CALIFORNIA'S OIL AND GASOLINE CONUNDRUM:

A BLUEPRINT TO ADDRESS CALIFORNIA'S GASOLINE INSECURITY, HIGH PRICES AND AVERT MORE PIPELINE & REFINERY CLOSURES

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Data Sources and Methods

For this research effort, a series of critical questions were developed, and data related to addressing those critical questions were identified, obtained, organized, and analyzed. The research involved in this work is widely available and includes but is not limited to verifiable sources such the California Energy Commission, U.S. Energy Information Agency, Bloomberg, U.S. Department of Energy, SEC filings, International Energy Agency, Oil & Gas Journal, American Petroleum Institute, the California Department of Tax and Fee Administration, the U.S. EPA, California Air Resources Board, Statista, California Attorney General's Office, California Legislative Analyst's Office, U.S. Department of Interior, Bureau of Labor Statistics, California DMV, California Geologic Energy Management Division, and the U.S. Oil and Gas Association. Readers are strongly encouraged to avail themselves to the many sources and authorities footnoted herein.

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Executive Summary

California faces immediate risks to gasoline supply due to declining in-state production, refinery closures, and an imminent northbound pipeline collapse. In this study, we demonstrate how increasing crude oil production in certain regions in California will preserve and sustain both refineries and pipelines and avert severe price shocks in the consumer fuel market. With the AAA price of gasoline in California 51% higher than the national average, Californians are already paying the highest price in the U.S. [1] The impending loss of two refineries and the collapse of the only remaining northern pipeline, together with increasing dependency on non-U.S. gasoline sources to California could drive the price of gasoline to double that of the national average by calendar year end 2026.

After years of tearing down California's in-state oil and gasoline production, Governor Newsom and the California legislature have done a stunningly abrupt about-face in 2025 and conceded that California's oil production and gasoline refinery infrastructures are still essential to its economy and that new production is needed. SB 237, which allows for up to 2,000 new drilling permits a year in Kern County, and AB 30 that allows for the sale of E15 gasoline, form the centerpieces of Governor Newsom's and the Legislature's plan to alleviate gasoline supply insecurity, moderate consumer prices and stabilize the markets. Unfortunately, SB 237 is too little and too late, and AB 30 is overly optimistic. New Kern production stimulated by SB 237 will not be enough to stem the natural decline of Kern County oil production in the current low crude price and regulatory environment. Furthermore, it is highly unlikely that AB 30 will universally reduce gasoline prices by $0.20 a gallon across the state as proclaimed by the Governor. Inevitably, in state crude oil production will continue to decline unabated and lead to further pipeline and refinery shutdowns over the next few years, increasing supply instability and prices.

Years of over regulation and industry demonization have now left California with limited choices and a critical call to action. Our analysis indicates that California can navigate its way out of this government-created crisis and avoid supply vulnerabilities and escalating consumer prices by implementing the following action steps:

1. California's most immediate, viable and sustainable option is to increase in-state crude oil production. The best, and essentially only way to achieve and sustain this benefit is to reopen the Las Flores Canyon pipeline system on the Central Coast and safely increase offshore crude oil production in the Santa Ynez Unit (SYU).

2. Restoring production in this region would immediately provide 45,000 barrels per day of clean, low-decline California crude suited for SoCal refinery configurations. Up to 100,000 barrels per day could be produced from the Santa Barbara channel. This oil can be directed south to the Los Angeles area refineries thereby freeing up tens of thousands of barrels of Kern County oil compatible with Northern California refineries to be redirected north to the surviving PBF-Martinez refinery Additionally, 350,000 barrels of SYU crude oil is currently in onshore storage tanks which could be delivered into the California system within a few days' notice upon reopening the Las Flores Canyon pipeline system.

Failure to act and failure to increase in-state crude oil production will only accelerate the exit of California refineries from the state, increase global GHG emissions, further California's contributions to environmental destruction, force greater reliance on foreign suppliers, increase consumer prices, and diminish U.S. national security.

[1] As of 11/28/25. https://gasprices.aaa.com/?state=CA

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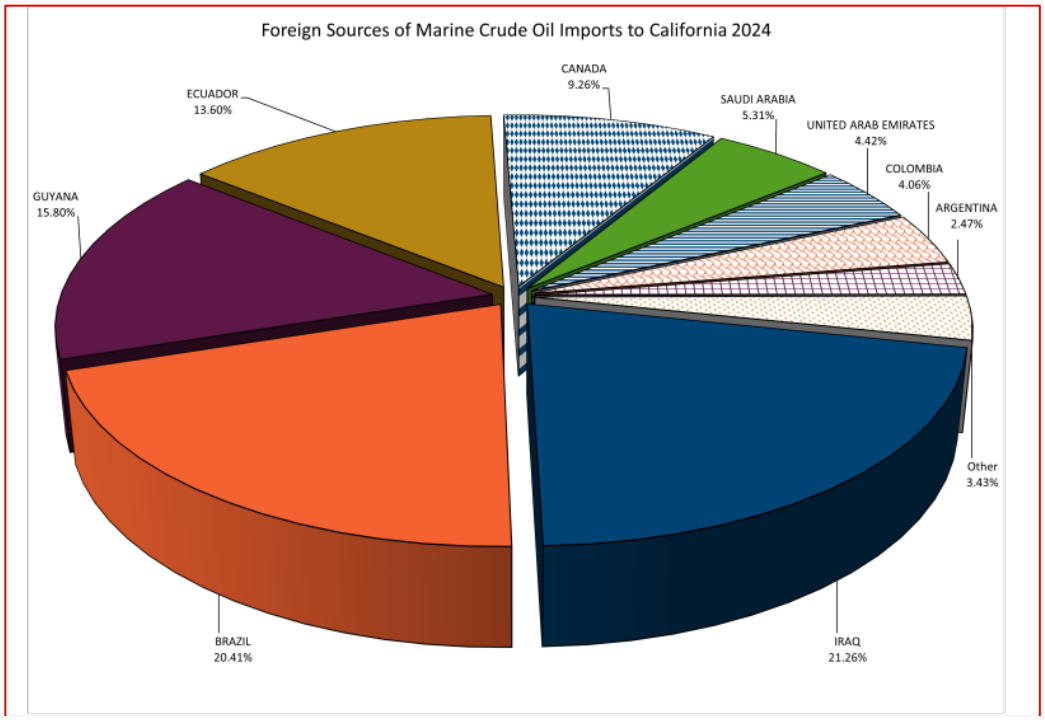
1.0 California's Oil Conundrum and Reliance on Foreign Suppliers

It is well-documented that California is an oil supply island. There are no in-bound crude oil or gasoline pipelines from anywhere in North America into California and there never have been any. Since the 1860s and throughout the twentieth century, California produced and refined enough in-state oil to provide the lion's share of the gasoline it needed. At one time, California was the world's largest exporter of oil. Crude oil production in California provided fuel to U.S. military forces during World War-II, the Korean War, Vietnam War, and supported the state's rapid population and economic expansion that began in the 1950's and continues today. Fossil fuels provide around 38% of California's electrical generation.[2] Today, the oil and gas industry in California accounts for 8% of the state's GDP, and significantly, it is the first 8%. Without oil and gas, the remaining 92% would be unattainable.

