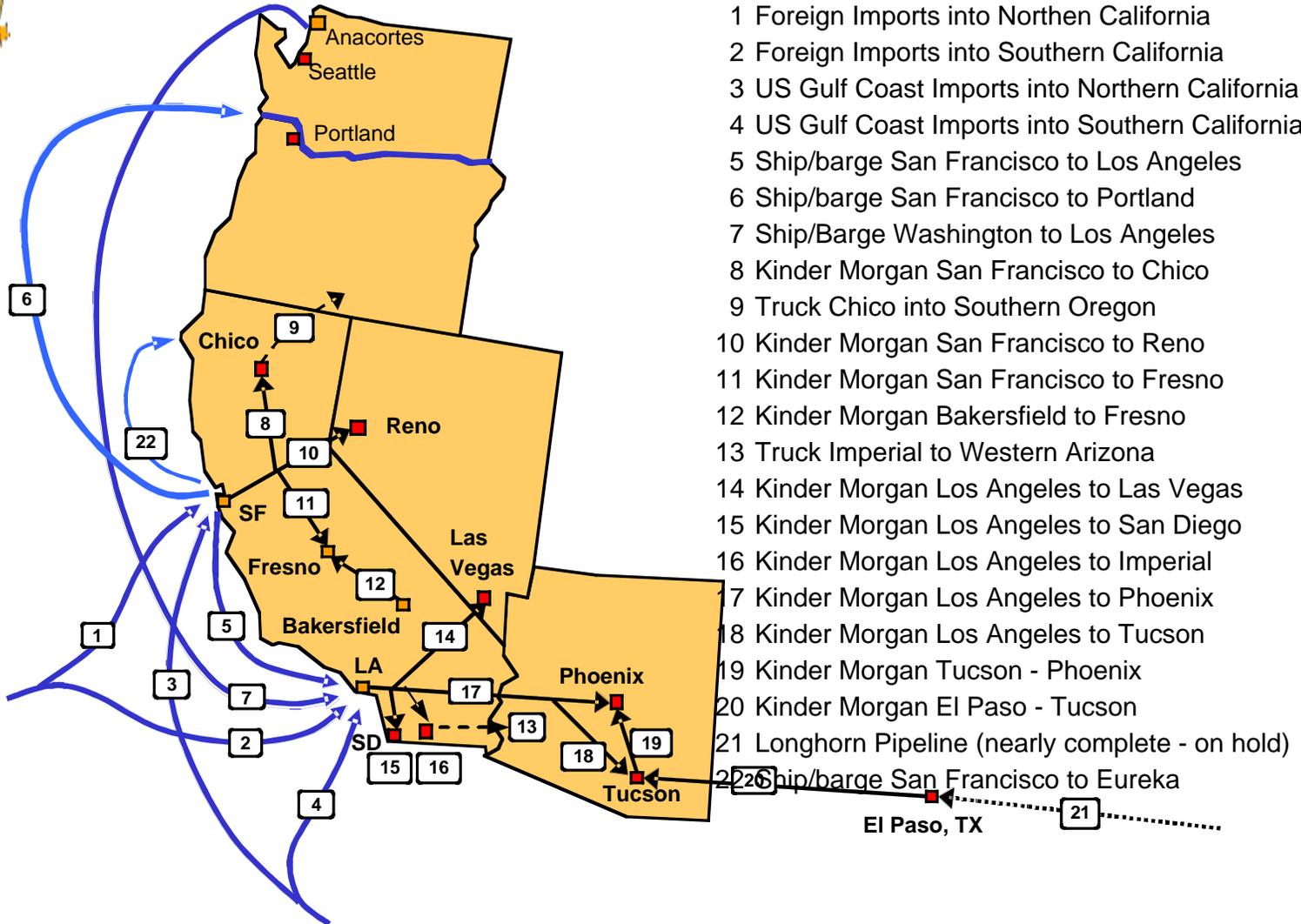


Overview – Distribution of Petroleum Products

- Refineries in the State produce transportation fuels for use in California & other locations – 1,600 thousand barrels per day (TBD)
- California supplies transportation fuels for neighboring states
 - Nevada – nearly 100 percent – 150 TBD
 - Arizona – 61 percent – 139 TBD
 - Oregon – about 35 percent – 37 TBD
- Imports of petroleum products arrive via marine vessels and rail car
- Exports of petroleum products by pipeline, marine vessel, rail car and tanker



