

DOCKETED

Docket Number:	23-ICFAC-01
Project Title:	Independent Consumer Fuels Advisory Committee
TN #:	262615
Document Title:	Julia May CBE Comments - Background materials & general CBE comments on ABX21 ICFAC
Description:	N/A
Filer:	System
Organization:	Julia May / CBE
Submitter Role:	Public
Submission Date:	4/8/2025 2:23:33 PM
Docketed Date:	4/8/2025

Comment Received From: Julia May / CBE
Submitted On: 4/8/2025
Docket Number: 23-ICFAC-01

Background materials & general CBE comments on ABX21 ICFAC

Additional submitted attachment is included below.

April 8, 2025

Submitted through Docket 23-ICFAC-01

Re: Background materials are useful for ICFAC evaluation – Preliminary comments regarding the Independent Consumer Fuels Advisory Committee (ICFAC), California Energy Commission (CEC)

Dear ICFAC Chair Mahoney, ICFAC members, and CEC Staff,

Thank you for the useful ICFAC workshop on Tuesday Feb. 26. We appreciated the context in the presentation on gasoline supply infrastructure, pricing, volumes, and ownership in and beyond California, as well as the discussion.

Since the committee only recently started, CBE wanted to share some useful background. (There is no need to reinvent the wheel.) Here are also a few conclusions with some additional analysis and detail later.

- **Average refinery capacity to make gasoline and other fuels has long been sufficient to meet California demand, even overproducing for export:**
 - PRE-PANDEMIC: In California and the nation, refinery capacity was steady (not shrinking) - for example, from 2012 until the 2020 pandemic. Many small refineries open in the past were inefficient, very dangerous, and unable to produce today's fuels. Contrary to oil industry mythology, large numbers of small, primitive refineries did not represent a golden age of plenty. They closed as government subsidies disappeared, while big refineries got bigger -- *exceeding demand*, and even exporting finished fuels.
 - SINCE THE PANDEMIC: Even after two recent major refinery closures post-pandemic, average supplies are *still* sufficient to meet California demand (because the pandemic, fuel efficiency, and EV sales cut demand).
 - WHEN PHILLIPS 66 LA CLOSURES (END OF 2025): California will *still* have sufficient *average* capacity, since EV sales continue to lower gasoline demand. Phillips even committed to provide fuel if needed through its terminals after the LA refinery closes.
- **Average annual capacity is different from temporarily tightened capacity.**
 - **Deliberate scheduling of planned maintenance when supplies are low, can cause tight supplies and price spikes** (e.g., after high summer consumption). The oil industry can manipulate prices this way.
 - **Long unplanned closures for repairs after accidents (if refineries fail in maintenance) can also spike prices.** Blatant maintenance failures and other errors causing explosions are documented in California refining history.

- Note that California has not run out of gasoline in any of these cases, but tight supplies lead to spot market trading and price gouging.
- **The most direct and safe solutions to tightened gasoline supplies include the following** (not expansion of the oil industry infrastructure, or overproduction):
 - **Improving REFINERY MAINTENANCE** with stronger regulatory oversight and audits to prevent unplanned shutdowns;
 - **Requiring MINIMUM RESERVES** to address both planned and unplanned supply constraints through a stored buffer (now in the works through CEC);
 - **Penalizing PRICE GOUGING**, to eliminate incentives to manipulate timing of planned maintenance (regulations in process through CEC and [DPMO](#)), and;
 - **Evaluating substantial California REFINERY EXPORTS** of finished fuels - despite price gouging and tight supplies in-state. Although exported gasoline may not meet California standards (“CARBOB”), we ask why it couldn’t be upgraded to do so (e.g., adding alkylate blending stocks).
 - **Increasing support for ZERO EMISSION TRANSPORTATION** is the biggest solution to chip away at the need for polluting refinery production. This is cheaper for everyone in the long term but requires support for up-front costs.
 - **Making contingencies for IMPORTS unnecessary in most cases could be achieved if the list above is addressed first.** Importing has gained momentum because it is simple, but it does not address environmental, health, and jobs issues and transition to clean, safe energy, nor the issues above.
- **Regarding *future refinery closures*:**
 - **Remaining refineries post-2025 have HIGH PROFIT INCENTIVES to stay in business until demand goes substantially down** - far enough to eliminate the need for another refinery. California refineries continually charge higher than other states (beyond price spikes): the documented “Mystery Gasoline Surcharge.”¹¹
 - **We proposed MODELING PARTIAL REFINERY CLOSURES for future closures**, to demonstrate how refineries could close duplicate units first as demand goes down, to match supply and demand more smoothly.
- **For health, safety, and survival the CEC and partner agencies need to acknowledge that without phasing out Fossil Fuels:**
 - California and the planet cannot survive **CLIMATE DISASTERS**,
 - California cannot meet **CLEAN AIR ACT HEALTH STANDARDS**, and
 - Frontline communities cannot eliminate **ENVIRONMENTAL RACISM**.

