CALIFORNIA LEGISLATURE

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SENATE ENVIRONMENTAL QUALITY COMMITTEE
SENATOR BLAKESPEAR
CHAIR

February 18th, 2026, 9:00 a.m.
1021 O Street, Room 2100

INFORMATIONAL HEARING

Environmental Impacts of and Considerations for Refinery Closures

BACKGROUND INFORMATION

Putting this hearing in context

Over the last several years, actions affecting California's refineries have drawn significant and urgent attention to the affordability, reliability, and long-term outlook of the state's energy and transportation fuel systems. These circumstances have also attracted the focus of a range of academics and other experts to provide deeper research and recommendations.

Partial timeline of events pertinent to today's hearing

- August 3, 2020: Marathon Martinez announces it is indefinitely shuttering petroleum refining to focus on biofuels, which eliminates nearly 9% of the state's existing gasoline refining capacity and roughly 700 jobs.
- March 28, 2023: SB X1-2 (Skinner) is signed into law, expanding roles for the California Energy Commission (CEC)'s responsibilities for reporting, assessment, oversight, and investigation of the petroleum market.
- October 14, 2024: AB X2-1 (Hart) is signed into law, expanding several of CEC's authorities and responsibilities established by SB X1-2.
- October 16, 2024: Phillips 66 announces plans to cease operations at its Los Angeles-area refinery, which supplied roughly 8% of the state's existing gasoline refining capacity, in the fourth quarter of 2025 (which it subsequently did).
- April 16, 2025: Valero announces its intent to idle, restructure, or cease refining operations at Valero's Benicia Refinery, which supplied roughly 9% of the state's existing gasoline refining capacity, by the end of April 2026 (the idling and wind-down for which has in fact already begun).[1]

[1] Update on Benicia Refinery. https://www.beniciarefinery.com/update-on-benicia-refinery 1/6/2026

- April 21, 2025: Governor Newsom writes to CEC Vice Chair Sive Gunda to, "redouble the State's efforts to work closely with refiners on short- and long-term planning, including through high-level, immediate engagement, to help ensure that Californians continue to have access to a safe, affordable, and reliable supply of transportation fuels…"
- June 27, 2025: Vice Chair Gunda responds to Governor Newsom, calling for actions to stabilize fuel supply, provide confidence regarding fossil fuel infrastructure, and develop and execute a holistic transportation fuels transition strategy.
- September 19, 2025: SB 237 (Grayson) is signed into law, with provisions intended to support in-state petroleum supply and infrastructure, as well as to direct the CEC to further evaluate the recommendations and strategies in the June 27th letter.

Recent publications from hearing panelists

- *Reports and Recommendations from the Contra Costa Refinery Transition Partnership*. Published January 2025 by the BlueGreen Alliance Foundation.

  This report describes how, in response to the Marathon Martinez closure, the Contra Costa Refinery Transition Partnership (CCRTP) carried out detailed research to understand the pace, scale, impacts, and opportunities of refinery transition; led a robust community and worker engagement process to gather critical feedback from impacted stakeholders across Contra Costa County's refinery corridor; and developed a comprehensive set of policy recommendations for prioritizing the needs of refinery workers and affected communities in the energy transition.

- *Before the Last Drop: Lessons from the Phillips 66 Los Angeles Refinery Closure*. Written December 2025 by Ann Alexander, published by the Asian Pacific Environmental Network and Communities for a Better Environment.

  This report used analysis of the Phillips 66 Refinery closure as a springboard for thinking through the larger question of what refinery communities should expect when a closure occurs and what they can do to prepare for it. The report is divided into four parts: facts on the ground, governing law, key issues, and recommendations.

- *Fossil energy minimum viable scale*. By Joshua Lappen and Emily Grubert, published in *Science* (Vol. 391, pp. 449-452) on January 29, 2026.

  This paper identified a risk of collapses in service availability as pieces of fossil infrastructures reach a "minimum viable scale," a level of throughput past which existing physical, financial, and managerial infrastructures can no longer effectively operate as expected. The authors establish a framework for and identify potential examples of minimum viable scale in the US, and call for a paradigm shift in system and decarbonization planning.

- T*he Writing on the Wall: Why California Refineries Are Closing*. Published by Thomas J.P. Hersbach, Constance Cho, Michael Mastrandrea, Michael Wara, and Deborah Sivas on February 11, 2026.

  This policy brief asserts that California's refining sector is in decline and refineries will likely continue to close in the future, with significant consequences for surrounding communities. The brief describes five key factors contributing to this: (1) the depletion of California's crude oil fields and a corresponding decrease in the economic viability of in-state crude oil production, (2) declining in-state gasoline sales, (3) declining in-state fossil diesel consumption, (4) ongoing national and global consolidation of the oil industry, and (5) increased availability of imported finished fossil fuel products.