West Coast Petroleum 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 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 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 Los Angeles to Tucson
- 19 Kinder Morgan Tucson - Phoenix
- 20 Kinder Morgan El Paso - Tucson
- 21 Longhorn Pipeline (nearly complete - on hold)
- 22 Ship/barge San Francisco to Eureka

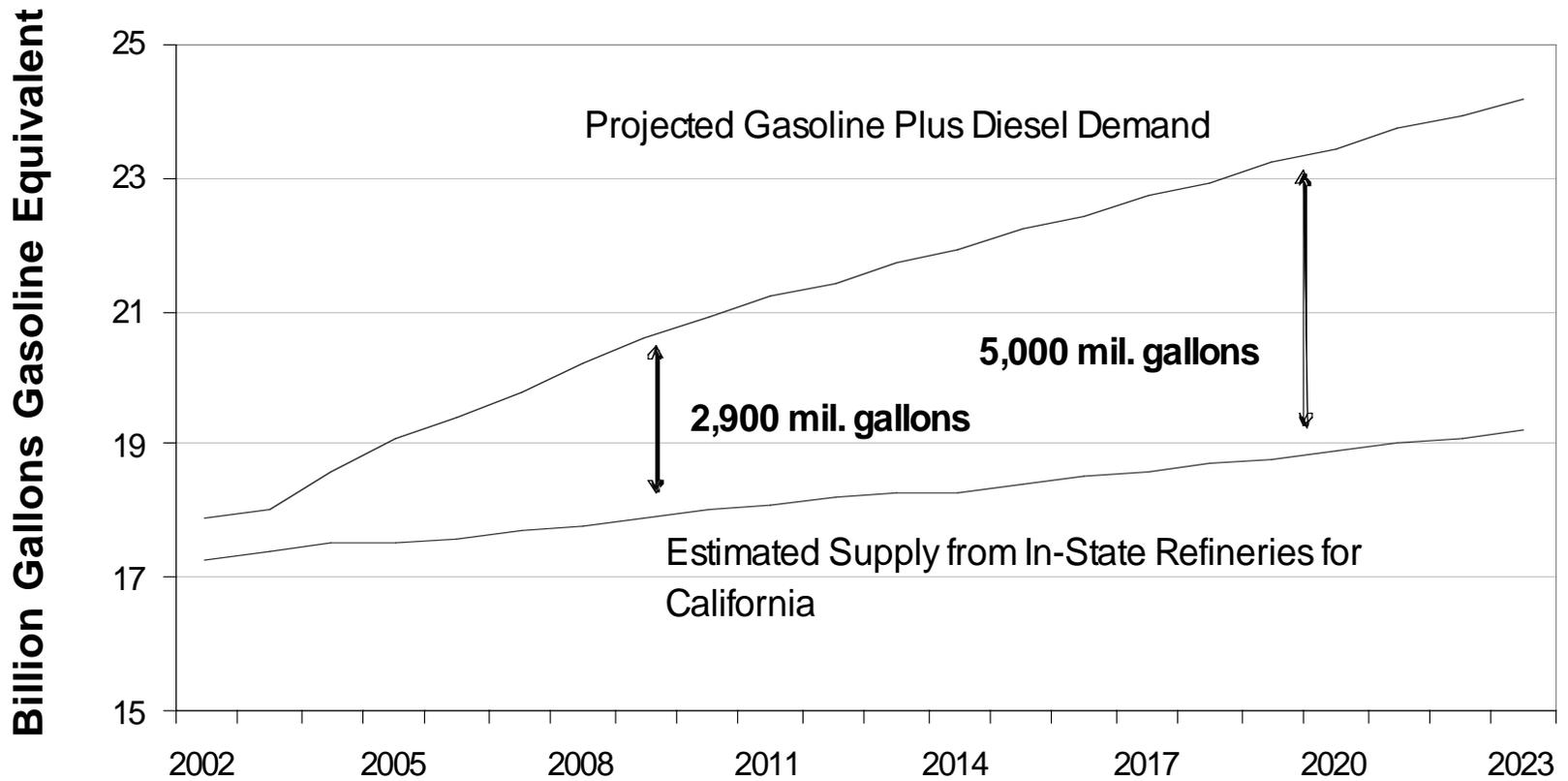


Overview - Demand & Supply Outlook

- Gasoline demand in California during 2003 estimated at 15.6 to 16 billion gallons, diesel fuel demand 2.8 to 3 billion gallons
- California represents nearly 12 percent of United States gasoline demand
- Demand for California transportation fuels expected to increase between 1.6 and 2.5 percent per year
- Refinery capacity increases have been small over the last several years, but could see some future gains
 - ConocoPhillips & Valero projects
- Refineries operate at or near maximum capacity, little ability to “ramp up” production
- Imports will become a growing and important source of supply for California