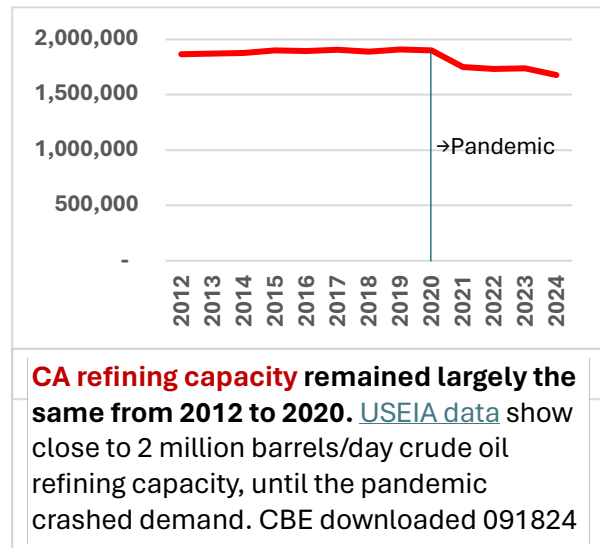
¹¹ For example, Prof. Borenstein, 8/18/23 [Mystery Gasoline Surcharge](#), CEC Docket, subtracting California specific fees and costs, shows California continuously charged more for gasoline than the rest of the nation.

I. California Refinery Capacity and Closure Planning: *How did we get here, and where do we need to go?*

A. Refinery capacity in California and the nation was steady from 2012 until the 2020 pandemic, more than met California demand, even exporting

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.

REALITY: Many small refineries of the past were simple, inefficient, straight-run distillation operations without the complexity to produce today's fuels.² Many closed after inability to compete with complex refineries. They had lost heavy subsidies and access to high quality, easy-to-refine crude, and could not meet basic requirements to produce less-polluting fuels (lead-free, less cancer-causing benzene, lower levels of hazardous sulfur compounds, etc.). **Many were very dangerous**, poorly run, with the most extreme air pollution events, and unable to operate without frequent costly breakdowns.³ **Big refineries got bigger, consolidating and expanding, more than meeting California demand, even exporting⁴ finished fuels.**



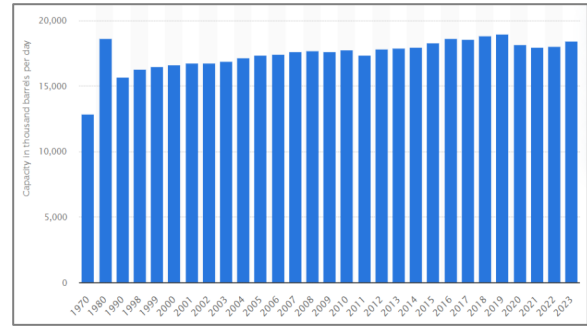
² Example: Princeton Univ., [The Petroleum Refining Industry](#), p. 89, ["...this subsidy program established extremely attractive investment opportunities for **very small, simple refineries, and many were quickly built. Very few of them could produce gasoline, and many used high-quality crude in the simple production of fuel oil instead of producing higher quality products.**"]

³ A) **PACIFIC REFINERY**, Hercules, CA, a small straight-run refinery had the worst refinery record in the Bay Area (hundreds of complaints per year) despite being smallest. CBE staff were present in BAAQMD 1990s deliberations, before 1997 closure. BAAQMD took unprecedented steps due to impact severity – taking dozens of neighbor declarations of health impacts to support air quality enforcement. **Contra Costa County Health Dept. found striking evidence of acute impacts: nausea, coughing, headaches, pre-asthma conditions, more. During one release, children were carried out of school on stretchers, vomiting from high levels of sulfur compounds.** CBE staff were regularly called by neighbors, including when panicked residents reported visible emissions into their windows. Also see The Record, Sept. 28, 1995, [here](#): ["**HERCULES -- A chemical release at a refinery Wednesday sent 41 people from a nearby private school for the developmentally disabled to hospitals. . . . Fumes caused by the mixture of two chemicals, naphtha and mercaptan, made 41 people at the Spectrum Center School ill. The symptoms included headaches, nausea and vomiting.**"]