Just 25 years ago, California produced roughly half of the oil it consumed. Today, California only produces around 20% of its needed crude oil and imports over 65% of its oil needs from non-U.S. sources, via highly pollutive maritime tankers which are predominantly owned and operated by foreign-flagged carries. For 2024, the majority of California's foreign oil came from Iraq (21%), Brazil (20%), Guyana (16%), and Ecuador (14%).[3]

Exhibit 1.0



(Source: CEC)

In addition to crude oil, California has become increasingly reliant on non-U.S. imports of refined products to meet its demand for gasoline, diesel, and jet fuel. In fact, despite having the 5th largest oil reserves in the nation, of all 50 states, California is the most heavily dependent on non-U.S. produced

[2] California Energy Commission. (2025). *2024 total system electric generation.* https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2024-total-system-electric-generation

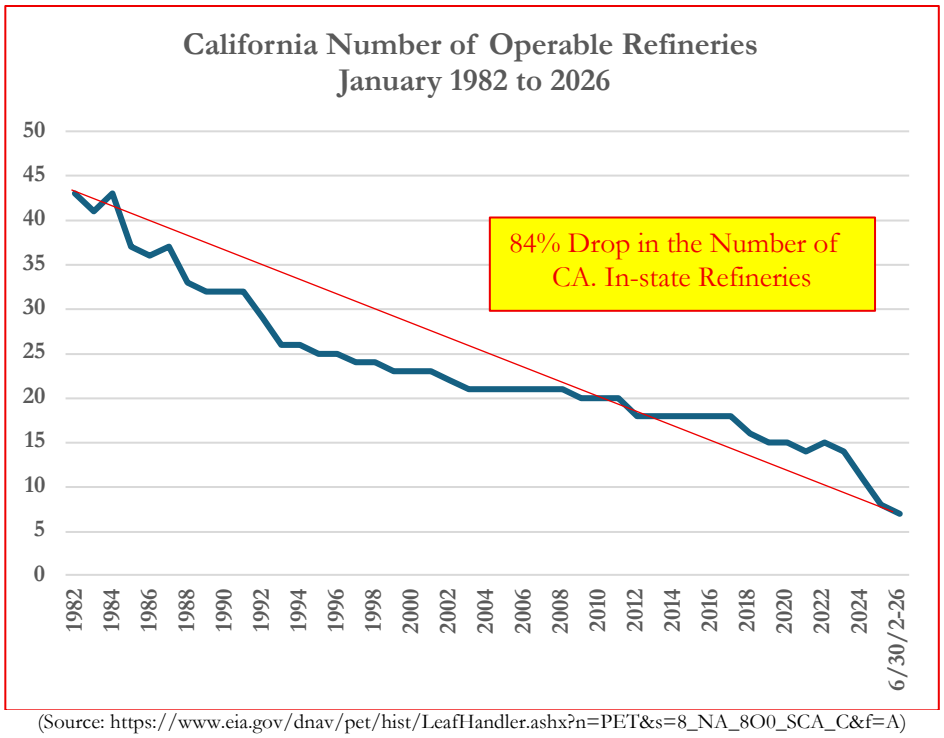
[3] California Energy Commission. (2025). *Foreign sources of crude oil imports to California.* https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/foreign-sources-crude-oil-imports

oil imports. These imports are necessary because there is not enough in-state crude oil production and refinery capacity to reliably meet demand and supply California with refined products.

2.0 Disappearing California Refineries

At one time California was home to over 40 operating refineries. However, due to high operating and regulatory compliance costs, a harsh political environment, conversions to bio and renewable fuels, and Governor Newsom's 2020 directive banning the sale of new internal combustion vehicles in the state, the number of refiners has declined by 84% from 43 in 1982 to just 7 survivors in 2026 (estimated). As Chevron Upstream President Andy Walz noted, "I think it's been a tyranny of about 25 years to get the refining business to leave California."[4] If left uncorrected, more refinery closures are likely to follow for the 2027 to 2031 period.

Exhibit 2.0



(Source: https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=8_NA_8O0_SCA_C&f=A)

California refineries were designed to process the state's predominantly heavy crude oil and are configured to produce the state-specific CARBOB gasoline and ultra-low-sulfur diesel fuel. CARBOB and ultra-low sulfur diesel fuels (CARB ULSD) are the result of California's regulatory-mandated air quality mandates, which are the strictest in the world. Because of their unique formulations most out-of-state refineries cannot produce CARBOB or CARB ULSD without costly retrofits and retrofits. Because of California's mandated special gasoline formula, there are only a handful of refineries outside of California in the world that can or will produce it.

[4] U.S. News & World Report. (2025, September 23). *California trying to keep oil and gas firms from leaving the state.* Fox Business. https://www.foxbusiness.com/economy/california-trying-keep-oil-gas-firms-from-leaving-state

Exhibit 3.0

CALIFORNIA REFINEIRES		Existing	Projected 2026
CA Refinery Capacity- CARBOB Fuels Only	Location	2025	2026
Southern California Refineries			
Marathon Petroleum Corp., Los Angeles Refinery*	Los Angeles	365,000	365,000
Chevron U.S.A. Inc., El Segundo Refinery	Los Angeles	285,000	285,000
PBF Energy, Torrance Refinery	Los Angeles	160,000	160,000
Phillips 66, Los Angeles Refinery**	Los Angeles	100,000	0
Valero Energy, Wilmington Refinery	Los Angeles	85,000	85,000
Sub-total:		**995,000**	**895,000**
Northern California Refineries			
Chevron U.S.A. Inc., Richmond Refinery	NorCal	245,271	245,271
PBF Energy, Martinez Refinery	NorCal	156,400	156,400
Valero Energy, Benicia Refinery	NorCal	145,000	0
Kern Energy, Bakersfield Refinery	Kern Co.	26,000	26,000
Sub-total:		**572,671**	**427,671**
Grand Total-Refinery Capacity- B/D		**1,567,671.00**	**1,322,671.00**
Gallons Per Barrel = 42		65,842,182.00	55,552,182.00
Total Production- Gasoline Conversion Ratio = 49.64%		**32,684,059.14**	**27,576,103.14**
Percentage Loss in Gasoline Production			-15.62%

(Source: CEC)

Collectively, inclusive of refineries that have converted to renewable fuels and with the loss of the Phillips 66 and Valero refineries, California will have lost close to 21% or 6.2 million gallons a day of its in-state gasoline production capacity since 2023. Based on current projections, California could possibly lose more refineries between 2027 and 2032, resulting in further substantial reductions in in-state gasoline production and further price increases.

