

# Statewide Refinery Transitions: A Pivotal Moment for California

Connie Cho, Senior Policy Advisor, APEN

Presented at The Climate Center's July 31, 2025 webinar:  
***"Planning for Refinery Closures That Benefit Workers,  
Communities, and the Environment"***

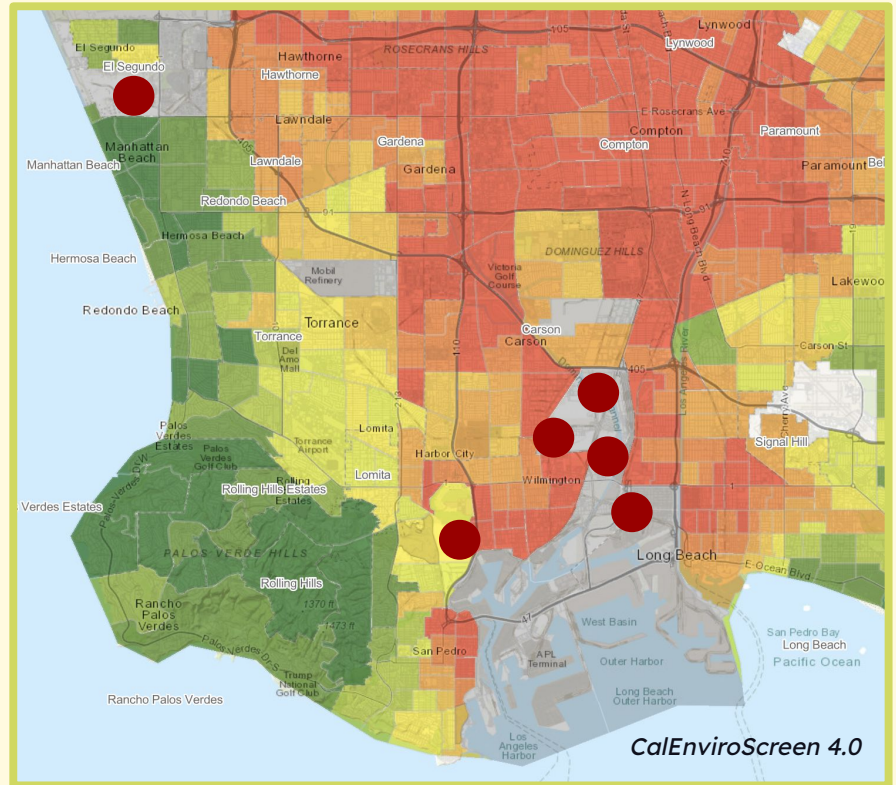
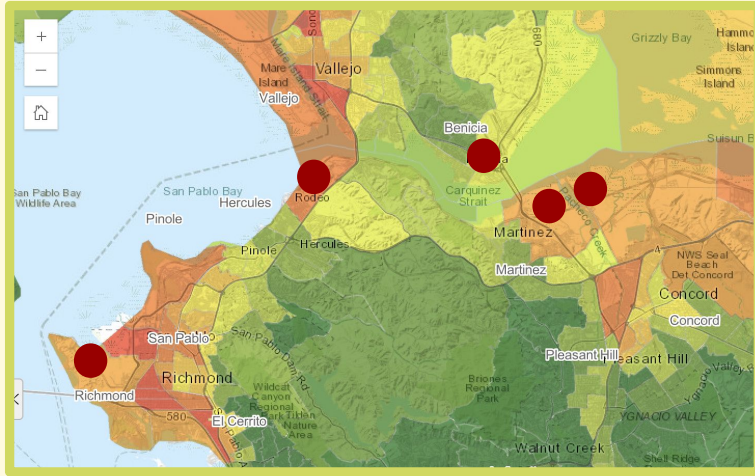
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# Refinery Communities Fight for Environmental Justice



*Photo by Denny  
Khampanthong of  
APEN Richmond youth  
leaders speaking in  
front of the Chevron  
Richmond refinery,  
2025.*



**CA refineries are old, massive, dangerous, and inherently polluting.**

Refinery-related activity is the **largest source of direct PM2.5 emissions in Wilmington-Long Beach-Carson.**

“Typically, consumer products are the largest single source of VOC emissions in the South Coast Air Basin, however, **the petroleum refining industry (32%) is the largest VOC emitter in this community.**”

*AB 617 Community Emission Reduction Plan, 2019*





# Refineries are Major Sources of Local Pollution

In **Benicia**, cancer rates are much higher than the rest of the state and Solano County, including a **breast cancer rate nearly double** that of the average Californian.