Hearing scope

This informational hearing of the Senate Environmental Quality Committee is intended to focus on the environmental impacts of and considerations for refinery closures. Broader context (including but not limited to petroleum market dynamics, ongoing regulatory impacts on operating refineries, and labor and workforce impacts) are not necessarily within the purview of this hearing nor committee, but they are helpful to provide a more complete picture of refinery closures. The remainder of this background document will provide a brief introduction to the topics anticipated to be discussed in the hearing.

Contents of background information document

Refineries produce significant pollution…

Petroleum refineries are indisputably major sources of air, water, and soil pollution. California's refineries are some of the largest stationary emitters of toxic air contaminants, criteria pollutants, and greenhouse gases in the entire state.[2]

Some refineries (many of which have existed since prior to the inception of modern environmental laws)[3] have been found to have underground "lakes" of oil (free-phase hydrocarbons) that can potentially contaminate aquifers with hazardous chemicals such as benzene, toluene, ethylbenzene, xylene, and PFAS.[4] Without rapid action, these underground plumes of water pollution can spread beyond the refinery's footprint as well. For instance, a 1997 Cleanup and Abatement Order issued to the owners of the former Powerine refinery in Santa Fe Springs, CA cited, "extensive dissolved-phase contamination on-site and off-site, including under the State Hospital to the south."[5]

The negative impacts of these refineries are not felt equitably. According to a 2022 report from Earthjustice, many of the communities surrounding California's refineries are home to a high proportion of people of color (64-95% in the Los Angeles area) and households highly burdened by pollution (89th to 100th percentile most-burdened according CalEnviroScreen 4.0 in the same area).[6] These impacts add up quickly and significantly. By some accounts, estimates of the pollution-related economic impact of the oil refining industry in Contra Costa County alone are $290-$560 million annually when accounting for the value of increased mortality, hospital admissions, asthma, cancers, lost school and workdays, and other impacts.[7]

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[2] Cal. Assembly Floor Analysis, Concurrence in Senate Amendments to AB1647 (2017-2018 Reg. Sess.) at 2 (Sept. 12, 2017), https://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=201720180AB1647.

[3] https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries/california-oil

[4] Before the Last Drop: Lessons from the Phillips 66 Los Angeles Refinery Closure. Ann Alexander, Dec, 2025.

[5] Powerine oil company, cleanup and abatement order and prospective purchaser agreement (file no. 85-18 8 96-137). 8/26/1997

[6] Crossing the Fenceline: Critical Reforms to California's Petroleum Refinery Emissions Monitoring Law. EarthJustice. October 12, 2022

[7] *Reports and Recommendations from the Contra Costa Refinery Transition Partnership.* Published January 2025 by the BlueGreen Alliance Foundation.

In addition to impacts caused by pollution from routine operations, refineries can be incredibly dangerous in the event of an accident as well. They experience flaring events, fires, spills, and explosions that can impact nearby residential areas and put community members, first responders, and refinery workers at risk of harm, or even death.

… and substantial economic benefits

However, in addition to the concentrated negative impacts created by refineries, they also produce fuels and products that have historically been indisputably essential to California's economy and quality of life. These benefits are experienced statewide. Thus, despite being major sources of pollution, they are also major drivers of economic activity and growth. Despite the well-documented pollution they create, California does not—and should not—prioritize immediate closure of all in-state refineries because of the other rippling consequences such closures produce.

Refineries, both directly and indirectly, are often significant contributors of tax revenue for the cities in which they reside. Recent local sources estimate that Valero contributed about 13% of Benicia's tax revenues[8], and Chevron nearly 24% of Richmond's.[9] These tax revenues can of course be used by local governments to provide any number of essential services, meaning closing a refinery can have far-reaching indirect consequences to a community.

Beyond tax revenues, refineries are often major employers as well. Chevron's Richmond refinery, for example, may be the city's largest single polluter and the largest greenhouse gas emitter of all Bay Area refineries, but it's also the city's largest employer; about 3,000 people work at the refinery, including contractors, according to the company.[10] According to *Before the Last Drop*, Phillips 66 stated that the closure of the Los Angeles refinery will result in the direct loss of 900 jobs—600 employees and an additional 300 contractors.[11]

Nevertheless, the roles these refineries play in their local economies and the impacts of their closures are not what keeps refineries open. Decisions to continue operating, idle, or close a refinery are based on assessments of market conditions, projected earnings, and operating costs.

Refinery closures are expected to continue

Because of a range of contributing factors, there is reason to believe that California will experience more disruptive refinery closures in the coming years.

Companies cite trends "Long-term sustainability and market dynamics"

Refiners doing business in California have been clear in raising concerns about the long-term economic viability of their operations in the state. These are noteworthy, but also not necessarily unique to California.