To compensate for the imbalance in demand (consumption) and in-state production of gasoline, California has been forced into importing tens of millions of barrels of refined products from refineries in China, India, Saudi Arabia, and South Korea, demonstrating the state's ongoing and growing vulnerability to supply disruptions, geopolitical unrest, weather, labor disruptions, vessel availability, and foreign dependence. For example, in 2024, California imported most of its jet fuel from China predominantly through the Port of Los Angeles, demonstrating the state's increased reliance on foreign-sourced fuels produced in regions with inferior environmental standards. Today, India is also a source of jet fuel.[5] Both India, and especially China, represent potential political and economic conflicts with national policies and U.S. national security interests.

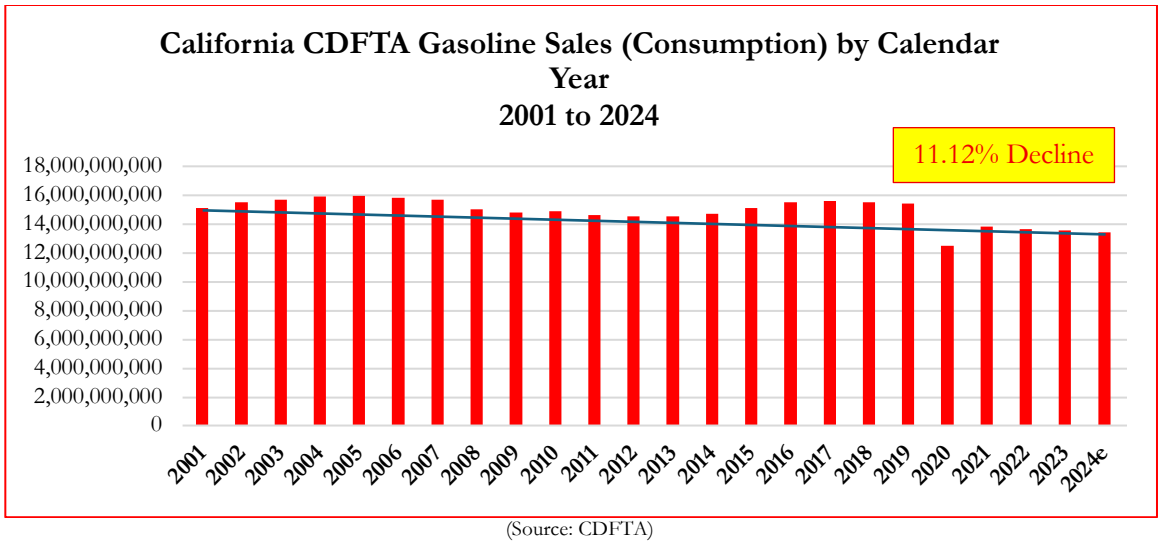
Gasoline demand in the Golden State has not declined anywhere near the rate anticipated by state agencies such as the CEC and CARB. Rather than the steep annual declines originally forecasted by the CEC and CARB under overly optimistic electrification scenarios, real-world demand for gasoline in California is falling at less than 2% per year. In fact, since the low point in 2020 due to the pandemic, gasoline demand in California has increased by 7.5%.[6] Jet fuel consumption, which is the fastest

[5] U.S. Energy Information Administration. (n.d.). *Company level imports.* U.S. Department of Energy. https://www.eia.gov/petroleum/imports/companylevel/

[6] *Fuel Taxes Statistics & Reports.* (2025). Ca.gov. https://cdtfa.ca.gov/taxes-and-fees/spftrpts.htm

growing fuel segment in California is expected to increase over 25% by 2040 to 125,000,000 barrels per year. [7]

Exhibit 4.0



(Source: CDFTA)

The combination and consequences of these events implies that for decades to come, and well into the latter half of the twenty-first century, California will still need a robust crude oil supply chain and operating refinery system to meet fuel needs even as EV adoption continues. The currently mandated total phaseout of in-state oil production by 2045 is increasingly implausible and irresponsible given these structural realities and the fact that oil and gas provides 8% of California's GDP.[8] California will still need its oil pipeline and refinery infrastructure well into the latter part of the 21st century to remain a viable economy. Ending all California drilling and oil production by 2045 is increasingly unlikely and impractical. Jets require fuel, roads are made of asphalt, and touch screens use hydrocarbon molecules.

3.0 The Collapse of California Pipelines

Refineries are the customers for crude oil which, in California, is delivered via maritime transport or in-state pipelines. Pipeline transportation of crude oil and finished products such as gasoline, is the most efficient and cost-effective method of movement. According to the U.S. Department of Transportation, pipelines are the safest method to transport petroleum products.[9] According to the U.S. Department of Transportation, "it would take a constant line of tanker trucks, about 750 per day, loading up and moving out every two minutes, 24 hours a day, seven days a week, to move the volume of even a modest pipeline. The railroad equivalent of this single pipeline would be a train of 225, 28,000-gallon tank cars."[10]

Today's pipelines are highly regulated and engineered to exact standards. A crude oil and finished fuels pipeline will integrate advanced technologies with continuous operations to monitor safety and environmental impacts. In the U.S., pipelines and pipeline operations are highly regulated and fall

[7] California Energy Commission. (2024, November 7). *Transportation Energy Demand Forecast: Major Updates and Results* (Prepared by A. Freeman, N. Saxena, & F. Kabir; TN No. 259930). 2024 Integrated Energy Policy Report Update, Docket No. 24-IEPR-03. https://efiling.energy.ca.gov/getdocument.aspx?tn=259930

[8] California Governor's Office. (2021, April 23). *Governor Newsom takes action to phase out oil extraction in California.* https://www.gov.ca.gov/2021/04/23/governor-newsom-takes-action-to-phase-out-oil-extraction-in-california/

[9] *General Pipeline FAQs*. (n.d.). PHMSA. https://www.phmsa.dot.gov/faqs/general-pipeline-faqs

[10] *General Pipeline FAQs | PHMSA*. (2019). Dot.gov. https://www.phmsa.dot.gov/faqs/general-pipeline-faqs

under the purview of various federal, state, and local agencies, including the Pipeline and Hazardous Materials Safety Administration. In California, the California Department of Conservation's Geologic Energy Management Division (CalGEM) and the California Office of the State Fire Marshall (OSFM) oversee oil and gas pipelines.[11] As codified in California Regulations sections 1774, 1774.1, and 1774.2, California has the strictest standards for oil and gasoline pipeline construction, testing, and maintenance in the world. California Regulations 1722, 1722.9, 1773.1, and 1775 provide for some of the most rigorous environmental protection standards in the world as related to oil and gas production.