Stephen Golub, "The Price Benicia Pays" Benicia Independent, from Solano County Health Department Data  
<https://beniciaindependent.com/stephen-golub-the-price-benicia-pays-valero-public-health-and-safety-and-moving-forward/>

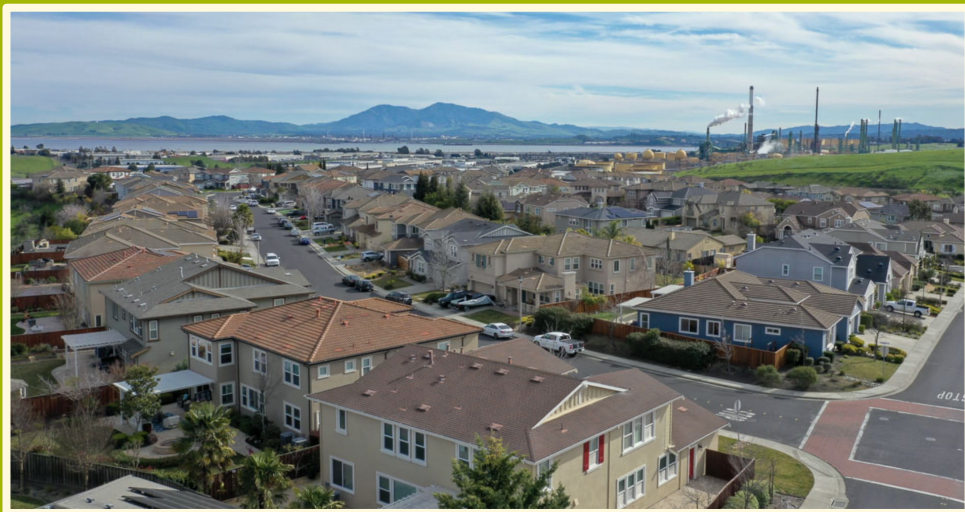


Photo of homes next to the Valero oil refinery in Benicia, from the Benicia Community Air Monitoring Program (BCAMP)

## Valero's Benicia Refinery Outage Triggered 'Huge' Release of Pollution

By Ted Goldberg  Jun 12, 2017  Save Article



An 18-minute power outage on May 5, 2017, at the Valero refinery in Benicia led to a prolonged episode of flaring during which 74,000 pounds of sulfur dioxide was released into the air. (California EPA)

In 2017, Valero emitted more than 74,000 pounds of sulfur dioxide during 14 days of flaring, which has serious respiratory impacts, and 350 pounds of carbonyl sulfide, a highly toxic and extremely flammable gas.

# A Legacy of Environmental Injustice: Health Inequities in Refinery Communities

“The communities near refineries frequently comprise **low-income families and people of color**, who bear the brunt of the air pollution from refinery operations. Additional health risks of compromised air quality can lead to a **higher incidence of respiratory issues, cardiovascular diseases, and other health problems.**”

*CEC Transportation Fuels Assessment (2024), p. 52*

Frontline communities are **regularly exposed** to toxic refinery pollutants known to **cause cancer, reproductive and developmental harms**, and more.

*OEHHA, Analysis of Refinery Chemical Emissions and Health Effects (2019) p. 20-27*



State of California  
**OEHHA**

Benefits and Impacts of Greenhouse Gas Limits on  
Disadvantaged Communities, 2022 Report, p. 37

*Table 2. Direction of Emission Changes at Facilities Near High-Scoring CES Communities Varies by Pollutant and Sector (2018 Compared to 2012 Emissions)*

| Sector          | Number of facilities in high-scoring CES communities (maximum) | GHG | PM2.5 | Air Toxics |
|-----------------|--|-----|-------|------------|
|                 |  |     |       |            |
| Hydrogen Plants | 6  | ↑   | ↑     | ↓          |
|                 |  |     |       |            |
| Refinery        | 14   | ↑   | ↑     | ↓          |

<https://oehha.ca.gov/sites/default/files/media/downloads/environmental-justice/impactsofghgpoliciesreport020322.pdf>