B) **POWERINE REFINERY**, Santa Fe Springs, CA, history of breakdowns: ["Each morning, Stella Wells peeks out the door. . . takes a deep breath and checks which way the wind is blowing. If the sulfur smell of rotten eggs is in the air, Wells keeps the children indoors. **If the wind is blowing from the direction of the Powerine Oil Co. refinery, Wells keeps the children indoors. It is a routine Wells began ... after the refinery ... released a sulfur cloud that left three children in her care gagging and gasping for breath.**"] LA Times, [Nov. 27, 1988](#).

⁴ For example, see [Stand-earth and Community Energy reSource Comments - Attachment 2 re Imports and Exports](#) . . . , Greg Karras and Matt Krogh, 11/21/23, submitted to CEC via docket 23-OIR-03

U.S. refinery capacity similarly grew from the 70's to 2020 (it did not shrink, despite smaller refineries closing) – until the pandemic cut demand somewhat. As in California, over time small refineries in other states closed, big ones got bigger. The chart at right shows **Oil Refinery Capacity in the U.S. from 1970 to 2023, in thousands of barrels/day⁵.**



B. Air Pollution of the past killed hundreds of thousands per year, and still kills thousands per year: fuels refineries make are responsible for most of this

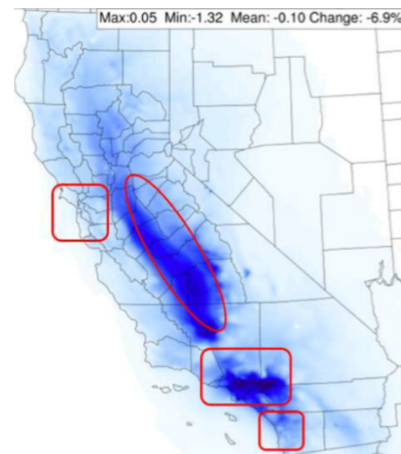
Although seemingly obvious, this reality gets lost in repetitive arguments of the oil industry for expansion or preservation: **The reason it is essential to eliminate use of fossil fuels is because they cause deadly air pollution and climate disaster, which cannot otherwise be solved.** Our state agencies need to defend these basic facts against oil industry obfuscation.

We agree progress has been made—through regulation. Air pollution was so bad in the 1970s (and even worse earlier) that improvements in fuel efficiency and emissions controls were necessary to avoid the most extreme health impacts. The huge numbers of deaths due to air pollution in the past can't be calculated. **But even after decades of work that greatly cut air pollution, 200,000 deaths per year still occurred in the U.S. due to air pollution, with California deaths the highest (~21,000 per year), according to a 2013 MIT study.**⁶

Motor vehicles still cause thousands of deaths per year in California.

The benefits of electrifying transportation are vast⁷ (air quality improvements graphed at right in blue shading). Benefits are most dramatic in LA and the Central Valley, but are statewide.

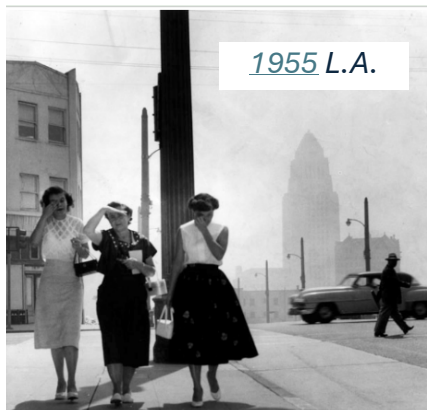
- **2,265 premature deaths/year avoided, plus extensive avoided hospitalizations, school loss days, asthma impacts**
- **~\$20 billion/year saved.**



⁵ Available at Statista.com, [Oil refinery capacity in the United States from 1970 to 2023](#) (in 1,000 barrels per day), published by Statista Research Department, Jul 8, 2024.

⁶ *Air pollution causes 200,000 early deaths each year in the U.S.*, New MIT study finds vehicle emissions are the biggest contributor to these premature deaths, Jennifer Chu, , August 29, 2013, available [here](#).

⁷ *Quantifying the Air Quality Impacts of Decarbonization and Distributed Energy Programs in California* E3, 2021, pp. 6-7, available [here](#).

