

Environmental Justice *for* Refinery Communities

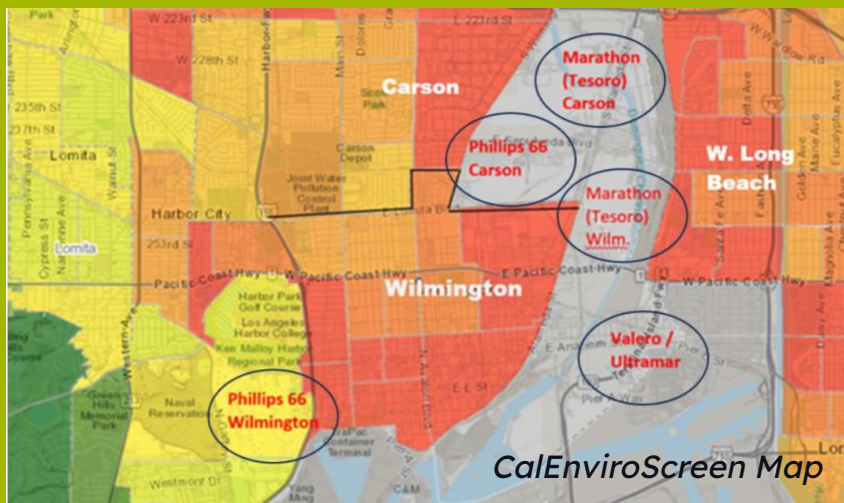
*Informational Hearing on California's Petroleum Economy:
The Present Market and the Future Fuels Transition Plan*
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A Legacy of Environmental Racism: Health Inequities in Refinery Communities



“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.**”

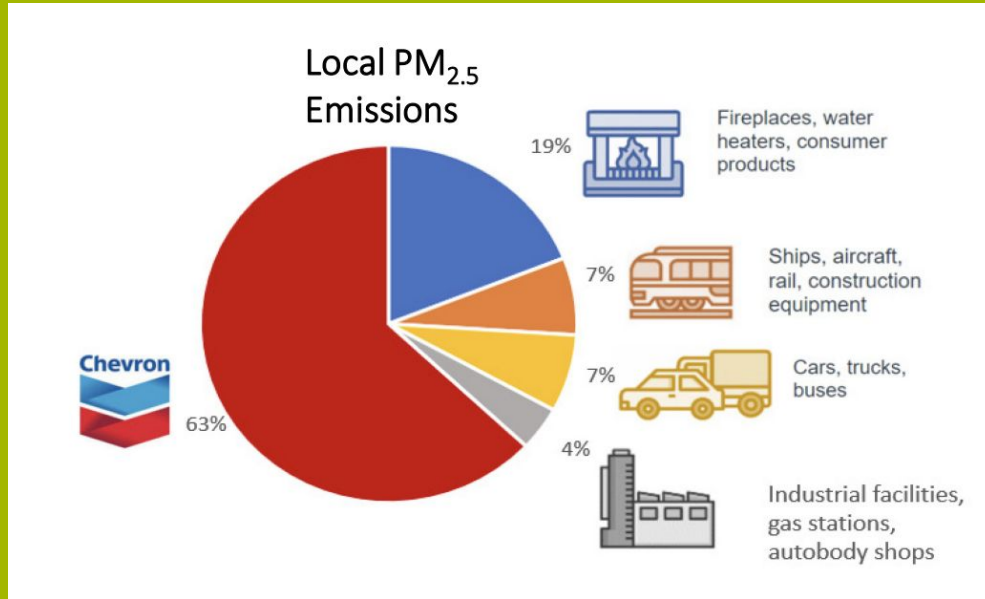
CEC Transportation Fuels Assessment (2024), p. 52

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

Refineries are Major Sources of Local Pollution

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



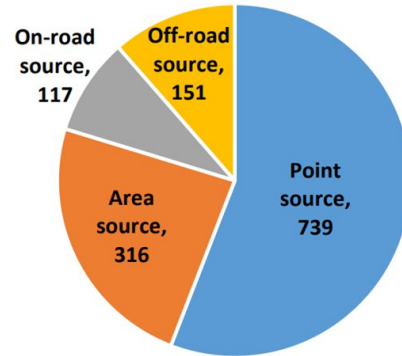
Parents, teachers, and community members at the 2024 Flaring Town Hall at Peres Elementary next to the Chevron Refinery in Richmond, CA.

Refineries are Major Sources of Local Pollution

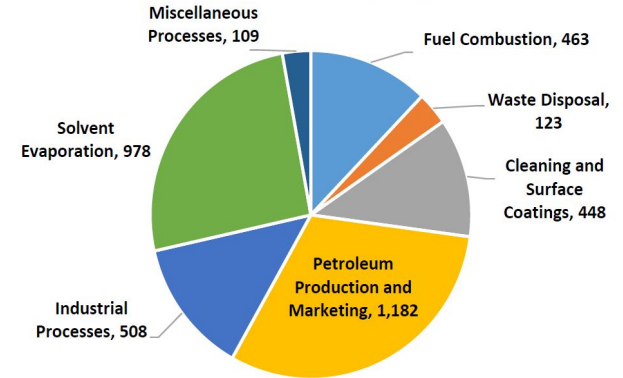
The **Wilmington-Carson-W. Long Beach** community has the **largest concentration of oil refineries** on the West Coast.