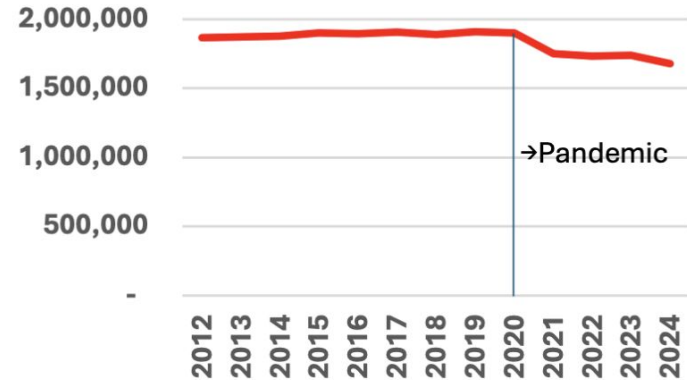


## Greater Monopolies: Fewer Refineries, but Same Capacity Until 2020

**MYTH:** California had a golden age of refinery capacity decades ago, with 40 refineries, most of which closed due to extreme and unnecessary environmental regulation.

**FACTS:** Many **small refineries of the past *could not compete***: simplistic, inefficient, straight-run distillation operations without the complexity to produce today's fuels.

**Pre-Pandemic consolidation: refineries got bigger in some of our communities** in order to keep profiting from foreign and non-California states by increasing **exports** of finished fuels, so *concentrated refinery pollution has either persisted, or worse, increased in some places.*



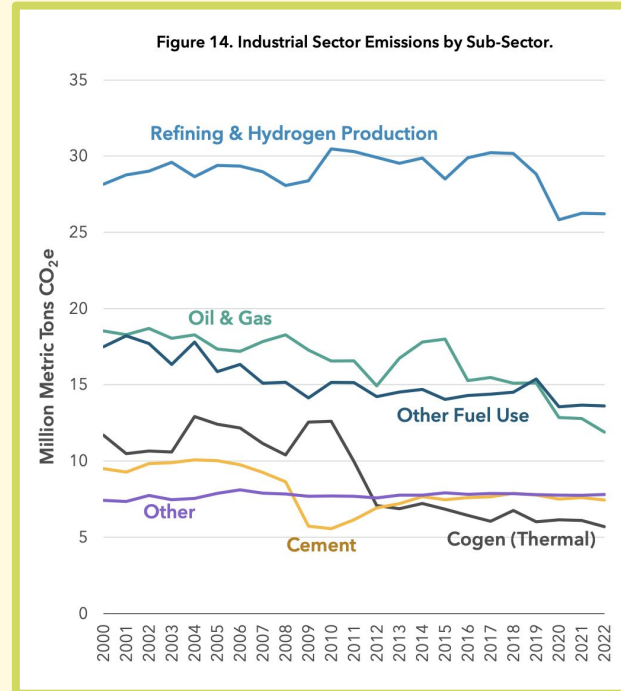
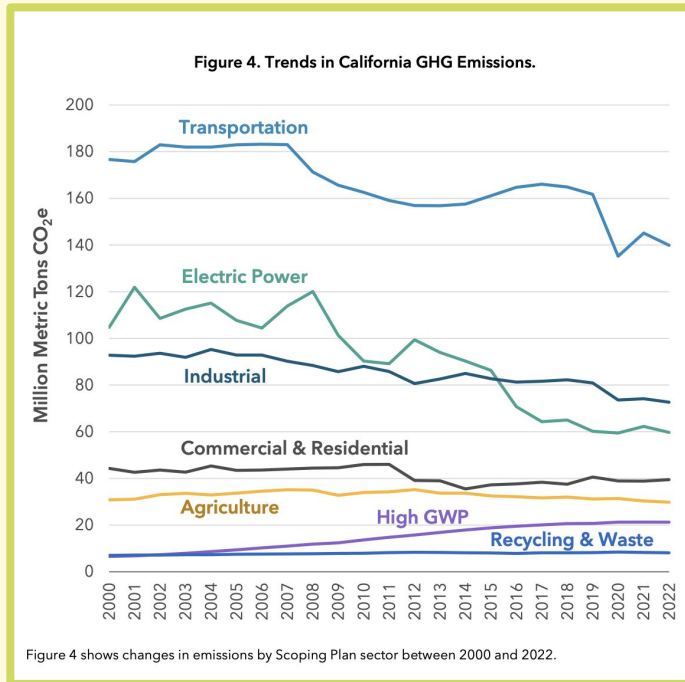
**CA refining capacity** remained largely the same from 2012 to 2020. [USEIA data](#) show close to 2 million barrels/day crude oil refining capacity, until the pandemic crashed demand. CBE downloaded 091824