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[8] https://wtop.com/national/2025/10/california-oil-workers-face-an-uncertain-future-in-the-states-energy-transition/

[9] https://richmondside.org/2025/10/27/richmond-accidentally-releases-chevron-2024-tax-payment/

[10] https://richmondside.org/2025/04/01/california-oil-refineries-closing-chevon-richmond-just-transition/

[11] Before the Last Drop: Lessons from the Phillips 66 Los Angeles Refinery Closure. Ann Alexander, December 2025.

In June 2022 interview with Bloomberg TV, Chevron CEO Mike Wirth said "You're looking at committing capital 10 years out, that will need decades to offer a return for shareholders, in a policy environment where governments around the world are saying, 'We don't want these products to be used in the future.' ... We're receiving mixed signals in these policy discussions.""[12] Similarly, in announcing the closure of the Los Angeles refinery, Phillips 66 stated "[t]he timing of this announcement is based on consideration of multiple factors including the long-term sustainability of our Los Angeles Refinery and market dynamics, as well as future options for the site as part of Phillips 66's ongoing review of its portfolio of assets."[13]

The future of the petroleum refining industry is uncertain worldwide, and businesses seem to be facing tough choices looking forward.

Broader domestic, international, and technical factors at play as well

A recent policy brief from the Stanford Climate & Energy Policy Program assessed the numerous factors at play and offered a sobering conclusion: "California's refining sector is in decline and refineries will likely continue to close in the future, with significant consequences for surrounding communities."[14]

The brief describes five key factors contributing to this prognosis: "(1) the depletion of California's crude oil fields and a corresponding decrease in the economic viability of in-state crude oil production, (2) declining in-state gasoline sales, (3) declining in-state fossil diesel consumption, (4) ongoing national and global consolidation of the oil industry, and (5) increased availability of imported finished fossil fuel products."

Complicating matters further, a recent publication from Notre Dame energy researchers Josh Lappen and Emily Grubert calls into question prior assumptions about how far along the gradual scale-down of the state's petroleum utilization existing infrastructure will be economical or technically feasible.[15] In assessing the "minimum viable scale" of fossil energy systems, the paper sounds a warning that in the face of declining utilization, operators may make the decision to cease operations altogether sooner than we had expected.

Taken together, these recent reports emphasize how essential a holistic transportation fuel transition strategy is to the state. When faced with so many signs pointing towards further closures in the near-future, and given the acute consequences of each one, what can the State do to protect its residents and economy alike? In other words, if the writing is on the wall, what should state policymakers do upon reading it?

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[12] https://www.bloomberg.com/news/articles/2022-06-03/chevron-ceo-warns-not-to-count-on-new-us-oil-refinery

[13] https://investor.phillips66.com/financial-information/news-releases/news-release-details/2024/Phillips-66-provides-notice-of-its-plan-to-cease-operations-at-Los-Angeles-area-refinery/default.aspx

[14] The Writing on the Wall: Why California Refineries Are Closing. February 11, 2026. Thomas J.P. Hersbach, Constance Cho, Michael Mastrandrea, Michael Wara, and Deborah Sivas. https://tinyurl.com/StanfordCEPP-CARefineryClosure

[15] Joshua Lappen, Emily Grubert, Fossil energy minimum viable scale. *Science* **391**,449-452(2026). DOI:10.1126/science.aea0972

If the predictions in the Stanford brief and the Notre Dame paper turn out to be accurate, California may have precious little time to prepare. The State will need to understand the gaps that exist between our current and future energy systems, make a plan for continued provision of essential services while we transition, and execute that plan in a way that maintains Californians' wellbeing and popular support alike. The stakes are high, but if California successfully navigates the mid-transition, we can lead as a model for others to follow worldwide.

The state has a bona fide interest in the operations of the petroleum industry

At their core, California's petroleum systems as they operate today face a fundamental tension; they serve a vital role in the State's economy, and yet they are under the control of private companies who have a fiduciary duty to provide returns for shareholders. California has repeatedly relied on increased transparency to address this challenge while upholding refiners' autonomy.

The Petroleum Industry Information Reporting Act

The tension is not a new phenomenon. Even as early as 1980 when the Petroleum Industry Information Reporting Act (PIIRA) took effect (as a direct response to gas shortages stemming from the Iran oil crisis), the Legislature found and declared that,

> "..a complete and thorough understanding of the operations of the petroleum industry is required by state government at all times to enable it to respond to possible shortages, oversupplies, or other disruptions and to assess whether all consumers, including emergency service agencies, state and local government agencies, and agricultural and business consumers of petroleum products have adequate and economic supplies of fuel."[16]

PIIRA requires certain petroleum industry participants, including refiners and marketers, to submit certain data to the CEC. The CEC holds confidential information collected under PIIRA as confidential at the individual company level but publishes aggregated data. This information enables CEC to orchestrate a complete response to possible shortages or other disruptions. The information also helps develop and administer energy policies in the interest of the state's economy and the public's well-being.

Recent legislation enhances petroleum system transparency

Further amendments to PIIRA and other CEC authorities in recent legislation have strengthened the State's ability to assess and manage the petroleum system.