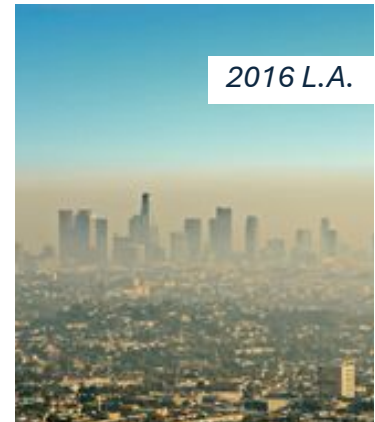


1955 L.A.

Water and Power museum.



1986 L.A.



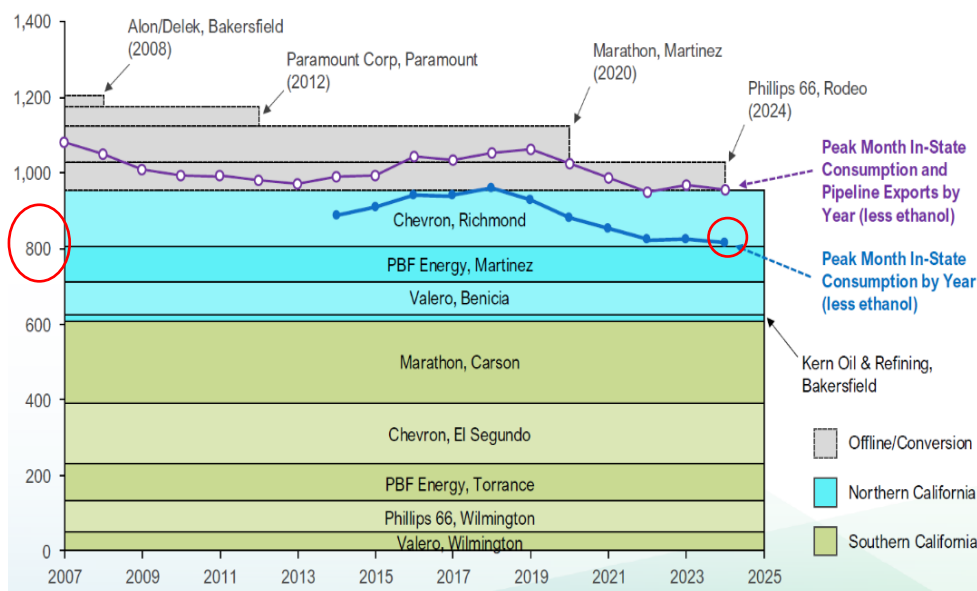
2016 L.A.

iStock Credit Daniel Stein

There are many additional health impacts from fossil fuels, including refinery chemicals known to cause cancer, neurotoxicity, and more. The need to replace fossil fuels is essential for public health. And climate disaster is already upon us, only to get far worse without fossil fuel phaseout action.

C. Even after two recent major refinery closures, average supplies are *still* sufficient to meet in-state demand (because the pandemic, fuel efficiency, and EV sales cut demand, while some refineries outcompeted others)

Two major crude oil refiners in Northern California - Marathon Martinez and Phillips 66 Rodeo - closed in 2020 and 2024, respectively, to become biofuel refineries, cutting substantial volumes of gasoline production from the market. CEC provided the following chart in its 2024 Fuels Assessment.⁸ Grey bars are closed refineries.



Despite the closures:

The blue dotted line shows peak in-state demand was always lower than refinery capacity.

⁸ California Gasoline Supply Constraints and Potential Solutions, CEC and DPMO, September 19, 2024, Slide 6

D. California will *still* have sufficient average capacity after Phillips 66 LA closes at the end of 2025

In October, 10/16/24 Phillips 66 suddenly announced it would shutter the Los Angeles refinery complex (in Wilmington and Carson - [Business Wire](#)). These two parts of the refinery work together as one integrated refinery. It appears Phillips' hundreds of workers and contractors who will lose jobs were not provided advance notice. There is no doubt this is devastating to refinery workers, though the relief from air pollution is a welcome surprise to neighbors.

What will happen to California fuel supplies after Phillips 66 LA closes late 2025?