# Refinery Greenhouse Gas Emissions: No Progress

A 2024 CARB press release on the GHG Emissions Inventory Report described refinery greenhouse gas (GHG) emissions data from 2002 - 2022 as “**essentially flat.**”

<https://ww2.arb.ca.gov/news/california-greenhouse-gas-emissions-decline-across-most-sectors>





Globally,  
(gross\*)  
refinery  
margins are  
falling—but  
higher in  
CA.

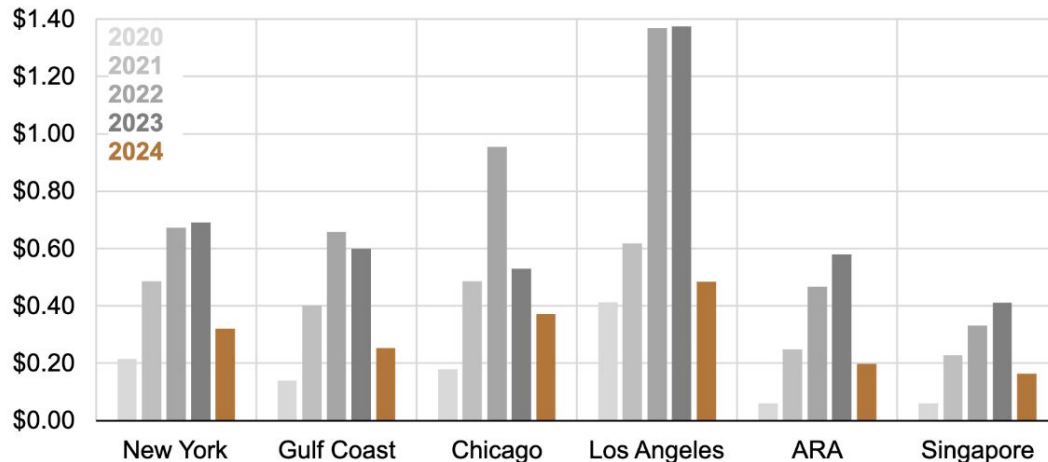
## IN-BRIEF ANALYSIS

OCTOBER 15, 2024

## Global refinery margins fall to multiyear seasonal lows in September

### Regional September refining margins (2020–2024)

dollars per gallon

**Data source:** Bloomberg L.P.

**Note:** The 3:2:1 [crack spread](#) is an indicator of refining margins, the short-term profit margin for oil refineries, which generally produce about 2 barrels of gasoline for every 1 barrel of distillate fuel oil. To estimate the refinery crack spreads, regional crude oil benchmarks were used (Brent for New York, Los Angeles, and ARA; Light Louisiana Sweet for the U.S. Gulf Coast; West Texas Intermediate for Chicago; and Dubai for Singapore). ARA=Amsterdam-Rotterdam-Antwerp





# Gross refinery margins in California are historically high



Oil refiners were making **97 cents per gallon** in gross profit from CA gasoline in April - more than double their historical norms.





**Refinery closures and notices of closure are everywhere:** *from Pennsylvania to Texas to California.*

**Big Oil is now trying to panic California's elected officials into more giveaways** for executives and shareholders without changing the fact that refiners are consolidating and will close up shop everywhere, including California.

**So, we need targeted strategies to manage this transition.**

## Houston's oldest refinery is shutting. It won't be the last as gasoline use declines

By Barbara Powell and Nathan Risser  
Tribune News Service

Feb 17, 2025 | Updated Feb 17, 2025 0

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Smoke rises from the LyondellBasell Houston refinery on June 14, 2024, in Houston, Texas. The city's oldest refinery is preparing to shut down.  
Brandon Bell/Tribune News Service



Refinery communities and allied advocates have called for the state to **plan ahead for refinery closures**.