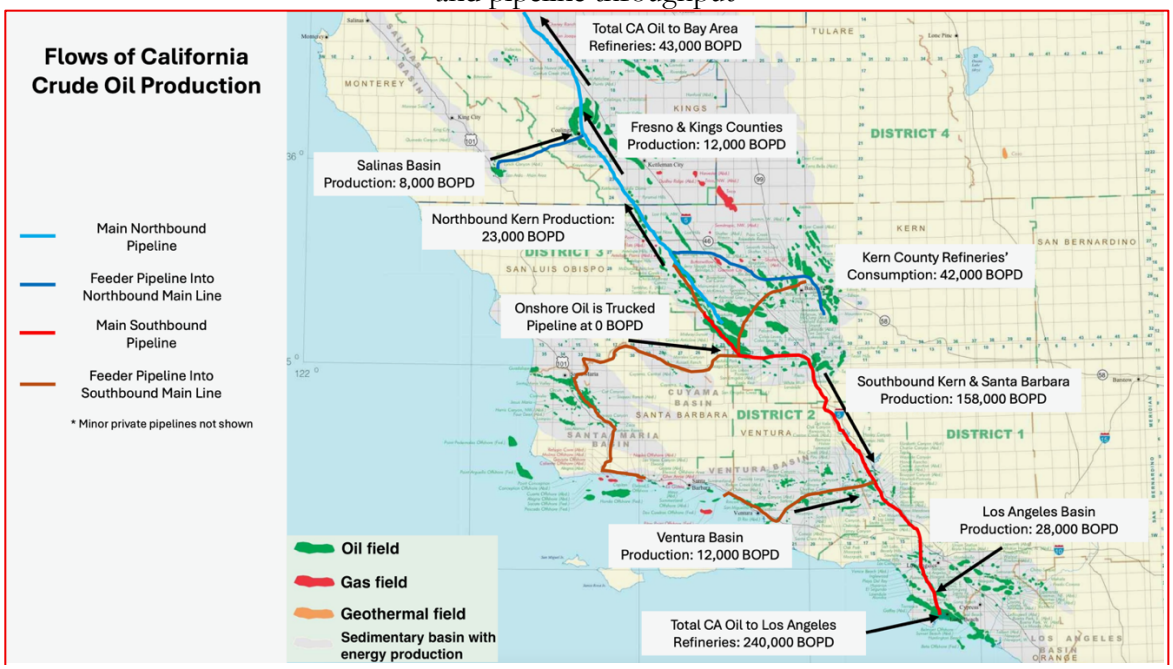
Notably, the same pipelines used for the movement of crude oil could also be configured to transport multiple fuel types, such as all grades of conventional gasoline, jet fuel and kerosene, heating oils, multiple grades of CARBOB, and ultra-low sulfur diesel fuels. Moving different fuels through the same pipeline is accomplished in large batches, with extensive "clean-outs" occurring between each batch of products. As clean-outs are mandatory and essential to the proper and safe operation of the pipelines, they must be carefully scheduled and coordinated.

Although California has no in-bound crude oil or gasoline pipelines, the state does have an extensive network of intrastate pipelines that connect oil producing regions and maritime ports to refineries. There are two major intrastate pipeline systems which connect and move San Joaquin Valley (SJV) production: (1) the primary northbound artery is the San Pablo Bay (SPB) pipeline, and (2) the Plains Pipeline 2000 and PBF Line M70 pipelines which compose the southern artery. Feeding these two major pipelines are multiple smaller "gathering" lines. Collectively, these pipelines have the capacity to transport 410,000 barrels of crude oil daily, distributed 51% northbound on the Crimson SPB pipeline and 49% southbound on the Plains 2000 and PBF M70 lines. Of critical note, Crimson's SPB pipeline is the only major northbound line feeding refineries from the SJV.

As shown in Exhibit 5.0 below, California produces crude oil from regions located in Northern and Southern California, as well as offshore from wells located in federal waters and is transported by a series of pipelines to refineries in Northern and Southern California.

[11] California Department of Conservation. (n.d.). *Pipelines and facilities*. https://www.conservation.ca.gov/calgem/for_operators/Pages/Facilities.aspx#:~:text=Generally%2C%20CalGEM%20regulates%20all%20pipelines,used%20for%20transportation%20to%20refineries.

Exhibit 5.0: Current crude oil production regions in Southern California along with daily refinery and pipeline throughput



(Source: Various & Authors)

In Northern California, the refinery and pipeline network was originally configured around crude production from Kern, Kings, Fresno, and Monterey Counties, particularly the heavy crude grades found in the San Joaquin Valley (SJV). Three large Northern California refineries survive and operate today: Chevron Richmond (which now has no pipeline connections and relies entirely on tanker imports), PBF Martinez, and Valero Benicia. The PBF Martinez and Valero Benicia refineries are supplied by the San Pablo Bay (SPB) pipeline, a subsidiary of Crimson Midstream, LLP. The SPB "Crimson" pipeline is the only remaining northbound crude pipeline in the entire state. With the imminent closure of the Valero Benicia refinery, PBF Martinez will be the sole surviving Bay Area refinery with pipeline access to California-produced crude. However, the PBF Martinez refinery is positioned to accepts both maritime and pipeline crude stock and its operations are not contingent on pipelines and are not reliant on the SPB pipeline.

Southern California, by contrast, has six major refineries—Chevron El Segundo, Marathon Los Angeles, PBF Torrance, Valero Wilmington, Kern Energy, and San Joaquin Refining—all of which are pipeline-connected to SJV crude. With Valero's Benicia closing, Los Angeles will have 5.7 times more pipeline-connected refining capacity than the entire Bay Area. This structural imbalance, together with refinery economics, strongly incentivizes Central Valley producers to ship crude south, where the market is larger, more competitive, and more flexible.

Exhibit 6.0

CALIFORNIA REFINERY	INTRASTATE CRUDE OIL FEEDS		
Northen California	**Pipeline**	**Pipeline Capacity**	**Maritime- 100%**
Chevron- Richmond	NA	NA	Maritime- 100%
PBF Marathon- Martinez	SBP-Crimson	210,000 b/d	Maritime
Valero- Benecia	SBP-Crimson	210,000 b/d	Closing
Southern California			
Chevron- El Segunda	Plains- 2000	135,000 b/d	Maritime
PBF - Torrance	M70	70,000 b/d	Maritime
Valero- Willington	Plains- 2000	135,000 b/d	Maritime
Marathon- LA	Plains- 2000	135,000 b/d	Maritime- Limited
Kern. Energy	Plains- 2000	135,000 b/d	None
San Roaquin	Plains- 2000	135,000 b/d	None
Note: Combined Plains capacity is 235,000 b/d for all lines.			

In the past few months, approximately 43,000 barrels per day were transported via from Kern, Kings, Fresno and Monterey Counties to Northern California refineries—about 20% of pipeline capacity, which is far below both economic and operational breakeven levels. Now, only about 29,000 barrels per day are shipped in the SPB pipeline. These small volumes are increasing operating costs per barrel transported resulting in a $2.0 million a month loss for Crimson Midstream, the owner/operator, as well as incurring substantial costs in deferred maintenance. Crimson Midstream, has notified the Governor that they will need to shut the pipeline down without relief. Based on current information, the shutdown of the SPB pipeline is imminent and could be as early as December 31, 2025.