Projected Transportation Demand versus Supply





Overview - Imports & Infrastructure



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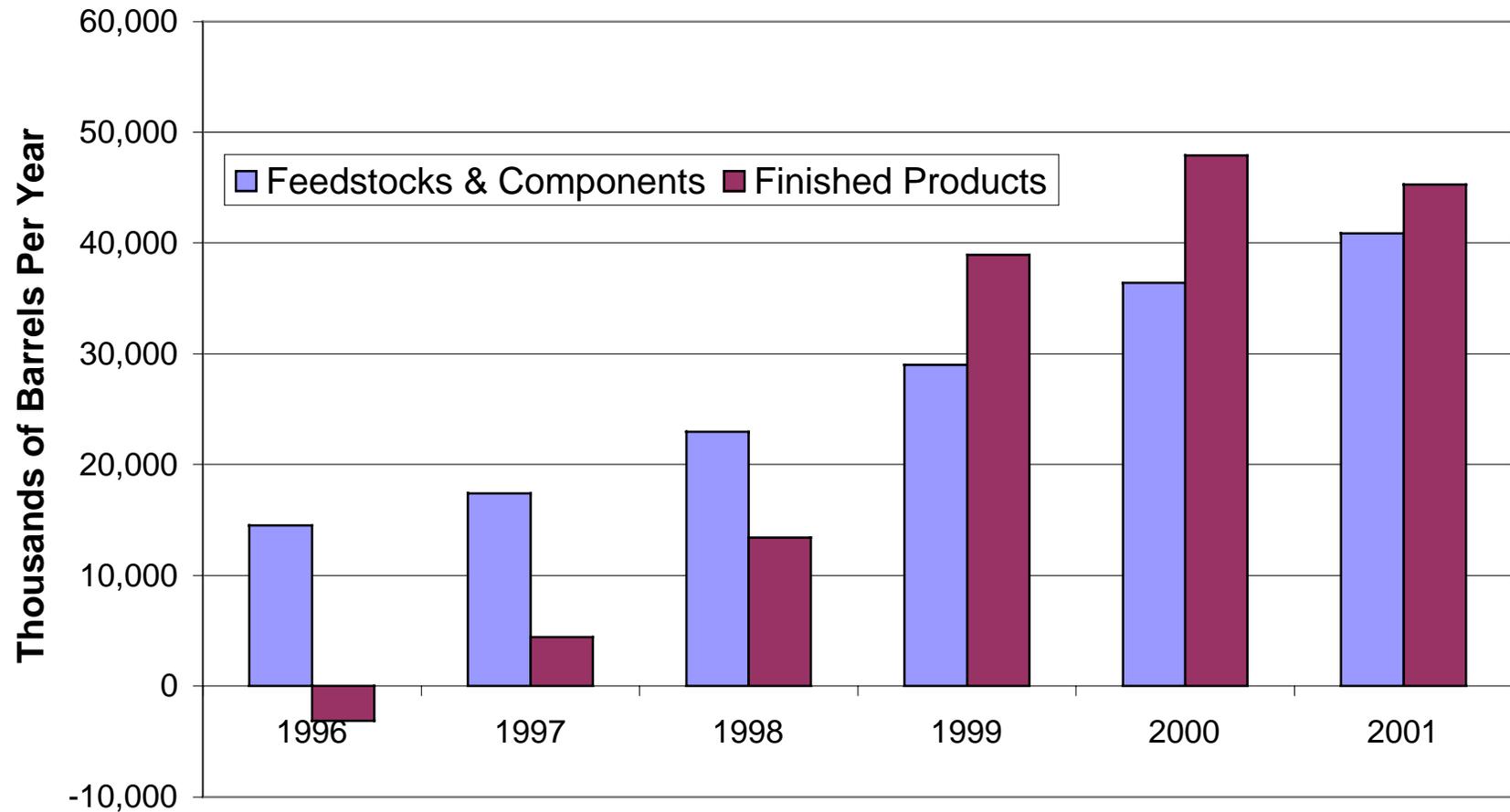