Senate Bill 1322 (Allen), enacted in September 2022, established new transparency requirements for the oil industry by mandating that refiners report their gross gasoline refining margins to the state, as well as compliance costs for Cap-and-Trade and the Low Carbon Fuel Standard.[17]

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[16] Public Resources Code 25350

[17] California Oil Refinery Cost Disclosure Act Monthly Report https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/california-oil-refinery-cost-disclosure

The legislation passed in recent special sessions (SB X1-2, strengthened by AB X2-1) further enhanced transparency into California's petroleum market by expanding the state's data collection authority and creating new oversight and regulatory mechanisms. Because of these bills, the CEC now has even greater insight into refiners' finances and operations. Importantly, SB X1-2 established a requirement for refiners to give the CEC one year's notice of their intent to close or significantly change operations, which gives the State and local communities more time to plan accordingly.

So what impact has this transparency had, and what lessons can be learned from it? Although proving direct causation is difficult (if not impossible), California's gas prices have indeed not experienced the same spikes in the two years since the special session legislation passed as compared to the preceding two years.[18] Meanwhile, despite being given the authority to impose a cap on refiners' profit margins by SB X1-2, the CEC recommended a five-year pause on imposing such a cap to promote continued investment, safety, and reliability.[19] The margin cap and other discretionary authorities created by the special session legislation (such as resupply or minimum inventory requirements) are still under evaluation, but have not been implemented at this time. Nevertheless, as California attempts to navigate the mid-transition, we cannot rest on our laurels. Ultimately, as the Vice Chair's June letter states,

> "To prevent a further exacerbated imbalance of supply and demand from harming Californians… and to maintain resilience in the system in light of ongoing uncertainty, the State must actively manage the decline of its legacy petroleum-based systems while maintaining affordable, reliable, safe, and equitable access to transportation fuels statewide."[20]

However, this prudent advice cannot be put into practice without more information. We cannot manage what we do not measure. The State—to manage the State's petroleum fuel and energy systems through this period of decline at least as effectively as it has managed them through decades of expansion—would likely benefit from more clarity around refineries' plans before, during, and after closure.

Transparency and standards can also benefit refinery closures and cleanup

Despite the more robust information landscape that has been established around ongoing refinery operations, multiple recent reports suggest that such clarity does not exist at the end-of-life for petroleum refineries.

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[18] Governor Newsom's statement on Valero's Benicia refinery update. 1/6/2026. https://www.gov.ca.gov/2026/01/06/governor-newsoms-statement-on-valeros-benicia-refinery-update/

[19] Alexander Wong, Sunit Chawla, Kelsie Goff, Jesten Ruiz. 2025. SB X1-2 Implementation: Maximum Gross Gasoline Refining Margin. California Energy Commission.

[20] Letter from Siva Gunda to Governor Newsom, June 27, 2025. https://www.energy.ca.gov/media/11640

Refineries' waste discharges are regulated by the Water Boards

The State Water Resources Control Board and the nine Regional Water Quality Control Boards (collectively, the "Water Boards") have primary responsibility for implementing and enforcing the Porter-Cologne Water Quality Control Act. For the petroleum industry, SB 1082 (1993) specifically identified the Water Board as the lead agency for refinery closure and clean-up. Under this framework, the Boards are designated to have "sole jurisdiction over the supervision" of cleanup actions, providing "primary authority for all aspects of site remediation except hazardous waste unit remediation".

Water rights holders report at least annually to the Water Board as part of the permitting process. Pollution indicated in those reports can trigger a Regional Water Board investigation, as can petitions from individuals. Requirements for these reports are in the Wastewater Discharge Requirement (WDR) orders which are site specific and issued by the Water Board every 5 years.

The Boards can utilize enforcement tools, such as Cleanup and Abatement Orders (CAOs) to compel responsible parties to remediate waste, or Site Cleanup Requirements (SCRs) which can describe the specific actions that must be taken by the discharger to remediate, report, and monitor the site cleanup if they are out of compliance with their WDR. They also possess broad investigative authority under Water Codes Section 13267 to require "technical or monitoring program reports" and to inspect facilities to ensure compliance. This oversight is vital because refineries often sit on decades worth of underground pools of hydrocarbon liquids and buried hazardous waste that require costly and prolonged efforts to clean up.

For example, the Board issued orders in 1997 for the Powerine refinery "directing Powerine Oil Company to conduct a subsurface investigation … and to detect and assess any conditions of soil and ground water pollution" that occurred over its sixty-year history.[21]

End-of-life considerations affect operational decisions

As refineries' economic futures are called more and more into question, they begin to seem like less attractive investments (due to lessened projected profitability, increased maintenance costs, and impending cleanup liabilities). As we move through the mid-transition, there could be a phase where refineries lack the necessary capital to operate safely and economically sooner than California is prepared to lose their capacity. This risk is only heightened by the nature of turnarounds, which are substantial and costly maintenance and upgrade efforts for which significant portions of a refinery are taken offline every several years.