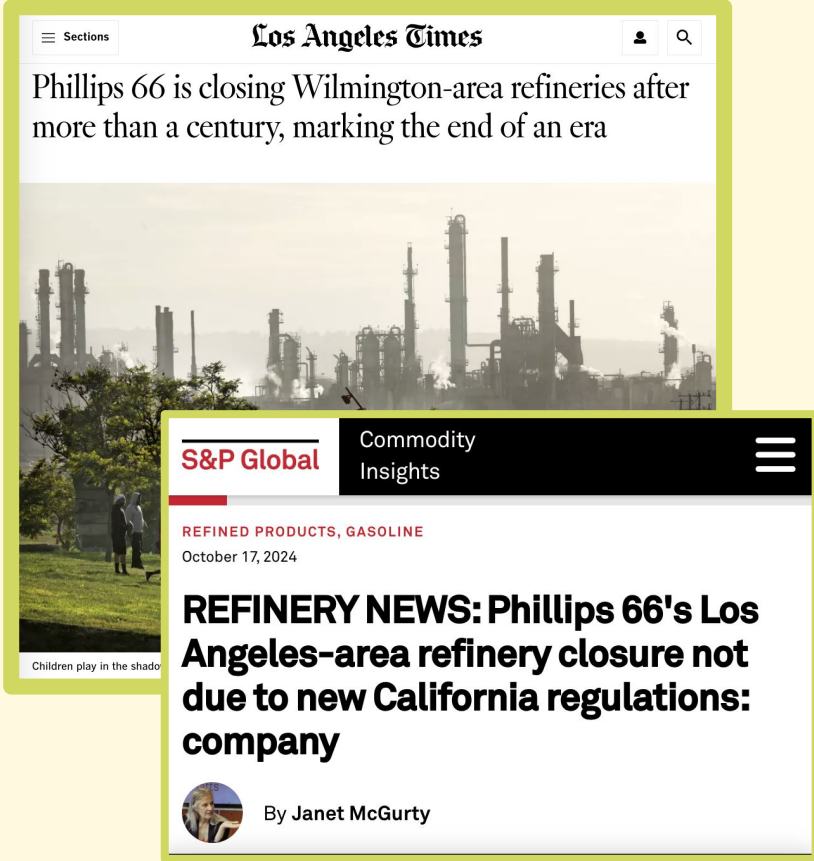
Instead of an abrupt, chaotic, and unjust transition, **we can prepare for an equitable transition** by prioritizing investment and protections for the most impacted workers and communities.





Last fall, Phillips 66 announced plans to shutter its Wilmington-Carson refinery by the end of 2025, but will still import in refined gasoline at the Port of LA.

Phillips 66 admitted its closure was a result of longstanding consolidation plans due to market dynamics, **not** new California regulations.



The screenshot shows a news article from the Los Angeles Times. The main headline reads: "Phillips 66 is closing Wilmington-area refineries after more than a century, marking the end of an era". Below the headline is a large photograph of an industrial refinery complex with tall distillation columns and smokestacks. In the foreground, a grassy area with trees is visible, and a small caption reads "Children play in the shadow".

Below the main image, there is a section header "S&P Global" and "Commodity Insights". The article is categorized under "REFINED PRODUCTS, GASOLINE" and dated "October 17, 2024". The sub-headline reads: "REFINERY NEWS: Phillips 66's Los Angeles-area refinery closure not due to new California regulations: company". The author is identified as "By Janet McGurty" with a small circular profile picture.



This spring, Valero announced intent to “close, idle, or restructure” the Benicia Refinery by the end of 2026 – with no indication of an import operation.

While these unplanned closures have shocked many – it’s a clear indication that **California needs a *managed transition* away from fossil fuels.**



KQED

May 5 at 1:00 PM · 🌐

The fire comes just weeks after Valero executives announced they were considering closing the sprawling refinery by next April.