Overview - Imports

- California shifted from a net exporter of finished petroleum products (transportation fuels) to a net importer in 1997
- Imports of refinery feedstocks and blending components also continue to grow
- This import trend is expected to continue over the next 10 to 20 years
 - Shell's Bakersfield refinery closure will reduce in-state production of gasoline and diesel fuel by 30 to 40 TBD
 - A portion of this production decline could be made up through additional imports
- Crude oil imports are also forecast to rise as California oil production continues to decline
 - Bakersfield closure will have a minimal impact on crude imports since the refinery currently receives all of its crude oil from local wells



California Net Imports Domestic and Foreign Sources 1996 through 2001



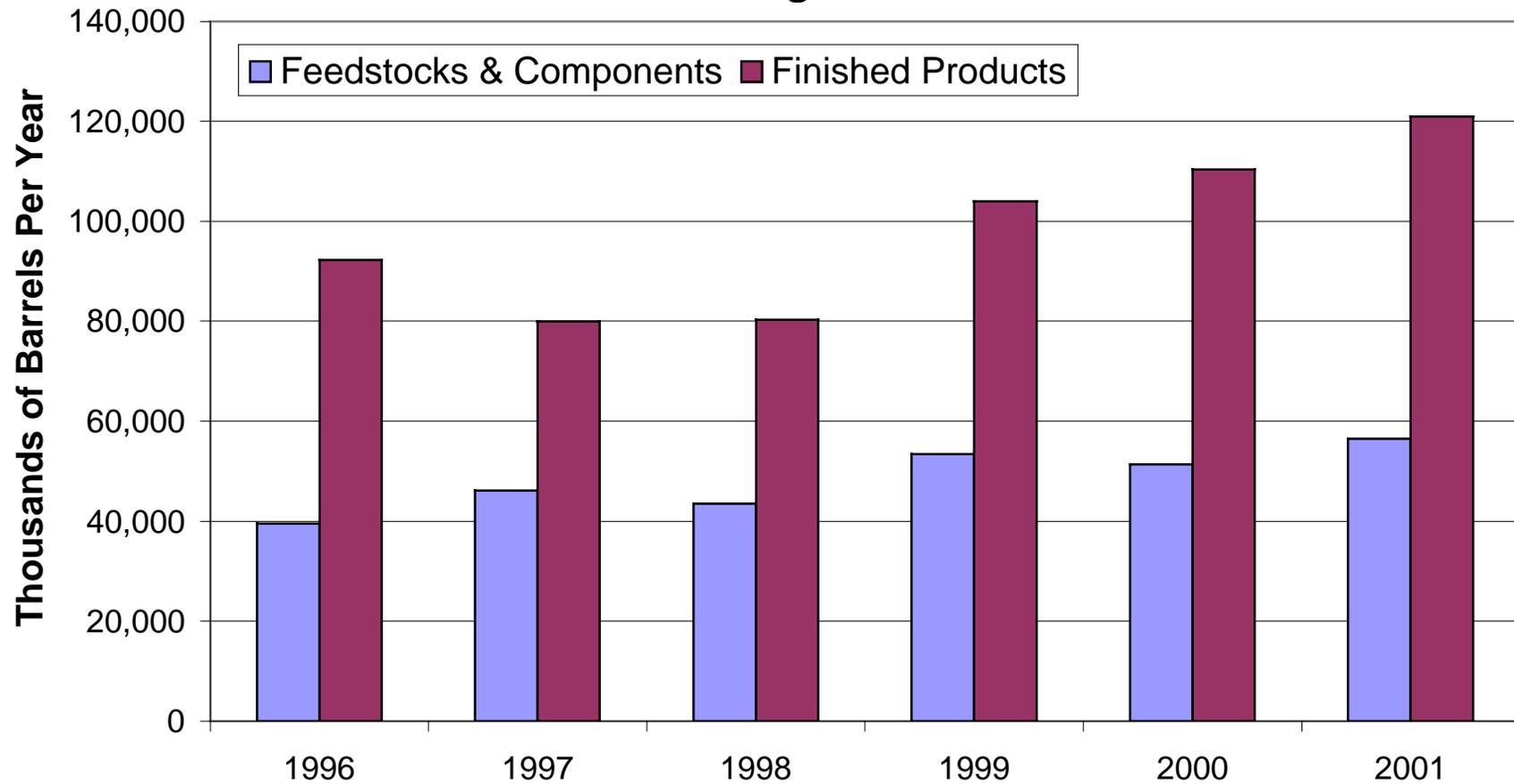


Overview - Infrastructure

- Crude oil and petroleum product infrastructure assets are separate and distinct from one another – not interchangeable
- Exports and imports of like petroleum products use similar marine facilities
 - Finished products – 121 million barrels (332 TBD)
 - Feedstocks & components – 57 million barrels (156 TBD)
- The Energy Commission has evaluated the marine logistics and determined that the infrastructure to handle imports is becoming constrained
- Southern California facilities are forecast to receive the bulk of the additional imports – both crude oil and petroleum products