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 is the largest VOC emitter in this community.** Approximately **32% of the total VOC** emissions in this community are attributed to processes related to petroleum refining. The second largest contributor to the community’s VOC emissions is consumer products. Off-road and on-road mobile sources account for marginal portions of the total VOC emissions.”

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



Most Refinery VOCs are emitted from **refinery storage tanks**, via tank seals, vents, and fittings.

Volatile Organic Compounds (VOCs) are known to result in **serious health impacts**, including cancer; eyes, nose, throat, skin irritation; or neurological, liver, blood, and reproductive damage.

VOCs are also **smog-forming**, which adds to the LA-South Coast's non-attainment status under the Clean Air Act.

In 2017, an AQMD-commissioned study found VOCs had been **under-reported** at every refinery in the region, **especially storage tanks**.

Johan Mellqvist et al., Emission Measurements of VOCs, NO₂, and SO₂ from the Refineries in the South Coast Air Basin Using Solar Occultation Flux and Other Optical Remote Sensing Methods, 1-3 (Apr. 2017).

Refinery Community Transition Visioning and Leadership

Summary of Local Harms and Dependencies Resulting from the Refinery

Click a section of the wheel below to explore community voices and information about that harm or dependency:



Taking Stock: Visioning Beyond the Refinery,
UC Berkeley Othring and Belonging Institute,
August 2022.

Early Investments

- **Making polluters pay for one-time and short-term investments** to support long-term public infrastructure and economic diversification to reduce dependence; **savings** to replace declining tax base
- **Pilot programs, collaborative forums, and partnerships** between community, labor, other stakeholders

Regulatory Action Needed (State/Regional)

- **Coordinated, whole-of-government plan** to transition off of fossil fuels that gives **local communities and workers clear timelines** to plan and execute a just and equitable transition.
- **Stronger regulations to protect** community and worker **health and safety** during transition
- Reassessment of site contamination to **secure updated, enforceable and adequate financial assurances** for land and water **remediation**

ABX2-1 Policy Option: Storage - Minimum Refinery Reserve

During the SBX1-2 proceedings, APEN and CBE have **supported** the process to implement an **effective minimum refinery reserve**, to soften price spikes while protecting the health of our communities and our state's climate goals.

Re: Environmental Justice Comments on Informational Proceeding on Maximum Gross Gasoline Refining Margin and Penalty Workshop

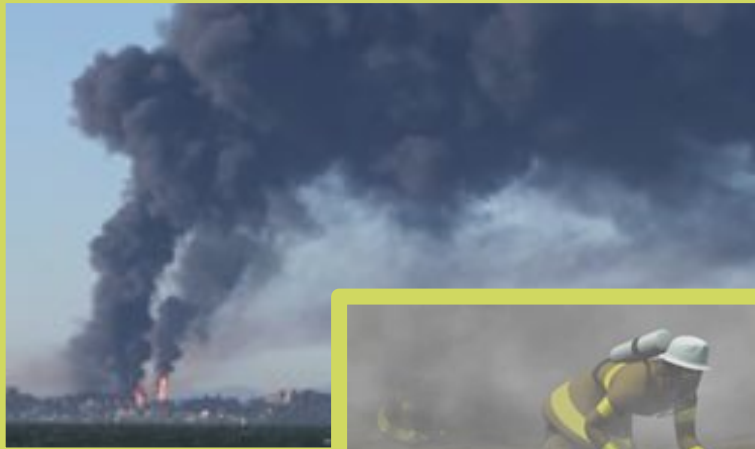
I. Overarching Policy Recommendations

CEC should focus on measures that can help protect consumers while we transition away from fossil fuels, without oversupplying gasoline or weakening health protections. While we generally support guardrails to smooth refinery gasoline supply to reduce price volatility—including use of storage, maintenance planning, and consideration of foreign exports—we urge the CEC not to pursue measures that would delay the urgently needed transition away from fossil fuel refining. We oppose measures that would increase gasoline supply by loosening critical

III. Storage Requirements for a Minimum Strategic Reserve

We strongly support the effort to collect data and information to implement a minimum strategic reserve. The CEC should consider storage requirements as an approach to dealing with supply shortages leading to price spikes. We recognize that the CEC considers storage-related policy options in its Transportation Fuels Assessment and plan to comment further on the development of strategic storage reserves as an approach to balancing out supply and combatting price spikes.

Deferred Maintenance is a Dangerous, Frequent Practice



Chevron Richmond Refinery: 2012 Fire

“Had the crude unit been shut down when the leak was first noticed, the massive fire would not have occurred, the 19 workers would not have been in danger, and the community would’ve been protected.”

- US Chemical Safety Board

Torrance Refinery: 2015 Explosion

The US Chemical Safety Board (CSB) found the explosion and catastrophic release of Hydrofluoric Acid (HF) was caused by deficient safety procedures, equipment use beyond safe life, and re-use of old variance procedures without full analysis.

Transportation Fuels Transition Plan: Still Pending

“While the impact of short-term policies to address price spikes on the longevity of refinery operations remains uncertain, **it is imperative to acknowledge and consider the public health and safety risk of prolonged refinery activity and increased production.**”

– Transportation Fuels Assessment, p. 52



Photo credit: Communities for a Better Environment (CBE), taken from the school playground of CBE members in Wilmington