Exhibit 7.0

CALIFORNIA PIPELINE	INTRASTATE CRUDE OIL FEEDS		
Pipeline	**Pipeline Capacity**	**Current Estimated Pipeline Capacity Utilization**	**Status**
Northbound			
SBP-Crimson	210,000 b/d	15%	Shutdown Imminent
Southbound			
Plains- 2000	135,000 b/d	82%%	Active- Stable
M70	70,000 b/d	87%	Active- Stable

If the SPB pipeline is shut down, Northern California will need to import crude oil via more shipments from maritime tankers or over-the-road tanker truck oil from Southern California. Each of these options would add $.50 to $1.00 to the price of gasoline and risk higher spikes due to geopolitical, equipment and transportation issues.

In California, as well as other states, tanker trucks are heavily regulated and require special licenses to operate. Gasoline tanker trucks come in various sizes and configurations. Fuel tanker trucks are usually non- or low-pressure liquid bulk carriers. In contrast to the massive volumes of barrels or gallons that are carried by rail tankers and maritime vessels, tanker trucks carry between 200 to 250 barrels of oil, or 8,400 to 10,500 gallons, depending on configuration and DOT rating. By example, to replace 100% of the SPB pipeline capacity using a large tanker truck would require and add up to 222 more trucks a day to California's already stressed highway and freeway system.

The lack of sufficient in-state crude oil production and the closure of the Valero's Benicia refinery create an imbalance which is the root cause of the crisis facing the SPB (SPB) pipeline. Once one of several northbound options, the SPB pipeline is forecasted to handle only about 29,600 bopd for November, down 70.4% from an average of more than 100,000 bopd just a few years ago. The current volume only 15%-16% of the system's 210,000 bopd design capacity which is 46% below generally acknowledged economic breakeven levels. Because pipeline costs are roughly 80% fixed, this collapse in volume has driven the tariff sharply upward and threatened the pipeline's financial viability. In early 2025, Crimson Midstream (the pipeline operator) filed a tariff based on 62,700 bopd or 63% of capacity throughput that would support a $3.61/bbl tariff rate.[12] But as volumes rapidly fell—due to PBF shifting to marine supply for Martinez, Chevron permanently rerouting its SJV crude to El Segundo, falling in-state crude production, and general producer preference for southern pipelines—the economics of the SPB pipeline rapidly deteriorated.

In June 2025, and in response to decreasing volumes and escalating financial losses, Crimson California Pipeline, L.P., the owner and operator, initiated an emergency filing with the California Public Utilities Commission (CPUC) seeking am increase in its tariff rate to $3.75/bbl. Analysis of the higher tariff indicates that it may help slightly but will assure continuity of operations. The higher tariff rate will, at best, only cover the cash operating expenses and lessen losses, it will address or alleviate LTIP and CorEnergy expenses. With actual volumes now at 29,600 bopd, the "true" cashflow breakeven tariff is $4.42/bbl, which is substantially above regulatory and producer tolerance limits. Stated differently, increasing the tariff to $4.42 does not provide an attractive economic value to the producers and would, in most likely terms, force more maritime shipments northward with any cost associated with the increase in pipeline tariff granted to Crimson, simply passed along to the California consumer who already pays the highest prices in the nation for gasoline.

By contrast, the Plains Line 2000/63 (southbound) charges $1.68–$2.36/bbl.[13] Furthermore, as a captive private pipeline, PBF's Plains-2000, which moves crude oil to its Torrance refinery, has marginal costs below $1.00/bbl.

Anecdotally, crude oil producers have repeatedly told Crimson that $3.75–$4.00/bbl is the maximum economically tolerable northbound tariff; anything above that risks making SPB commercially unattractive and potentially obsolete. Shippers have already nominated zero barrels for December 2025, citing uncertainty about final tariffs, and singling declining confidence in SPB's financial stability, and the looming closure of Benicia. PBF and Valero have both requested the return of their line fill, signaling their withdrawal from the system. Crimson Midstream has informed shippers it potentially has sufficient funds to operate through early 2026, but without regulatory action or increased volumes, the SPB pipeline's future is uncertain.

4.0 Consequences of Losing Refineries & Pipelines

As a result of California's policies, refiners and pipeline operators have exited the state or are considering exiting the state. From 2023, and because of refinery conversions to renewable fuels and the loss of two refineries, California's in-state gasoline production will have dropped by 6.2 million gallons a day. Other than SB 237 and AB 30, which are insufficient, the only public plan to replace the self-inflicted loss is of in-state crude oil and fuel supply to import gasoline and more crude oil from non-U.S. sources using foreign flagged tanker vessels. That solution exposes both the California

[12] E&E News. (2025, November 21). *California approves rate hike for distressed oil pipeline operator.* https://www.eenews.net/articles/california-approves-rate-hike-for-distressed-oil-pipeline-operator/

[13] Plains All American Pipeline. (n.d.). *Tariffs*. https://www.plains.com/customers/tariffs/

consumer and U.S. national security to greater and more complex geopolitical and economic risks. It also contributes to additional carbon emissions and severe air pollution, especially in port communities and in the regions where the crude oil is produced and refined overseas.

Importing refined petroleum products, such as CARBOB gasoline or California reformulated diesel, presents its own set of substantial economic, safety, and environmental drawbacks that compound the challenges facing the state's crude supply chain. While California already brings in some finished products, relying more heavily on imports exposes consumers and the state to a much more volatile, complex, and expensive supply system. The specialized transportation fuels that are required in California are costlier to produce out of state because most refineries elsewhere are not configured to meet California's unique CARBOB specifications. To do so, would require a refiner to invest heavily in new equipment and processes to undertake special blending, reformulation, or batch-processing campaigns, all of which increase production costs and result in premium pricing. These costs would be passed directly through to California consumers in the form of higher retail pump prices. As the finished gasoline would be produced by refineries located in counters such as India, China, Iraq, and even Russia, the California Legislature and Governor would have very little leverage and virtually no powers to enforce environmental and human rights standards, let alone prices.

Additionally, since in-state refiners are voluntarily exiting California, the state must rely more extensive on the marine transportation of finished gasoline and diesel fuel. Finished fuels are more dangerous and hazardous to transport than transporting crude oil due to the higher volatility and flammability of these refined products. As finished fuel tankers are smaller than crude oil tankers, there will be increased tanker calls into Los Angeles/Long Beach, Richmond, Martinez, and Benicia; all of which bring elevated risks of environmental damage, port congestion, marine accidents, fires, and spills; events that disproportionately threaten coastal communities, minority populations, port workers, and sensitive wildlife habitats.