Without state intervention, disinvestment can create a dangerous environment where declining capital inflows could lead to deferred maintenance and heightened dangers.[22] These "financially driven decisions to reduce costs" can manifest in the abrupt abandonment of essential safety projects, as seen when Philadelphia Energy Solutions (PES) "abandoned a major maintenance turnaround one week before its planned execution" at its Philadelphia refinery which was followed

[21] Powerine oil company, cleanup and abatement order and prospective purchaser agreement (file no. 85-18 8 96-137). 8/26/1997

[22] Letter from Siva Gunda to Governor Newsom, June 27, 2025. https://www.energy.ca.gov/media/11640

by massive explosion just months later.[23] In California more recently, less than a month after Valero announcing the intent to close the facility, the Benicia refinery experienced a significant fire. The 72-hour report from Valero to the local fire department stated that the preliminary cause appeared to be the result of part of a furnace stack falling and striking equipment.[24] Petroleum refining infrastructure is dangerous and carefully controlled under the best of conditions, it is no surprise that as refineries' financial outlooks dim, opportunities for catastrophic failure can become more likely.

Given that "a complete and thorough understanding of the operations of the petroleum industry is required by state government at all times" (per PIIRA), and that the Water Boards' ability to accurately estimate cleanup obligations and costs in advance of closure is unclear, there is a case to be made for the Water Boards to have greater transparency into closure and cleanup plans. This could help to proactively prepare for the economic and environmental realities that will need to be faced as refineries near their end-of-life.

Specifics are challenging, but estimates are helpful

No two refineries are the same, but there are commonalities between them. Even when specific dollar amounts are impossible to achieve, order-of-magnitude assessments are essential for understanding systemic financial risk. The recent report on the Phillips 66 Los Angeles refinery closure recommended default technology standards for refinery site remediation for just this reason. That recommendation read,

> "State agencies… should develop a default set of decommissioning and remediation technology standards associated with various types of contamination, together with default timelines for their implementation. Such standards, which should be based on conservative assumptions, would protect communities, give stakeholders a sense of what to expect, and assist with the ARO assessment"[25]

Financial risks may be significant without information and accountability

Liabilities are unknown but likely to be substantial

Generally accepted accounting principles allow refiners to assume that refineries have an "indeterminate useful life" until there is an anticipated date for their closure. In California, that means that up until a refiner submits their notice of intent to close or reduce operations (pursuant to SB X1-2), their balance sheets and financial reports reflect an asset retirement obligation (ARO) of $0.

Recognizing this practice meant there were significant off-balance cleanup liabilities, a 2024 report from CarbonTracker, an independent financial think tank, attempted to use throughput capacity to

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[23] An Unrefined Ending: Lessons Learned from the Creation and Closure of the Philadelphia Energy Solutions Refinery. Christina E. Simeone, March 2023. www.ucsusa.org/resources/philadelphia-refinery-closure

[24] 72 Hour Report, from Valero to Benicia Fire Department https://www.ci.benicia.ca.us/vertical/sites/%7BF991A639-AAED-4E1A-9735-86EA195E2C8D%7D/uploads/050525_72_HOUR_REPORT-Valero_Benicia_Refinery.pdf

[25] Before the Last Drop: Lessons from the Phillips 66 Los Angeles Refinery Closure. Ann Alexander, December 2025.

generate first-order approximate costs based on the true post-closure costs of recent actual closures.[26] Using that very rough approximation, the report estimated the six largest publicly-listed refining companies collectively may have held $34 billion in unaccounted for cleanup liabilities worldwide, despite those companies only reporting less than $900 million recorded in liabilities at the time.

Although—to be clear—these back of the envelope estimates are by no means as precise as engineering studies, providing any insights into these off-balance sheet items is critical for investors and regulators to assess whether a company can generate the requisite cash flows to pay for the AROs when they become due. Currently, identifying zero costs in financial filings has been described by experts as the "least accurate value that companies could give investors".[27]

As an example of both the value of knowing these AROs and the difficulty of attaining them, the New Jersey public pension fund in 2022 sought disclosure of Phillips 66's AROs through a shareholder resolution.[28] The resolution stated that, "Absent this information, investors cannot assess the true risk-adjusted value of their investment nor deploy capital effectively." Ultimately, Phillips 66 excluded the proposal from consideration, on the basis that it micromanaged the company's operations. The US Securities and Exchange Commission (SEC) concurred that the ARO information could not be required to be disclosed in that way.