KQED.ORG

Valero Refinery Fire in Benicia Is Under Control After Warnings to Stay Indoors | KQED

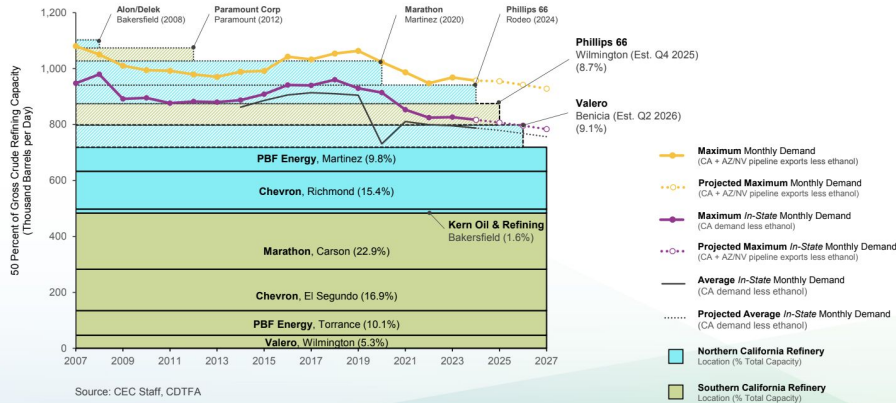




# Key to the Mid-Transition: Planning Ahead



## Estimated Gasoline Refinery Capacity



7

- ➔ **Targeted measures to address short-term supply issues**
- ➔ **Plan ahead for the impacts of declining demand, including refinery closures**
- ➔ **Holistic managed transition, including more investment in EVs and public transit**



# Targeted, Near-Term Strategies

- **Targeted Goal:** stabilize supply in the near-term using an evidence-based approach (MATH).
- **Targeted Near-Term Statewide Policy Recommendations**
  - ◆ **Implement storage strategies:** finalize the ABX2-1 **re-supply inventory rule** and develop a **strategic reserve** (e.g. ABX2-1 minimum inventory rulemaking).
  - ◆ **Reject rollbacks to refinery process safety management (PSM) CalEPA/CalOSHA rules** to prevent sudden outages that trigger price shocks, and keep frontline workers and communities safe.
  - ◆ **Advance near-term logistical solutions** while preserving public participation, robust health and safety protections, within a managed decline framework.
- **Targeted Short to Medium Term Policy Recommendations**
  - ◆ **Fuel specifications rulemaking:** given the success of CARBOB as a gold standard for other states and improvements in car engines, a public rulemaking could be merited.
  - ◆ **Crude oil and pipeline data transparency, potential rulemaking, and interagency coordination requirements** to ensure state agencies can independently monitor, analyze, and assess managed transition needs to achieve multiple public interest goals.

Oil companies started using refinery closures and the threat of gas price shocks to roll back decades of progress on health, safety, and environment.

## Valero Renewable Fuels Co. v. EPA

Filing Date: 2025

Case Categories: [Federal Statutory Claims](#) > [Clean Air Act](#) > [Industry Lawsuits](#) > [State and Municipal Vehicle Standards](#)

Principal Laws: [Clean Air Act \(CAA\)](#), [Administrative Procedure Act \(APA\)](#)

Description: Challenge to the Clean Air Act preemption waiver granted by the Biden administration U.S. Environmental Protection Agency in January 2025 for California's Advanced Clean Cars II regulations.

KQED

Sign In

NEWS

## 'Secret Deal' in California Would Weaken Regulations for Oil Refineries

## Oil industry ad campaign presses California lawmakers on affordability

By Alex Nieves | 05/07/2025 06:21 AM EDT

The seven-figure ad buy calls on state and local





# Refiners were knowingly cutting corners while spending billions on stock buybacks

**THIS IS A SHAKEDOWN.**

|  | Valero shareholder payouts:        | Climate, health fines: |
|--|------------------------------------|------------------------|
|  | \$4.3 billion for Valero investors | \$82 million for CA    |

Big Oil failed to fix their refineries. We're all paying the price. [StopTheOilShakedown.org](https://StopTheOilShakedown.org)

- In 2024, Valero was fined \$82 million by the Bay Area Air Quality Management District (BAAQMD) and the California Air Resources Board (CARB) after BAAQMD inspectors discovered that Valero had knowingly violated health and safety laws for over 16 years. **In that 16 year span, Valero knowingly skipped safety inspections and emitted an estimated 8,400 tons of toxic air contaminants, over 360 times the legal limit.”**
- At the same time, Valero returned [\\$4.3 billion to shareholders](#) in stock buybacks and dividends in 2024.



**How is California Responding?**





# Good News: Holistic, Planned, Managed Transition

Vice Chair Gunda's June Letter "recommends the pursuit of three **concurrent** strategies."