- **California 2024 *in-state* gasoline demand was ~800,000 barrels per day (bpd) before the Phillips LA closure** (minus ethanol, which is provided by parties outside refineries). (CEC chart above, with red circles added).
- **The chart also shows ~150,000 bpd average extra capacity above California in-state demand in 2024** (used to export finished fuels out of California).
- **CEC also found demand will go down an additional ~25,000 bpd lower in 2025⁹, and again by ~25,000 bpd in 2026**, due to electric vehicle sales.
- **Even after the Phillips closure (with ~85,000 bpd gasoline capacity¹⁰), this leaves ~100,000 bpd extra in average capacity above demand.**¹¹ Phillips also stated it will continue to supply fuels to California's market through its terminals as needed, after it closes the LA refinery.

Therefore California can still meet average gasoline demand through in-state refining capacity even after Phillips LA closes, because of success lowering demand for polluting fossil fuels.

Some tried to blame the Governor and California regulations ([LA Times, 10/17/24](#)) for the Phillips closure plans, but Phillips itself stated this was untrue: [Phillips 66's Los Angeles-area refinery closure not due to new California regulations: company](#), Oct. 17, 2024.

- Phillips reported the refinery is closing due to business plans, after 4 years looking for a buyer, and when the company realized the value of the real estate is very high.
- Professor Borenstein, U.C. Berkley's Haas School of Business, stated that **gas prices are unlikely to be affected by the closure**. (ABC7 reporting, [10/18/2024](#)).
- Phillips stated its intent to continue supplying gasoline through its terminal, and that it may cash in on the valuable land: [Hydrocarbon Processing](#), 10/16/24. *"With the long-term sustainability of our Los Angeles Refinery uncertain and affected by market dynamics, we are working with leading land development firms to evaluate the future use of our unique and strategically located properties near the Port of Los Angeles".*

⁹ 400 million gals/year / 365 days/ yr / 42 gals/barrel = 26 thousand barrels/day (bpd).

¹⁰ Phillips Wilmington and Carson total capacity is ~ 139,000 bpd. CEC estimated 60% is gasoline production for each refinery in its chart. This is consistent with Phillips website: 85,000 bpd gasoline production, [here](#).

¹¹ ~150,000 slack 2024 + 50,000 demand reduction 2025 & 2025 – 85,000 Phillips LA gasoline production closure 2025 = ~115,000 average cushion end of 2026 (or ~90,000 end of 2025).

Community members who live up against the Phillips refinery have been subject to **repeated fires, flaring, and accidents from this and other local refineries, and found the closure a welcome surprise.** [LA Times, 10/18/2024](#), found: “. . . in recent years, complaints of acrid odors, fiery accidents, soot and harmful emissions have gained new resonance . . .” **Sample photos of Phillips 66 Wilmington and Carson taken by CBE staff and members:**



Phillips 66 Wilmington is located directly on community residential fencelines



E. Sufficient average capacity is different from further tightened capacity when accidents cause long closures, when industry fails in maintenance

CEC staff have identified the concern that if the remaining refineries have unexpected accidents and long unplanned outages – these can truly constrain supplies even when existing refineries have sufficient average annual capacity to meet demand. Consequently, the state is planning how to resupply the market, also to keep prices from spiking.

Refineries were found to repeatedly delay maintenance and cut other corners, for example:

- The U.S. Chemical Safety Board (CSB) found: **"In 2012 alone, the CSB tracked 125 significant process safety incidents at U.S. petroleum refineries. Seventeen of these took place in California." (2013)** Despite subsequent regulation, major accidents have continued through 2025.
- **Chevron 2012** - Aug. 6, 2012 - Explosion was caused by repeated failure to fix thinning metal on crucial equipment identified in 2002, 2009, and 2011 but left unrepaired. Even after the hot distillation unit started leaking, Chevron did not shut down, operating until the explosion. 19 workers miraculously escaped. A massive black plume blew miles over the community - see dramatic [US CSB animation](#).
- **Torrance 2015** – This explosion caused a near-miss from a deadly Hydrogen Fluoride (HF) release: a 40-ton piece of equipment flew through the air, landing within feet of a tank of HF tank. White residue from other units blew over houses for miles around. Luckily, workers had evacuated before the explosion, after personal gas alarms sounded. CSB found causes were deficient safety procedures, equipment use beyond safe life, and re-use of old variance procedures without full analysis. ([2/18/15](#)).
- **Martinez 2025** – After a major fire closed the PBF Martinez refinery for months, Federal, State and Local California Leaders Released a Joint Statement:¹² **"Having had 30 years of dealing with the oil industry, it is past time for every federal, state, and local regulatory agency with jurisdiction over the Martinez Refining Company to act aggressively with all the statutory authority they have to hold the refinery accountable," said Rep. Mark DeSaulnier.** " . . . Without more aggressive oversight it is not a question of whether deaths will occur, but when given *the company's disregard for safety.*" The refinery is expected back to normal by the end of 2025, before Phillips LA closes.¹³ It illustrates anew the need for audits and regulatory action.