Environmentally, importing refined products from producers in India, China, South Korea, and other distant countries increases greenhouse gas emissions at multiple stages. For example, crude oil production often occurs in regions with weaker pollution controls than California; marine voyages transporting finished fuels across the Pacific for 40 to 49 days emit significantly more CO_2 per gallon delivered than crude oil transported via pipeline; and increased tanker traffic raises the risks of both catastrophic spills and chronic ecological degradation. This includes ballast-water impacts, vessel-strike risks to marine mammals, and long-term shoreline contamination. In effect, shifting from in-state refining of California crude to greater reliance on imported finished fuels would externalize pollution while intensifying local environmental hazards, all while raising prices and reducing energy security.

The loss of two major refineries and the collapse of a major northbound pipeline will undoubtedly increase consumer prices; the only issue is by much. The larger issue is that California will be increasing its dependency on foreign sources supplying crude oil and gasoline to the Golden State, and, to a certain extent abdicating its energy security to those nations, as well as impacting U.S. national security. With the expected substantial increase in inbound maritime tanker traffic, as well as the potential for more over-the-road gasoline and oil tanker trucks on California's roads, California will be increasing global GHG emissions and negatively contributing to climate change and environmental destruction.

The consequences of these actions, the inherent inadequacies of SB 237 and AB 30 as solutions, and the lack of leadership to fully address the crude oil and gasoline security needs of the state on part the Legislature and Governor, have created an urgent reality in California. The inability or failure of Sacramento and state regulators to fully address and prevent the loss of the Valero refinery and the collapse of the SPB pipeline will have significantly negative implications to California. Specifically:

- Northern California refineries are losing access to in-state crude even though fuel demand remains relatively steady.
- Northern California will most likely experience severe price increases which would be disproportionate to those in Southern California.
- The surviving Northern California refineries will be 100% dependent on waterborne crude oil supplies.
- The impact of SB 237 for increasing crude oil supplies would be severely limited by the loss of the SPB pipeline as the remaining southbound pipelines are operating in the 80%+ capacity and there is little space to accommodate any new SB 237 production of significant volume.
- Southern California continues to dominate pipeline-connected refining, drawing San Joaquin Valley crude south.
- Southern California will experience consumer price increases, as well, but not to the extreme as those in Northern California.
- California's total greenhouse (GHG) emissions and air pollution, both locally and globally will increase; thus, contributing to climate change and environmental degradation.
- California will have no control or leverage over the operations, emission, and human resource practices, and prices of foreign gasoline producers, who will likely charge a premium.
- If sourced from India, California may be importing jet and gasoline fuels produced from Russian crude; thus, California consumers will be financing, to some extent, Russia's aggression and war against Ukraine.
- If sourced from China, California may be importing jet and gasoline fuels produced from Iranian and Venezuelan crude oils; thus, California consumers will be financing, to some extent supporting rogue regimes and drug cartels.
- As California is home to over 40 military installations, the loss of refineries and pipelines creates increased vulnerabilities to the fuel supplies to military bases in the state.
- As collateral consequence of California's actions and inability to effectively address the loss of refining and pipeline assets, neighboring states Arizona and Neveda will most likely be adversely affected.

If the SPB pipeline shuts down, the consequences cascade across the state. Northern California would lose its only pipeline access to California-produced crude. PBF Martinez would have to increase reliance on tanker imports, raising costs, emissions, and Bay Area marine traffic. Chevron Richmond—already reliant on foreign crude—would become even more exposed to geopolitical price risks. At least 15,000 barrels per day of SJV crude that currently can only reach refineries via SPB pipeline would have to move by truck. Based solely on the loss of 15,000 b/d, around 67 more trucks a day would be required worsening roadway congestion, increasing emissions, and exposing marginalized communities to higher air pollution burdens to compensate for the collapse of the SPB pipeline.

Meanwhile, Central Valley producers would be left with only two southbound pipelines, both of which already operate at relatively high utilization. Any outage—such as the Plains Pipeline 2022 shutdown—

would instantly strand large volumes of SJV crude, forcing shut-ins and costing producers millions. This would also undermine the explicit goals of SB 237, which aims to preserve California's remaining production base and prevent unnecessary interruptions in crude oil supply to prevent price spikes.

5.0 The Blueprint for Ensuring California Gasoline Security & Price Stability

California's oil production and gasoline refinery infrastructure are at a significant crossroads. Unfortunately, years of over regulation and political demonization has now left California with limited choices; either: (1) continue the current path and risk significantly higher gasoline prices, supply shortages, and higher unemployment, or (2) acknowledge that the policies that have contributed to the potential for critical shortages need to be addressed and changed…now.

The Governor, Legislature and CEC have told the public that passage of SB 237 for increasing in-state oil production, and AB 30 which allows for the sale of E15 gasoline, as the centerpieces of their legislative solution, will alleviate gasoline supply insecurity, moderate consumer prices and stabilize the markets. Unfortunately, SB 237 is too little and too late, and AB 30 is overly optimistic and borderline unrealistic in its claims. At best, SB 237 and AB 30 will be of some value but are largely inadequate to address the potential supply insecurities, national security implications, and anticipated increases in consumer gasoline prices associated with declining in-state crude oil production. the loss of two refineries, and the collapse of a vital pipeline.

Properly addressing California's impending gasoline crisis will require a more comprehensive and practical business approach and significant regulatory changes. Within the very near short term, options are limited for the Golden State. SB 237 does not take effect until January 2026. While it is a positive step in the right direction by the Governor and State Legislature, it is doubtful that 2,000 wells could be drilled and brought into production in 2026 at rates sufficient to increase California's oil production to necessary levels to save the State from its pending gasoline and crude oil insecurity issues.

For decades the sale of E15 in California was unlawful until the closing of two refineries and the real possibilities of considerably higher consumer gasoline prices in the state. The passage of AB 30 promising a $0.20 reduction in retail prices as promoted by the Governor's office, is unrealistic and somewhat improbable. The study, which the Governor's office cited but failed to disclose, was financed by the Renewable Fuels Association.[14] Although the "math" may be correct, the analysis is devoid of practicality and does not consider major factors such as adoption rates, capital costs for new equipment, and transportation costs, all of which would be included in the price of fuel to the consumer. Furthermore, the study assumes that E15 would be exempt or be subject to lower LCFS costs as a major part of the estimated savings. There are no E15 gasoline retailers in the state and it is doubtful that there will be 100% adoption of E15 as a fuel for all internal combustion gasoline vehicles, as assumed by the authors of the study. At best, the adoption of E15 might save the consumer $0.06 to $0.086 a gallon but it would also increase fuel consumption as E15 yields 1 to 3% less miles per gallon. Stated differently, it will require more E15 gasoline to travel the same miles versus E10, thus requiring more fuel while the state is losing refinery capacity.

[14] California, S. of. (2025, October 2). *Governor Newsom Signs bill expanding fuel options to cut gas prices.* Governor of California. https://www.gov.ca.gov/2025/10/02/governor-newsom-signs-bill-expanding-fuel-options-to-cut-gas-prices/

Other than importing more crude oil and gasoline from non-U.S. foreign sources such as Iraq, China, South Korea, and others using more non-U.S. maritime vessels for supplying products to California, and the limited prospects of SB 237 and AB 30, California's Governor, Legislature, and agencies, such as the CEC and CARB, have not yet revealed publicly any comprehensive and well-reasoned strategy to provide for gasoline security and price stabilization.
Based on our research, we present three possible solutions for California's government created conundrum.