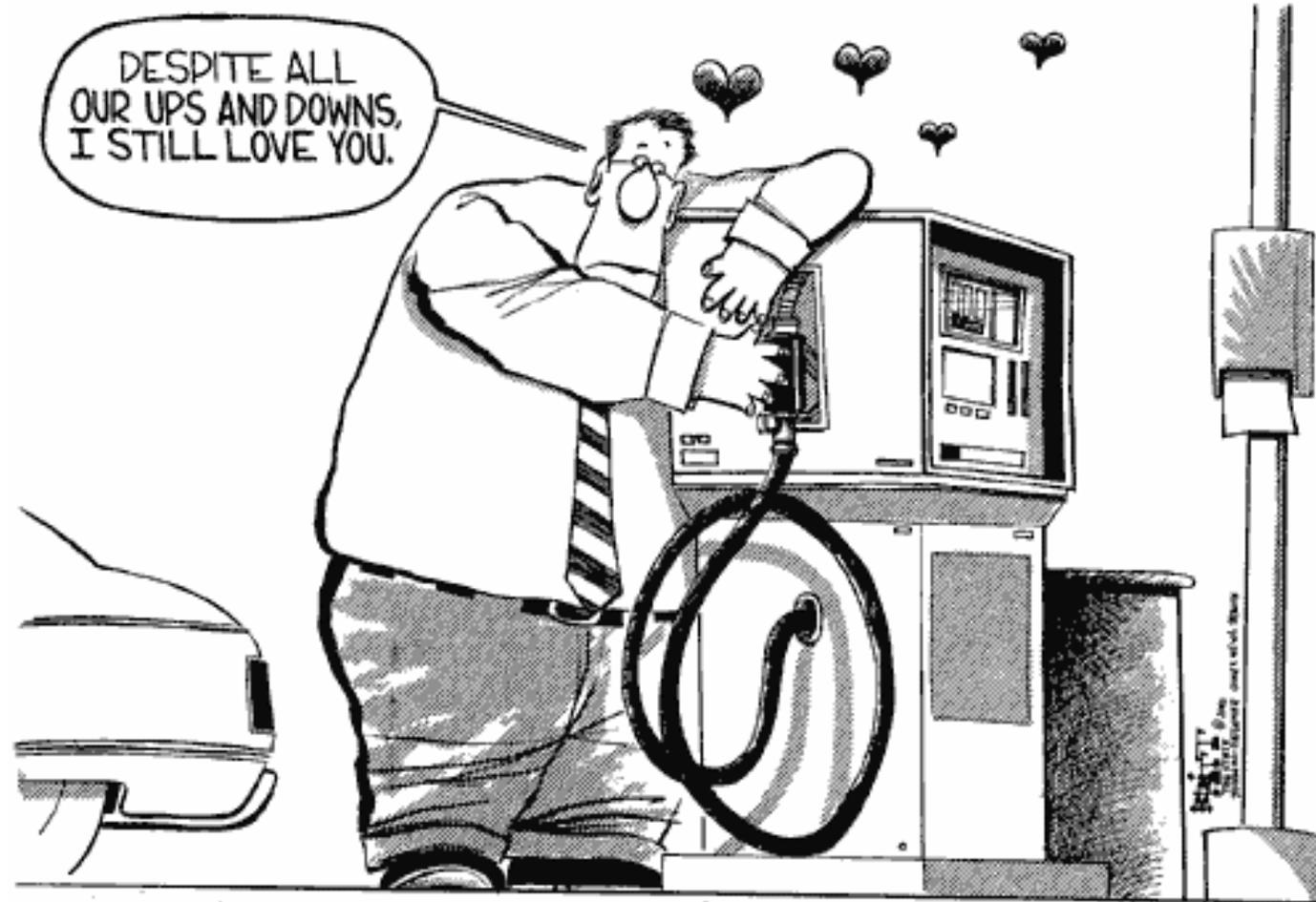


California Imports & Exports Domestic & Foreign Sources Combined Waterborne Movements 1996 through 2001





Price Issues



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Overview - Price Issues

- California retail gasoline prices are normally higher than U.S. average
 - Higher quality, cleaner burning reformulated gasoline is more expensive to produce than other types of gasoline sold throughout the rest of U.S.
 - California is a net importer of gasoline and blending components to meet demand, adding to the supply costs
 - Steadily increasing demand for transportation fuels
 - Declining spare refining capacity & inventory levels
 - The elimination of MTBE has reduced the supply of gasoline in California
- The average difference has increased from just over 10 cents in 1995 to over 26 cents since January of 2003