We propose that the solution to refinery outages is not having extra refineries, but to have stricter standards for refinery maintenance, to avoid such major accidents. Improving is not a simple task, but many solutions have been identified through US CSB reports and other agencies. CEC should recommend the state convene appropriate agencies to audit and improve refinery maintenance requirements to prevent long outages, including penalties for failures. **If safety cannot be improved, this further demonstrates the inherently polluting and dangerous nature of this industry.**

> No amount of extra refining capacity can make up for poor maintenance causing sudden explosions and fires, removing capacity from the market for months, endangering workers and community members, and causing price spikes.

¹² Federal, State and Local California Leaders Release Joint Statement on the Martinez Refinery Fire February 5, 2025, Press Release, available [here](#).

¹³ Investing.com, 3/6/2025, [here](#).

II. What are options going forward to prevent constrained supplies and price gouging, and protect health and safety?

A. We need to harmonize fuel security with health & safety, & Just Transition


CBE and APEN supported the following principles for CEC's Fuels Assessment in 2024, detailed in written comments,¹⁴ with parts simplified graphically below from CBE slides. Our overarching message was the need to approach transportation fuel supply not only to ensure sufficient volumes, but to meet requirements on climate change, smog, and Environmental Justice while harmful fuel production declines. We agree with CEC's evaluations supporting the need to avoid a "lumpy" transition away from fossil fuels (to prevent sudden, unplanned closures that disrupt the economy, jobs, the tax base, and leave behind contaminated land).

SBX1-2 requires transportation fuels planning for a reliable, safe, equitable, affordable transition away from petroleum fuels, in line with declining demand.¹⁵ This requires:

- 1) **Ensuring Safe Fuels–Zero emission** (transportation electrification, not fossil fuels or biofuels, which emit greenhouse gases and smog precursors, or produced in dangerous operations that explode);

1 
Add SAFETY
framing
- avoid smog & climate disaster due to fossil fuels

2 
Begin
REGULATION
to Lower Refinery
Production &
Emissions (gradually)

3 
Expand programs to
CUT DEMAND for
gasoline & diesel
(EVs, transit,
walk/bike)


- 2) **Measures to Lower Refinery Production (supply) steadily**, in line with lowering demand;


- 3) **Expand programs to cut demand**- more support for transportation electrification, public transit, and walk/bike;

- 4) **Smooth out the lowering of refinery production**, evaluating impacts of exports, supporting fuel reserves, penalizing price gouging, and modeling the potential of Partial Refinery Shutdown of duplicate units in large refineries to avoid premature whole-refinery shutdown.

4a
Evaluate
EXPORTS
- may cause Cal. shortages & price gouging


4b
Require **FUEL RESERVES**
Storage ahead of refinery maintenance shutdowns


4c
Penalize **PRICE GOUGING**, pay low-income consumers


4d
Use **PARTIAL SHUTDOWN** pathway (shut duplicate units first)


¹⁴ For example, Comments of CBE & APEN submitted to CEC on Feb. 28, 2024 and 5/17/2024, available in CEC [docket 23-SB-02](#), on 4/2/2024 in CEC [docket 23-OIR-03](#), on 4/25/2024 in CEC [docket 23-OIIP-01](#)

¹⁵ SBX1-2, 25371.3, available [here](#).

B. There are many other documents useful to this proceeding

There are many additional comments and documents in the record submitted by Environmental Justice and other organizations, and presentations by the CEC, DPMO, and other parties which we will not attempt to list at this time. (CEC's 2024 Fuels Assessment forms an important basis going forward.)

ABX2-1 proceedings in the fall of 2024 also provide very useful materials, and the CEC may want to provide the committee and the public with easy links to these, since they no longer appear to be easily accessible online.

All of these provide important background supporting robust discussions for the ICFA, during this time of transition out of destructive fossil fuels, moving toward clean transportation, in a steady, equitable manner.

Thank you for your consideration and efforts.

Sincerely,

Julia May, Senior Scientist, CBE

Cc:

CEC staff
DPMO