5.1 Solution 1- State Financial Aid. The short-term options for California are extremely limited. Time is essential as one refinery has ceased operations, a second is shutting down within 120 days, and the only northbound pipeline, Crimson, is on the verge of collapse within 60 days. One option could include using taxpayer funds or the state's credit to provide Crimson Midstream, the owners of the SPB pipeline, roughly **$25 million per year emergency subsidy** to keep SPB operating. Spread across California fuel consumption, this cost is only about **0.036 cents per gallon**—far less expensive than the $0.50–$1.00 per gallon increases likely if Northern California is forced to rely more heavily on non-U.S. foreign oil and gasoline imports, an armada of maritime tankers, and upwards of 200 or more over-the-road tanker trucks a day. Transportation costs alone for imported gasoline and jet fuels range $0.123 to $0.17 a gallon which would be added to the retail price at the pump or to airline ticket cost. But even if the subsidy was provided, it would only be temporary and likely be politically unpopular. Afterall, taxpayer monies would be offered to an industry that has long been demonized by the Governor and Legislature as "ripping off" consumers.[15] Significantly, California taxpayer subsidies or state-arranged financing may address the short-term financial losses of the owner-operator, Crimson Midstream, but it does not provide for necessary volumes needed for substantiable operations and does not solve the structural mismatch between supply and refinery needs.

5.2 Solution 2- Increase Production. Over the longer term and as the most practical strategy for securing the California's gasoline and crude supplies and price stability is a statewide system solution which rebalances crude flows. This approach is sustainable and would provide operational certainty for the producers and surviving refiners, as well as ensuring supply security and price stabilization for consumers. Under this strategy, rebalancing would be accomplished by introducing new in-state crude oil production capable of supplying Southern California refineries. The introduction of new in-state production, above and beyond that of SB 237, would free up SJV crude to flow north through the Crimson SPB pipeline, thus, avoiding imminent failure and preserving the pipeline.

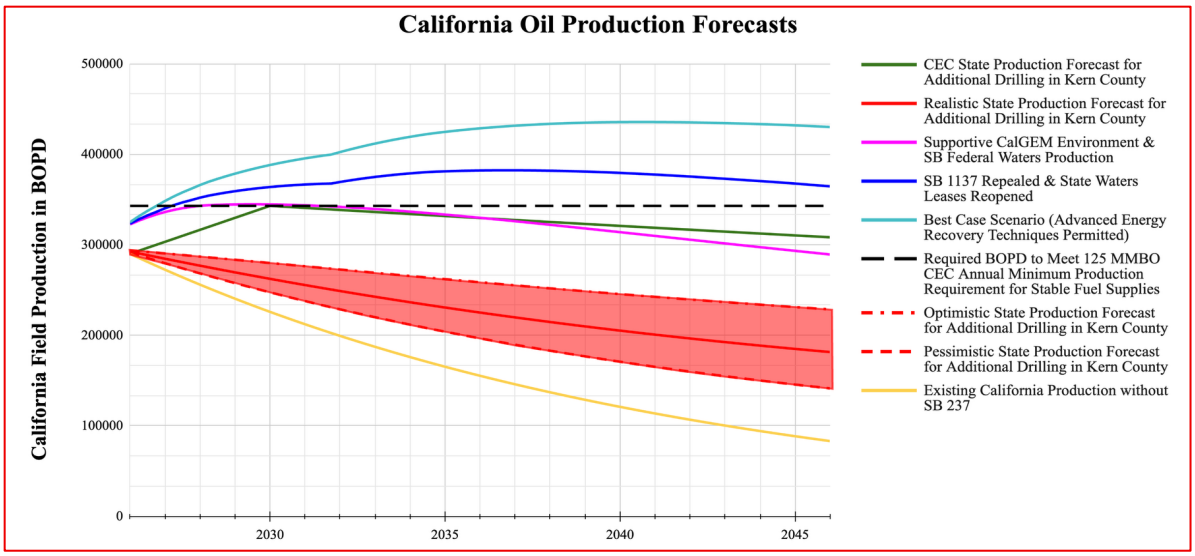
By directing this offshore production south, Southern California refineries would require fewer barrels of crude oil from the SJV thereby allowing a substantial portion of Kern County crude which is highly compatible with Bay Area refinery designs, to be redirected north. This would restore SPB volumes to sustainable levels, stabilize the tariff, and preserve the state's refinery and pipeline resilience.

The key to keeping the SPB pipeline viable and open is to send more Kern County oil north and utilize more of the existing capacity. However, presently, Southern California refineries and pipelines need all the Kern oil they can get. Exhibit 8.0 below summarizes 7 models of California oil production under various scenarios. As indicated in Exhibit 8.0 below, even under the most generous scenario, the implementation of SB 237 alone will not satisfy California's crude oil needs nor sustain the

[15] Office of the Governor of California. (2022, December 5). *Governor Newsom unveils price gouging penalty on Big Oil's excessive profits to protect Californians from being ripped off.* https://www.gov.ca.gov/2022/12/05/governor-newsom-unveils-price-gouging-penalty-on-big-oils-excessive-profits-to-protect-californians-from-being-ripped-off/

operations of the SPB pipeline. Even with additional drilling permits from SB 237, existing regulations and low crude oil prices will hamper meaningful increases in oil production.

Exhibit 8.0



(Source: Authors [16])

New Kern production stimulated by SB 237 will not be enough to stem the natural decline of Kern County oil production in the current low crude price environment and due to existing regulatory roadblocks, which will not be resolved by SB 237. New production is needed. Production models indicate that over the longer term, as California production in the SJV continues to decline, additional offshore resources (Santa Ynez Unit (SYU)), expanded South Ellwood output, and new onshore developments in the Los Angeles Basin could maintain the balance needed to support a long-term orderly transition to lower consumption. Allowing more advanced technologies and reverting to commonly-accepted production practices and techniques in the SJV could help increase production and reserves there. Still, without restoring the Las Flores pipeline system and increasing SYU offshore production and in Los Angeles, California has no realistic pathway to maintaining the north–south crude oil balance that keeps the refinery system functioning and allows the pipeline to survive. Without rebalancing, California will most likely experience an acceleration of refinery closures, skyrocketing consumer prices, gasoline supply issues, and contribute to environmental harm.