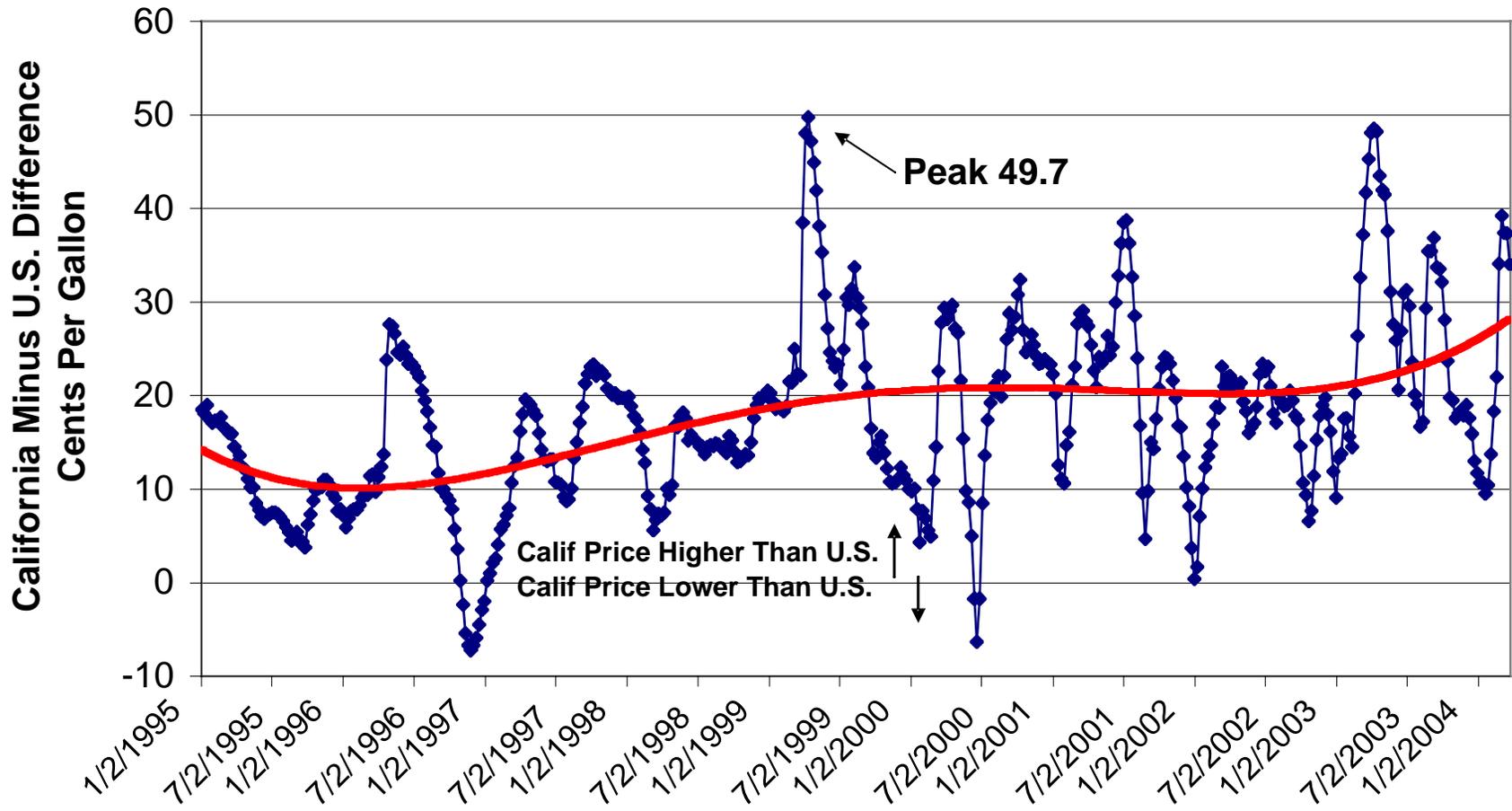


Overview - Price Issues (cont)

- Volatility (price swings) has also increased
 - Market is geographically isolated from alternative sources of supply by 2 to 6 weeks
 - Refinery problems have resulted in price spikes, some times in excess of 50 cents per gallon
 - Greater volatility could continue if quality imports become scarce or the infrastructure to handle the additional volumes is further constrained



California Gasoline Volatility January 1995 to March 22, 2004



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Shell Bakersfield Refinery Closure



Bakersfield Californian / John Harte



Bakersfield Overview

Supply from 3 refineries (Shell, Kern & San Joaquin)

- Bakersfield refinery is scheduled to cease operations by 10/1/04
- Shell plans to continue operating and make modifications to their terminal at the refinery
- Shell's Bakersfield refinery produces the majority of the gasoline and diesel fuel for the region by processing heavy crude oil from the San Joaquin Valley
- Shell has publicly stated that their refinery produces 2 percent of the gasoline (20 TBD) for the State and 6 percent of the diesel fuel (15TBD)
- Shell refinery normally ships gasoline and diesel fuel to the Fresno terminal via the Kinder Morgan pipeline
- Refinery also ships other petroleum products
 - Butane, petroleum coke & unfinished oils
 - Most of these are exported out of California



Potential Supply Impacts

- Shell has committed to supplying enough fuel to meet their contractual obligations following the closure of their Bakersfield refinery
 - Supply can be sourced from other Shell refineries (inside and outside the State) or other refineries
- What about the remaining balance?