Financial assurances exist but merit clarity

Refineries do seem to have some financial assurances as part of their permitting requirements. Valero Benicia's 2013 WDR, for example, includes the following:

> Financial Assurance: The Discharger shall submit to the Water Board evidence of an irrevocable post-closure fund acceptable to the Executive Officer, to ensure monitoring, maintenance, and any necessary remediation actions. Every five years, for the duration of the post-closure monitoring period, the Discharger shall submit a report that includes an outline of the financial assurance mechanism and verification that the fund has been created. The fund value shall be supported by calculations, to be included with this submittal, *providing cost estimates for all post-closure monitoring, maintenance, repair and replacement of WMU or landfill containment, cover, and monitoring systems*."[29]

Notably, the post-closure costs for which financial assurances are part of this permit do not seem include remediation. Financial assurance can also sometimes be provided by a "financial means test" whereby a responsible party needs to demonstrate sufficient net worth to be deemed able to cover liabilities (such as net worth being at least six times greater than the post-closure cost estimates).[30]

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[26] Flash Note: Off the Record, CarbonTracker, December 2024.
[27] Oil, Gas Industry's Accounting 'Loophole' Frustrates Investors. Bloomberg, October 3, 2025. https://news.bloombergtax.com/financial-accounting/oil-gas-industrys-accounting-loophole-frustrates-investors
[28] https://www.sec.gov/divisions/corpfin/cf-noaction/14a-8/2023/njcpfphillips032023-14a8.pdf
[29] https://www.waterboards.ca.gov/rwqcb2/board_info/agendas/2013/October/VRC/TO.pdf
[30] Letter from Valero to the San Francisco Bay Regional Water Quality Control Board, dated 3/26/2024, demonstrating financial assurance for the WDR Order No. R2-2013-0033

Nevertheless, reasonable caution is warranted. Evidence from related sectors shows that large firms frequently use "strategic spin-offs" to transfer massive regulatory debts to underfunded subsidiaries that are arguably set up to fail. In the coal industry, four of the largest companies succeeded in shedding $5.2 billion of environmental and retiree liabilities between 2012 and 2017 using bankruptcy to discharge obligations while keeping profitable assets.[31]

This risk of orphan infrastructure is already a reality in California's oil wells. There is a large population of nonproductive wells in the state, known as idle wells, which have not produced oil and gas for at least two years and have not been plugged and decommissioned. Idle wells can become orphan wells if they are deserted by insolvent operators. When this happens, there is the risk of shifting responsibility for decommissioning the wells to the State. Taken together, the scope of the problem is potentially massive; according to a 2018 analysis done by the California Council on Science and Technology,

> "An initial analysis of readily available information suggests that 5,540 wells in California are, as defined, likely orphan wells or are at high risk of becoming orphan wells in the near future. The State's potential net liability (subtracting available bonds held by CalGEM) for these wells is estimated to be about $500 million." [32]

These examples highlight the challenges and stakes involved in determining and recovering cleanup liabilities following bankruptcy. If that happens, there is a very real risk that taxpayers will ultimately be forced to foot the bill for remediation, or a site could be left in a state of contaminated disuse for years.

While other safeguards, financial assurances, and guarantee agreements exist, interpreting the resilience of them is beyond the scope of this committee and hearing. Regardless, given the magnitude of cleanup costs and the risks associated with them not being paid in a timely manner, further explanation from refiners would be valuable.

Gaps exist in state and local governments' abilities to assess and plan for post-closure

Lack of standards stymies decision-making

According to the recent report on the Phillips 66 Los Angeles refinery closure, government planning is currently hindered by the fact that the "decommissioning and remediation of refineries is extraordinarily under-regulated" compared to other hazardous industries. California's current "ad hoc system in place for determining the appropriate level of remediation" creates a "problematic information deficit" for the agencies and communities that must contend with planning for closures. The report asserts that without standardized processes and requirements around

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[31] B Macey, Joshua, and Jackson Salovaara. "Bankruptcy as bailout: coal company insolvency and the erosion of federal law." Stan. L. Rev. 71 (2019): 879.

[32] California Council on Science and Technology (CCST). 2018. Orphan Wells in California: An Initial Assessment of the State's Potential Liabilities to Plug and Decommission Orphan Oil and Gas Wells. Available online: https://ccst.us/reports/orphan-wells-in-california/.

cleanups, local officials and frontline communities are left "scrambling to participate meaningfully" in cleanup and redevelopment processes that can take decades to complete.

These concerns are echoed by the even-more-recent Stanford policy brief, which stated that "scant publicly available information" leaves local officials, union workers, and frontline residents "scrambling to participate meaningfully" in the transition.[33] Ultimately, the experience of the PES refinery stands as a primary example of a "failure on the part of city leadership" to envision a future for the site beyond refining until it was too late to influence the outcome.[34]

Community-, city-, and state-level priorities may be at odds with refiners'

It should be no surprise that given the variety of interests and entities affected by a refinery shutdown, conflicts arise in deciding what action to take.