**Status Update  
on Strategy 3:  
No Legislative  
Proposals  
(Yet)**

## Strategy 3: Holistic Transition Strategy

**TOPLINE:** Near- and medium-term actions must be part of a holistic transition strategy that is built on shared understanding, collaboration, and development of policies across state agencies and stakeholders. A managed transition is critical for protecting Californians and will depend on coordination and collective action.

**PROBLEM:** Transitioning California's transportation fuel system away from petroleum-based fuels is providing substantial benefits to consumers, workers, communities, and the environment, but an unmanaged transition poses significant and acute risks to safety, health, environment, economy, and affordability.

While concurrently addressing the previous objectives, the State should implement policies and plans to support a successful transition, which could include:

- Identify and pursue necessary transition funding to support climate, health, community, and worker priorities.
- Protect workers and communities such as through robust process safety management regulations at refineries, which has the added benefit of increasing reliability of the facilities.
- Support and protect California's authority to set emission standards and achieve climate goals.
- Further California's ability to diversify and evolve its transportation sector to comply with federal and state air quality standards and meet climate goals, such as by continuing to expand the availability and reduce the cost of ZEVs.
- 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.

- Evaluate whether new approaches to California's fuel specifications could continue to protect public health and meet federally required air quality standards while making the State more resilient to disruptions during its fossil fuel transition.
- Continue to evaluate additional options presented in the Transportation Fuels Assessment, e.g. product reserve and production enhancement strategies such as E15 or Reid Vapor Pressure (RVP) modification.
- Explore further pathways to increase resilience in the system, such as improving connectivity between Northern and Southern California fuel markets, e.g. through increased marine oil terminal capacity or repurposing of existing fossil fuel transportation infrastructure.
- Develop strategies that can support a managed phase-out especially during the late transition phase of the transportation sector, such as state management or ownership of assets.





# CEC Vice Chair June Letter: Continuing the Dialogue

- **The same industry that lied to us about climate change is trying to roll back health, climate, and environmental protections,** incl. EO N-79-20, regional Air District authorities and local authorities for taxation and permitting.
  - ◆ While the Vice Chair's letter acknowledged many of these proposals, it did not adopt them.
  
- **Outstanding Questions:**
  - ◆ **Kern Oil and Gas Ordinance:** how will the state do right by Kern communities?
  - ◆ **At-Berth Rule, Imports:** how will the state do right by port communities?
  - ◆ **Cap and Trade:** how will the state do right by fenceline communities – especially refinery communities?





# What's Missing?

- **How can we disincentivize oil refiners from taking turns to threaten lawmakers with the potential supply shock of closure year after year to rewrite the state's rules?**
  - ◆ Make a notice of closure or cessation of refining have consequences for refiners (i.e. invoke closure obligations).
- **How do we protect Californians from oil companies who would leverage the prospect of refinery closure to exploit lawmakers?**
  - ◆ Reduce refiners' monopolistic control over supply
  - ◆ Remove indirect leverage that comes from an *unplanned* transition (i.e. support/gap funds for workers and communities)





# Stop the Shakedown: Consequences of Closure



- Under financial disclosure laws, **oil refiners have avoided disclosing the value of their full asset remediation obligations (AROs)**. In 2023, Phillips 66 rejected the State of New Jersey Pension Fund's 2023 shareholder action to require disclosure "since...these [refinery] assets have no retirement date..."
- Unlike any other energy infrastructure, there are **no clear standards** or agency timelines for refiners to develop **safe decommissioning and remediation plans**.



# Stop the Shakedown: Summary

- **Targeted measures to address short-term supply issues**
  - ◆ Stabilize near-term supply, make the math work
  - ◆ Health and safety to ensure safe (=reliable) operations
  - ◆ Short-term actions fit with long-term vision
  - ◆ Hold the line on health and environmental protections
- **Plan for refinery closures**
  - ◆ Companies must disclose full extent and costs of cleanup and remediation needs, and plan for cleanup.
  - ◆ Gap funding for workers and communities
- **Advance the transition away from fossil fuels**
  - ◆ Invest in EVs and transit
  - ◆ Coordinate phase down of supply alongside demand