 - Other California marketers could expand their presence in Bakersfield
 - Local production could increase at the Kern and San Joaquin refineries
 - Marketers could source additional supplies from outside the State



Supply Impacts (cont)

- What end-users could be impacted?
 - Independent marketers without contracts could be impacted by the decline of local supply
 - These marketers are an important source of supply to the agricultural community
 - They also serve municipalities
- Need to better understand the various types of end-users that could experience potential supply problems
- CIOMA members could assist the Energy Commission staff to better quantify the estimated impacts



Logistical Issues

- How will outside supply be delivered to Bakersfield?
 - Shipments to Shell's Bakersfield terminal can occur via tanker truck, rail car or petroleum pipeline
 - Modifications would be required to increase the receipts of gasoline and diesel fuel from trucks and rail cars at Shell's Bakersfield terminal
 - Pipeline modifications will require longer lead time
 - Greater uncertainty regarding point of entry for imports
- Rail
 - Shell's Bakersfield refinery currently handles some rail movements
 - Additional modifications would be required to receive gasoline and diesel fuel



Logistical Issues (cont)

- Trucking
 - Modifications to receive additional traffic at Shell's Bakersfield truck loading rack could be completed in a short period of time
 - Additional truck traffic could be an issue for some local residents and environmental groups
 - But some of the current truck traffic will decline following the closure of the refinery, along with reduced refinery emissions



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Logistical Issues (cont)

