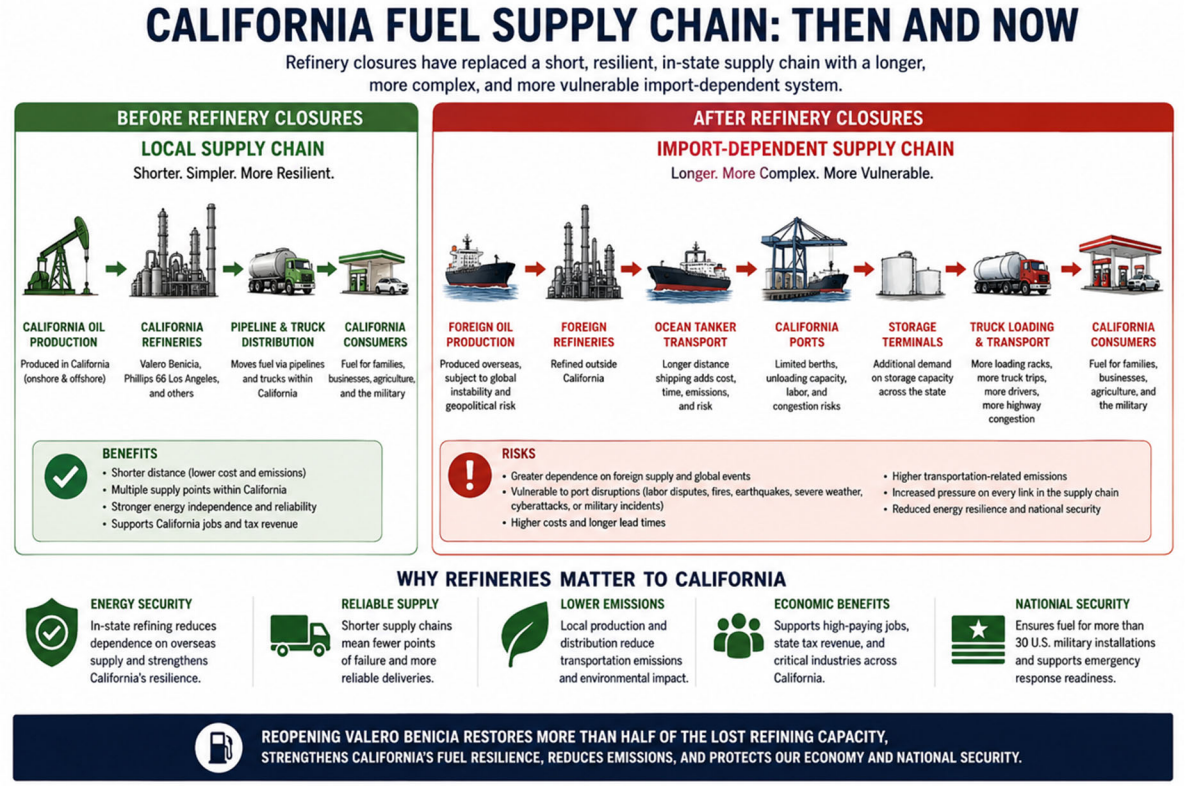
California Fuel Resilience Assessment

Executive Briefing for California's Congressional Delegation

July 11, 2026

California's fuel supply chain was designed around *in-state refining*. Removing two major refineries did not simply eliminate production, it fundamentally changed how fuel moves through California's entire logistics network.



Executive Findings

- California has lost approximately **3.85 billion gallons** of annual gasoline, diesel, and jet fuel production.
- Replacing that production requires approximately **251,000 barrels (10.5 million gallons) of imported fuel every day.**
- This replacement requires approximately **1,200 additional loaded fuel tanker truck trips every day**, placing additional demand on California's fuel distribution infrastructure.
- Replacing California refinery production with imported fuel adds an estimated **500,000 metric tons of CO_2 emissions annually from ocean shipping alone**, with additional measurable trucking emissions within California.
- Reopening the **Valero Benicia Refinery** would restore more than **55% of the refining capacity lost** by the two refinery closures.
- California's fuel challenge is a **capacity, resilience, environmental, and national security issue, not simply a fuel price issue.**

Why This Matters Now

Three major events have converged to create California's current fuel supply chain risk.

1. Global Oil Supply Disruption

Recent geopolitical conflict has damaged oil production infrastructure and tightened global supply. Even if major shipping routes fully reopen, global production cannot immediately return to previous levels. **California should evaluate increasing responsible in-state oil production while global supply remains constrained**.

2. Loss of California Refining Capacity

The closure of the Valero Benicia and Phillips 66 Los Angeles refineries removed approximately **3.85 billion gallons** of annual gasoline, diesel, and jet fuel production from California's supply chain.

That production has not been replaced.