# Questions?

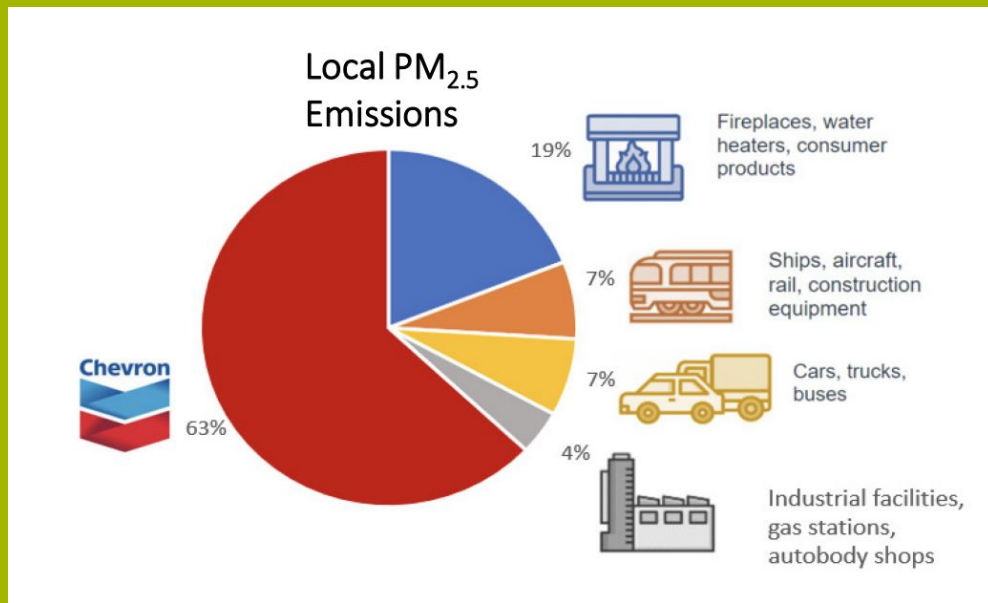
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# APPENDIX

# Refineries are Major Sources of Local Pollution

The **Chevron Richmond Refinery** is the **largest source of PM<sub>2.5</sub>** in the Richmond/San Pablo Area, emitting about  $\frac{2}{3}$  of the PM<sub>2.5</sub> in the area. The Air District's air monitoring van also detected **higher than typical** levels of certain **air toxics**, including **benzene**.



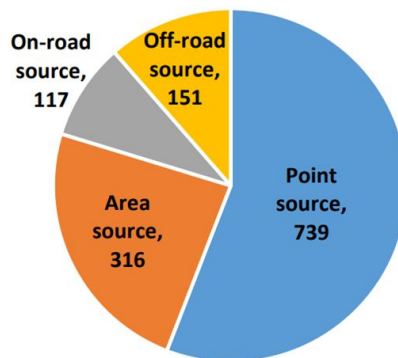
*Parents, teachers, and community members at the 2024 Flaring Town Hall at Peres Elementary next to the Chevron Refinery in Richmond, CA.*

# Refineries are Major Sources of Local Pollution

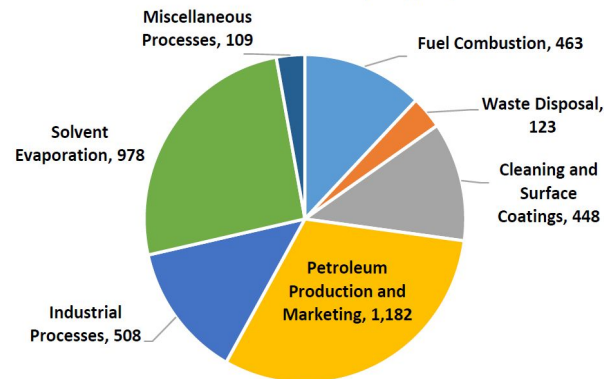
The **Wilmington-Carson-W. Long Beach** community has the **largest concentration of oil refineries** on the West Coast.

Refinery-related activity is also the **largest source of direct PM2.5 emissions** in this community.

Wilmington, Carson, West Long Beach  
PM2.5 in 2017 (tons/year)



Wilmington, Carson, West Long Beach stationary and area source  
VOC emissions in 2017 (tons/year)



“Typically, consumer products are the largest single source of VOC emissions in the South Coast Air Basin, **however, the petroleum refining industry (32%) is the largest VOC emitter in this community.**”

*Wilmington, Carson, W. Long Beach SCAQMD, AB 617 Community Emission Reduction Plan, 2019, p. 3b-3, image above right*