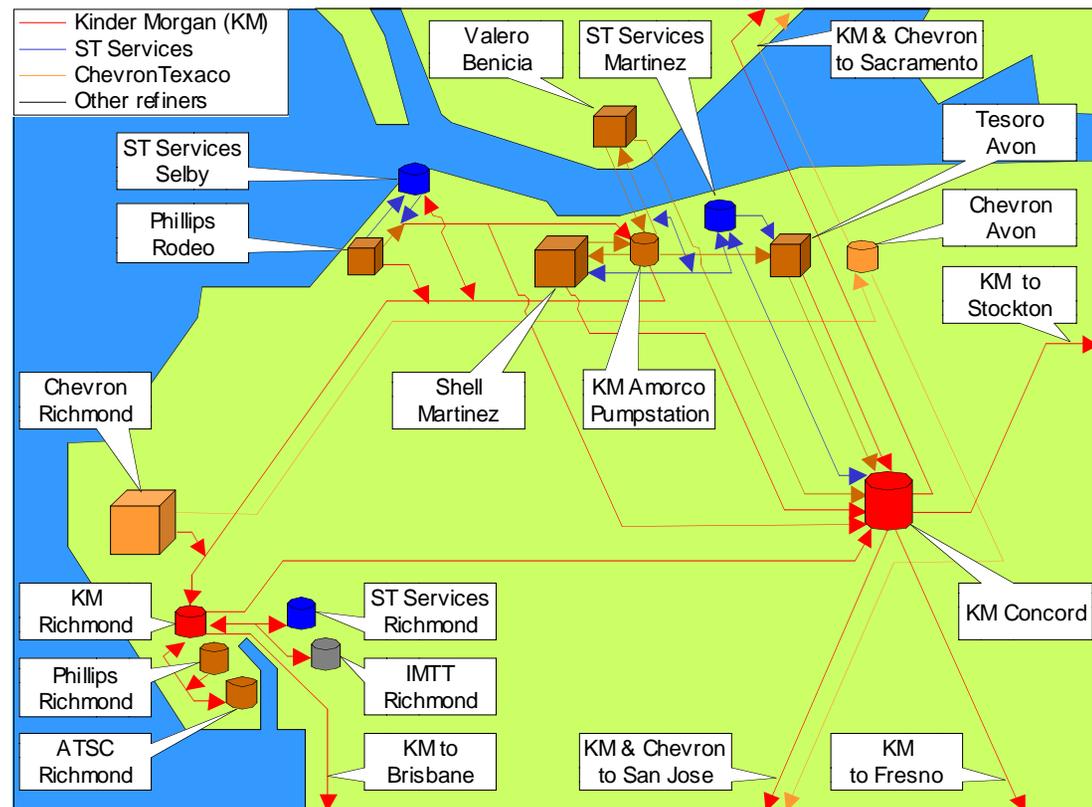
- Pipelines
 - Some additional volume could be shipped to the Fresno terminal on Kinder Morgan's North Line, but only a portion of the total output from Shell's Bakersfield refinery
 - Kinder Morgan would probably have to make modifications at their Fresno terminal and Concord pump station
 - Work would probably take between 1 and 2 years to complete





Logistical Issues (cont)

- Which marine terminals will handle the additional imports?
 - Some marine facilities could be constrained
 - Access to the Kinder Morgan North Line (into their Concord pump station) may not be easy, especially during the summer months





Other Issues

- Access to Shell's Bakersfield terminal
- Exchange agreements with other refiners
- Timing of the scheduled closure
- Possible sale of the refinery to another company



Other Issues (cont)

- Access to Shell's Bakersfield terminal
 - If Shell closes their Bakersfield refinery, what parties will have access to their terminal?
 - Shell, other petroleum product marketers or both?
 - Segregation capability, storage capacity, and truck rack expansion plans are key issues
- Without access to third party storage, additional supply from other terminals located outside of the region would have to be trucked to the Bakersfield region
 - Expansion at the Fresno terminal could be an option



Other Issues (cont)

- It is unclear if current exchange agreements with other California refiners will be terminated
 - If they are terminated, these other refiners may have to truck additional supplies into the Bakersfield and Fresno regions
 - Additional trucks and driver time would be needed
 - Or some refiners may choose to reduce their local market share
- Timing of the scheduled Shell Bakersfield refinery closure
 - October 1 closure date occurs at a point in the year when gasoline demand has usually passed its peak
 - However, agricultural interests could be impacted because this date is at a time of year when diesel demand for fall harvest begins to increase



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Shell's Bakersfield Refinery Closure Website
www.bakersfieldrefining.com/external/index.cfm