For example, increased import of refined fuel is often suggested as a solution to the state-level concern of having an adequate gasoline supply.[35] However, operating as an import terminal produces significantly less tax revenue and fewer jobs than an active refinery (while still contributing pollution and delaying full-scale site remediation), so local government can be resistant to the idea. In the ongoing closure of Valero's Benicia refinery, for example, the mayor has said that compared to the 400-plus employees in the refinery now, an import terminal would employee fewer than 100. He has also raised concerns about the significant loss of tax revenue with the closure of the refinery and the shift to imports.[36]

A letter, written earlier this month, from the State Building and Construction Trades Council, underscored the labor issue with imports: "Offshoring our energy production and supply would make California reliant on foreign jurisdictions to meet its energy needs. Even worse, it would make California dependent on fuel produced without our high-road labor, environmental, and human rights standards. A policy that transitions California's refineries into mere gas terminals, employing dozens rather than thousands, would result in a low-road approach to energy."

The conflict between refiners' priorities and the local communities' may be the most acute challenge. Making choices in furtherance of the fiduciary responsibility to provide a return to shareholders can often put companies in direct conflict with the priorities of the neighboring communities. PES provides a specific example of how refinery site redevelopment can be a challenging chicken-or-egg conundrum with conflicting interests between business and community. According to a 2023 Union of Concerned Scientists report,

> "In 2012, when Sunoco sold the site to PES, it filed a deed restriction on the refinery property that attempted to limit future uses of the site to refinery operations… This deed restriction limited future uses of the site to energy or refinery activities, ensuring that

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[33] The Writing on the Wall: Why California Refineries Are Closing. February 11, 2026. Thomas J.P. Hersbach, Constance Cho, Michael Mastrandrea, Michael Wara, and Deborah Sivas. https://tinyurl.com/StanfordCEPP-CARefineryClosure

[34] An Unrefined Ending: Lessons Learned from the Creation and Closure of the Philadelphia Energy Solutions Refinery. Christina E. Simeone, March 2023. www.ucsusa.org/resources/philadelphia-refinery-closure

[35] An Analysis of The Valero Benicia Refinery Closure on Gasoline Prices in California https://nealemahoney.substack.com/p/an-analysis-of-the-valero-benicia June 20, 2025

[36] https://www.siliconvalley.com/2026/01/08/valero-confirms-refinery-closure-import-gas/

> Sunoco/Evergreen would not have to increase the stringency of its cleanup standards and therefore would control cleanup costs."

Whether or not energy or refinery activities were the highest and best use of the property (or what local governments or communities would have chosen), the decision had effectively been made for them years prior to the refinery's closure. To be sure, this was a sensible condition of the sale by Sunoco given the uncertainty and magnitude of potential cleanup liabilities surrounding a 150-year old refinery. Nevertheless, it created another hurdle to redevelopment, delaying remediation.

Recent analyses of closures call for proactive planning

Given the lack of clarity around full cleanup costs, the potential for conflicting interests to deprioritize local interests, and the history of these decisions being made outside of the reach of community voices, multiple recent reports strongly recommend more robust state involvement in establishing requirements.

The recent report about the Phillips 66 Los Angeles refinery closure recommends requiring ARO disclosure. Recommendation number 3 of the report is "Mandate disclosure of full ARO cost for all refineries" and the report argues for creating such a requirement,

> "In the absence of a clear SEC requirement for refineries to disclose their AROs prior to a closure announcement, state government should create a requirement that they do so. To better enable regulators to assess the financial position of refineries, and to ensure communities' ability to prepare for closure and assess, the state should mandate disclosure by all refineries of the full calculated cost of their ARO, based upon defined factors."[37]

The report goes on to describe what the mandate should incorporate, including estimations of decommissioning and remediation costs, full disclosure of how the estimate was derived, requirements for the process by which the ARO estimate is developed, and timing requirements to ensure useful and current plans are available.

Similarly, the Contra Costa Refinery Transition Partnership recommended to both, "Establish refinery decommissioning/clean-up standards," and, "require site-specific plans to meet refinery decommissioning and remediation standards."[38] This same sentiment is reflected in the June letter from CEC Vice Chair Gunda as well, suggesting that the State should implement policies and plans to support a successful transition, including to, "Identify challenges, opportunities, and strategies for the future of land affected by the transition (e.g. remediation, marketability, and value), such as Asset Retirement Obligations and standards for refinery remediation and decommissioning plans."

When independent analyses of two recent refinery closures suggest the same way to make future closures less disruptive, and this concept is acknowledged by the administration, it may be worthy of further consideration.

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[37] Before the Last Drop: Lessons from the Phillips 66 Los Angeles Refinery Closure. Ann Alexander, December 2025.

[38] *Reports and Recommendations from the Contra Costa Refinery Transition Partnership.* Published January 2025 by the BlueGreen Alliance Foundation.

Communities with refineries face significant short-term hurdles, but stand to experience significant benefits in the long run with proactive engagement

Undoubtedly, refinery closures will be disruptive to the communities in which they have operated for decades. The generational impacts of localized pollution impacts have been disruptive as well. So too will the impacts of climate change disrupt these communities.