3. Reduced Fuel Resilience

California is now increasingly dependent on imported fuel moving through marine terminals, creating greater exposure to disruptions outside the state's control.

Capacity Assessment

Replacing the lost refinery production requires importing approximately:

- **251,000 barrels of fuel every day**
- **10.5 million gallons every day**
- Approximately **1,200 additional loaded fuel tanker truck trips every day**

This increases demand on every stage of California's downstream fuel distribution system, including:

- Marine tanker berths
- Fuel unloading facilities
- Storage terminals
- Pipelines
- Blending facilities
- Truck loading racks
- Fuel tanker trucks
- Qualified hazmat drivers
- Highway capacity

California's **highest sustained clean-product marine import level** was approximately **242,000 barrels per day**, while replacing the refinery closures would require approximately **416,000 barrels per day** of imports.

Moving this additional fuel inland would require the equivalent of approximately **40–100 additional truck-loading rack positions** operating every day, depending on terminal operating hours and loading cycle times.

Supply chains operate on proven capacity, not theoretical capacity.

Resilience Assessment

Supply chain resilience is the ability to continue operating when disruptions occur. It is achieved through adequate capacity, redundancy, and geographic diversity.

As California becomes increasingly dependent on imported fuel, its ports become critical infrastructure and a potential single point of failure.

A major disruption, including a labor dispute, fire, earthquake, cyberattack, severe weather event, or military incident could significantly reduce California's ability to receive and distribute fuel.

The consequences would extend far beyond motorists, affecting:

- Agriculture
- Manufacturing
- Hospitals
- Emergency response
- Public safety
- Aviation
- California's ports
- More than **30 U.S. military installations**
- Millions of California families and businesses

Greater dependence on imported fuel reduces California's fuel resilience by reducing capacity, redundancy, and geographic diversity.

Environmental Assessment

The refinery closures did not eliminate transportation emissions; they lengthened the fuel supply chain.

Our analysis estimates:

- Approximately **500,000 metric tons of additional CO_2 emissions annually from ocean shipping alone**
- Additional measurable trucking emissions within California as imported fuel is transported farther from marine terminals to consumers

Where public operational data is unavailable, engineering estimates are clearly identified and based on conservative assumptions.

The result is a longer, more transportation-intensive fuel supply chain.

Immediate Opportunity: Reopen Valero Benicia

Reopening the Valero Benicia refinery would immediately restore:

- **2.12 billion gallons** of annual fuel production
- More than **55% of the refining capacity lost**
- Approximately **5.8 million gallons of fuel every day**

It would also:

- Eliminate approximately **684 additional loaded fuel tanker truck trips every day**
- Reduce ocean tanker traffic by approximately **126 tanker deliveries annually**
- Avoid approximately **276,000 metric tons of CO_2 emissions annually** from ocean transportation
- Reduce dependence on California's busiest marine fuel import system
- Strengthen fuel resilience for California families, agriculture, emergency responders, and the U.S. military

Based on industry discussions, reopening Valero Benicia may require an investment on the order of **$1 billion**. Given its strategic importance, this should be evaluated as a **critical infrastructure restoration project** through a public-private partnership.

Recommended Federal Actions

1. **Partner with California and industry to reopen the Valero Benicia refinery as the highest priority.**
2. Restore refining capacity in the Los Angeles region to replace the production lost with the Phillips 66 closure.
3. Evaluate increasing responsible California oil production while global supply conditions remain unstable.
4. Treat California's fuel supply as a **national supply chain resilience and national security priority.**
5. Treat refinery restoration as critical infrastructure recovery by coordinating with industry and, where appropriate, the **U.S. Army Corps of Engineers** and the **U.S. Navy Seabees** to accelerate implementation.
6. Identify rural communities that have lost critical fuel stations and support targeted infrastructure improvements to restore fuel access for wildfire response and emergency operations.

Conclusion

California's fuel challenge is **not simply an energy issue**.

It is a **capacity issue**, because the state must physically receive, unload, store, and distribute millions of additional gallons of imported fuel every day.

It is a **resilience issue**, because greater dependence on imported fuel increases exposure to disruptions at critical marine infrastructure.

It is an **environmental issue**, because replacing local refining with imported fuel increases transportation-related emissions.

It is a **national security issue**, because California's fuel system supports one of the world's largest economies, the nation's largest port complex, critical emergency services, and more than **30 U.S. military installations**. Fuel resilience is therefore both an economic and national security imperative.

California did not eliminate its need for fuel; it eliminated much of its ability to produce that fuel locally.

Reopening the Valero Benicia refinery is the single fastest action available to restore more than half of the lost refining capacity, strengthen fuel resilience, reduce transportation-related emissions, improve national security, and increase California's ability to withstand future supply disruptions.

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Updated as additional data becomes available.