5.3 Solution 3- Presidential Intervention. California's policies and actions affect the U.S. we are already seeing the impact of more maritime tankers being diverted to California from east coast states and the need to import considerably more jet fuel from China and India to sustain commercial air operations in the Golden State. This is especially dangerous during times of geopolitical unrest as, for example, relying upon China for jet fuel in a national emergency, increased military operations, or the need to intervene on behalf of Taiwan would be highly precarious. Because California is essential to the U.S. economy and sits as the vanguard of U.S. defense and military readiness for Asia Pacific, it may require the President's intervention to assure gasoline security and price stability in California. Accordingly, one action that the President could take would be to invoke the Defense Production Act, as the means to protect vital crude oil production, refineries and pipelines. Given California leadership's inability to provide a clear and comprehensive plan for preserving refinery and pipeline

[16] Silvi, J. B., Rector, J. W., & Mische, M. A. (2025, October). *A Study of SB 237 to Stabilize Oil Production in California.*

assets and safely increasing in-state crude oil production, invocation of the Defense Production Act by President Trump would be in the best in the interests of the nation and state.

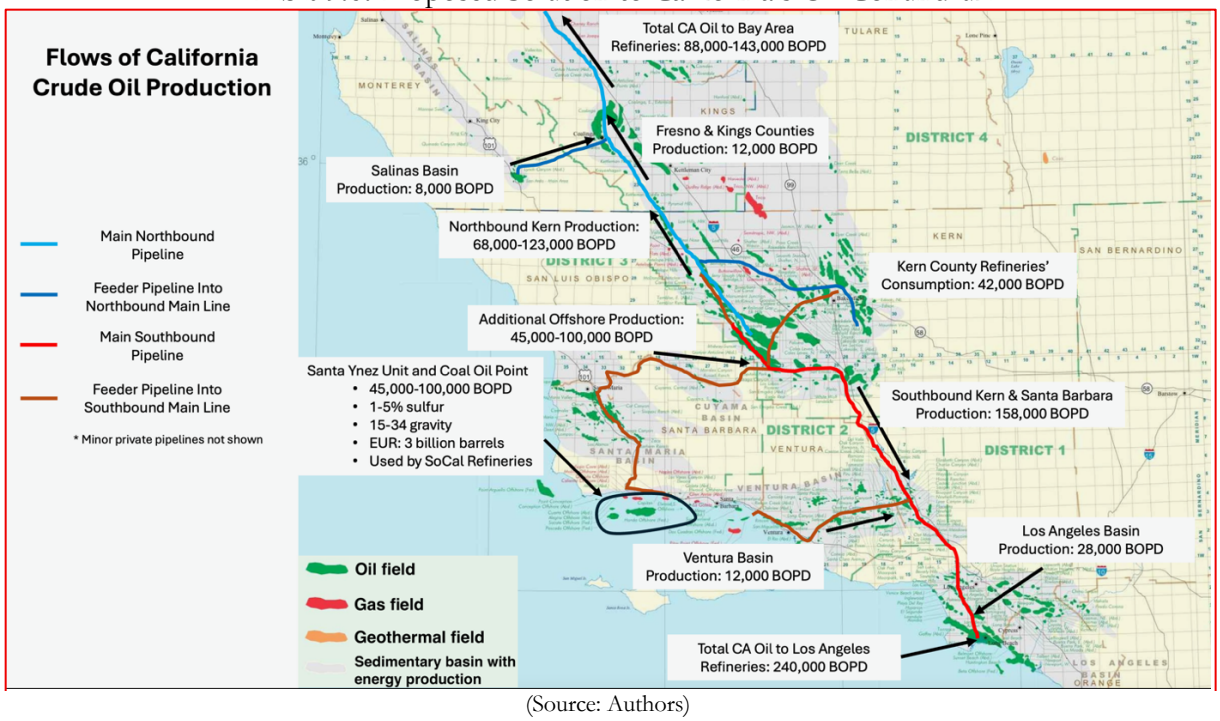
6.0 Recommended Action Steps

Of the three options outlined above, California's most viable option is to increase in-state crude oil production. The best, and essentially only way to achieve this benefit is to reopen the Las Flores Canyon pipeline system on the Central Coast and increase offshore crude oil production.

The Las Flores Canyon Pipeline has historically transported crude from offshore Santa Barbara fields (such as the Hondo, Pescado, Sacate, and South Ellwood oil fields) to refineries in Southern California. Restoring it would immediately provide 45,000 barrels per day of clean, low-decline California crude suited for SoCal refinery configurations. Additional development in areas with existing naturally occurring toxic oil seeps, could increase production up to 100,000 barrels per day and reduce natural toxic seep emissions. Additionally, there are currently 350,000 barrels of SYU crude oil in storage tanks which could be delivered into the California system within a few days' notice, or over 10 times the current daily volume moving through the Crimson SPB pipeline.

As indicated in Exhibit 9.0, and based on our estimates, the activation of the Santa Barbara and offshore SYU fields and connecting pipelines will immediately provide up to 350,000 barrels of already extracted crude oil from the SYU oil fields and provide an additional 45,000 to 100,000 barrels of daily production. This oil can be directed south to the Los Angeles area refineries thereby freeing up tens of thousands of barrels per day of Kern County oil compatible with Northern California refineries to be redirected north to the surviving PBF-Martinez refinery. The rebalancing that is achieved through additional production should avert the impending pipeline shutdown and does not require taxpayer dollars or a state-financing.

Exhibit 9.0: Proposed Solution to California's Oil Conundrum



(Source: Authors)

As older fields in the San Joaquin Valley decline, new production from areas like the South Ellwood field, the Los Angeles Basin and SYU offshore can come online to keep California's energy system viable. An added benefit is that managed production reduces large, naturally occurring oil and gas seeps. Offshore oil seeps in the Santa Barbara Channel and onshore seeps in Los Angeles release crude and toxic hydrocarbons into the environment in an uncontrollable manner. By producing oil in a controlled manner, underground pressure is relieved and surface seepage drops, which improves air and water quality while keeping oil in the state's energy supply chain.

Failing to address the loss of refineries and pipelines by California leadership will only result in the exiting of other refiners and pipeline operators, heavier reliance on foreign sources, greater exposure to geopolitical events and force majeure, increased GHG emissions, additional air pollution, and considerably higher consumer prices. If indeed, that is the case, then as a last resort, President Trump should consider interceding by invoking the Defense Production Act as a means of protecting the surviving refiners and pipeline operators. That action would be in the best interests of the nation and Californians.

7.0 Conclusion

Reopening the Las Flores Canyon pipeline system is the only immediately reasonably viable, abundantly obvious, long-term solution to California's gasoline supplies insecurities. Increasing in-state production keeps refineries running, preserves the San Pablo Bay Pipeline, strengthens energy security, mitigates port pollution near minority communities, reduces tanker traffic, and lessens dependence on foreign oil. At the same time, it would potentially reduce natural seep emissions, providing a real environmental benefit. This approach makes California's oil infrastructure more practical, reliable and resilient as the state moves through the multi-decade energy transition.

In this study, we demonstrated how increasing crude oil production in certain regions in California will preserve and sustain both refineries and pipelines. Failure to act and failure to increase in-state crude oil production will only accelerate the exit of California refineries from the state, increase global GHG emissions, force greater reliance on foreign suppliers, increase consumer prices, and diminish U.S. national security.