Economic upheaval cannot be avoided forever

The future of California is going to look a lot different than its past, whatever decisions are made today. Professor Kevin Anderson, a British petrochemical engineer turned climate scientist, is attributed for this poignant description of the moment in the broader climate context:

> "We face an unavoidably radical future. We either continue with rising emissions and reap the radical repercussions of severe climate change, or we acknowledge that we no longer have a choice and pursue radical emission reductions: no longer is there a non-radical option."

It seems this may be relevant in the refinery context as well. We either keep major sources of pollution operating under increasingly-unfavorable financials in pollution-burdened communities and reap the radical repercussions of continued emissions, releases, and accidents, or we acknowledge that even if we were to put concerted effort towards enacting policies to keep refineries open longer, their end is coming sooner or later and will radically alter communities for reasons outside of our control.

What we do have control over is the level of planning, coordination, and early engagement that can support beneficial transformations of refinery sites. When faced with the decision of whether to begin robust planning before or after a crisis occurs, history has shown California stands to avoid the worst outcomes of these imminent disruptions by being proactive.

Site redevelopment must balance significant liabilities and opportunities

As California considers what will ultimately be done with the land and other assets currently involved in petroleum refining, we would do well to consider lessons from refineries that have already closed. In a 2023 report released by Union of Concerned Scientists, author Christina Simeone described the circumstances that led to less-than-satisfactory outcomes with the closure of PES:

> "The victories and missteps associated with the PES refinery closure offer myriad learning opportunities. The inability to anticipate, build capacity, and plan for the refinery's closure left Philadelphia unprepared for the dynamic, fast-moving situation that ensued after the 2019 explosion. Primarily, the events represented a failure on the part of city leadership. Ultimately, a bankruptcy court auction determined the fate of the refinery property, with minimal input from city leaders and impacted workers and communities. Therein lies the greatest missed opportunity."[39]

[39] An Unrefined Ending: Lessons Learned from the Creation and Closure of the Philadelphia Energy Solutions Refinery. Christina E. Simeone, March 2023. www.ucsusa.org/resources/philadelphia-refinery-closure

In California, redevelopment conversations are actively underway regarding refineries in the process of closing. For instance, when Phillips 66 announced its intent to cease operations at their 650-acre LA refinery in October of 2024, the statement described how the company had already engaged commercial real estate development firms to evaluate the future use of the site.[40] While the CEO stated that, "These sites offer an opportunity to create a transformational project that can support the environment, generate economic development, create jobs and improve the region's critical infrastructure," these transformational uses will depend based on site contamination.

The time to act is now

If transitioning the world's fourth largest economy off of the energy system it has used since its inception and onto one that is still being built and deployed was easy, we would have done it by now. We are fortunate to have a wealth of technical, policy, and legal expertise to bring to bear on such a complicated issue. However, we are unfortunate in that the state's leadership in this space means there are very few examples to follow. Given the dynamics described about the "irreversible" decline of California's refining sector[41] and the possibility of infrastructure reaching a critical "minimum viable scale" sooner than imagined[42], we should not delay.

The insights provided by panelists in today's hearing may shine a light on some necessary actions, but there is much more work to be done. Forthcoming publications from State government (the Transportation Fuels Transition Plan required by SB X1-2 and the assessment required by SB 237) will hopefully further hone the policy considerations in California's specific context, and provide an essential idea of what a "holistic transportation fuel transition strategy" would look like.

It is the hope of the committee that conversations will continue between and within the entities represented here today. Without specifically understanding cleanup and site remediation, our state's transition strategy may lack the full picture of end-of-life obligations. Without understanding the severity and nuance of the ongoing in-state decline in petroleum refining, California's air and water regulators may lack vital context. Without understanding the dire impacts of refinery closures on communities, policymakers may lack the necessary urgency to proactively plan for their inevitable arrival.

Through continued cross-cutting collaboration and coordination, California can support communities, businesses, and all levels of government in building a shared vision of the holistic strategy that will be needed to navigate the mid-transition. Without it, the State may remain stuck for an uncomfortable period of time with one foot in the fossil energy system, beset by increasing economic and political headwinds, and one foot in the fledgling decarbonized, renewable energy system of the future. Every aspect of this transition benefits from proactive planning that recognizes the very real physical, economic, and societal presence petroleum infrastructure has in California today.

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[40] https://investor.phillips66.com/financial-information/news-releases/news-release-details/2024/Phillips-66-provides-notice-of-its-plan-to-cease-operations-at-Los-Angeles-area-refinery/default.aspx

[41] The Writing on the Wall: Why California Refineries Are Closing. February 11, 2026. Thomas J.P. Hersbach, Constance Cho, Michael Mastrandrea, Michael Wara, and Deborah Sivas.

[42] Joshua Lappen, Emily Grubert, Fossil energy minimum viable scale. *Science* **391**,449-452(2026). DOI:10.1126/science.aea0972