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# Attachment 2 to Comment recommending monthly online reporting of oil and refined fuels imports and exports

The uploaded material includes a six page comment letter with two tables, two charts, and one attachment, Attachment 2. Please note that Attachment 1 to this comment, a spreadsheet containing data provided by the Commission to the public, could not be uploaded to this portal in a format which would be user-friendly for independent verification of our analysis, and has been submitted via email to Docket 23-OIR-03

Additional submitted attachment is included below.



21 November 2023

Siva Gunda, Vice Chair California Energy Commission 715 P Street Sacramento, CA 95814

## Comment Regarding Docket No. 23-OIR-03, General Rulemaking Proceeding for Developing Regulations, Guidelines, and Policies for Implementing SB X1-2 and SB 1322 including those for the Petroleum Industry Information Reporting Act (PIIRA)

#### Dear Commissioner Gunda,

By this letter Stand.earth and Community Energy reSource provide an initial response to your invitation to comment on the California Energy Commission (CEC) proposal to update and improve the transparency and accuracy of PIIRA reporting.

We recommend monthly online reporting of crude oil and refined fuels imports and exports across the California border as a foundational next step toward the state's goal of a "reliable, safe, equitable, and affordable transition away from petroleum fuels in line with declining instate petroleum demand." Refining for export threatens this goal. Recent positive steps by the Commission toward transparent sharing of fuels import and export data allow comparisons with other data sources that further support this measure's need and feasibility. Available evidence reveals some additional refinery feedstock- and fuel-specific reporting needs, detailed below.

#### 1. Need for transparent, timely and accurate import-export reporting

California crude oil production is declining, as is the regional fuels market refineries were built here to access, leading to an increase in refining of imported oil for export fuels.<sup>1</sup> Emissions associated with fuel exports by refiners in California during 2013–2019 (including direct emissions from extracting imported oil used to refine the exports, refining that oil to produce the exports here, and burning the exported fuels) totaled approximately 930 million tons  $CO_2e^{.1}$ By late in the last decade roughly one-third of fuels refined in California—and more than 90 percent of petroleum coke refined here—was exported to other states and nations.<sup>2</sup> By 2022 excessive refining for export was implicated in a record gas price spike.<sup>3</sup> More than a decade earlier a switch to higher-sulfur, more corrosive imported crude contributed to the disastrous 21 November 2023 Vice Chair Gunda Page two

2012 Richmond refinery fire that caused some 15,000 residents to seek emergency medical care.<sup>4</sup> California communities who host refineries face local emission hot spots exacerbated by export refining that is fed by high-carbon crude imports from the Amazon Headwaters, Iraq, Alaska, and Canadian tar sands.

The California Air Resources Board (CARB) notes: "To manage the phasedown of oil and gas extraction and petroleum refining in California, exports of finished fuels must be considered and factored into that process, in addition to the declining in-state demand."<sup>5</sup> But there is no comprehensive state-supported import-export database that includes all refinery feedstocks and refined products for the public to consider. Transparent, accurate data sharing is needed.

## 2. CEC gasoline, diesel and jet fuel import-export data

We greatly appreciate your and your staff's initial positive steps toward solving this data transparency and accuracy problem. In particular, staff's recent response to our query provided a spreadsheet containing monthly gasoline, diesel, and jet fuel imports and exports via various transport modes (Attachment 1) and helped to confirm our view regarding current strengths and weaknesses in the underlying data (Att. 2).

This evidence shows that the Commission can report monthly imports and exports of gasoline, diesel, and jet fuel to the public.

Our preliminary review of these data further supports the accuracy and reliability of previously available annual and multi-year average export data. In one example, foreign exports of gasoline and gasoline blendstocks from January 2012 through June 2023 reported by the Commission (104 million barrels) fall within six percent of those reported by the U.S. Census (110 MM b).<sup>6</sup> Similarly in the same period, foreign exports of diesel reported by the Commission (181 MM b) fall within five percent of those reported by the U.S. Census (189 MM b).<sup>6</sup>

In a second example, across the pre-COVID years 2015–2019 annual estimates of statewide gasoline and diesel demand based on the Commission's export, import, refining, and stocks data compare reasonably well to demand estimates from CARB and the US EIA. See tables 1 and 2.

1. Gasoline: Annual California demand estimates based on CEC data are within 0-4
percent of CARB and US Energy Information Administration estimates, 2015–2019.

MM b/y	Net Prod.a	Stock $\Delta^a$	Imports <sup>b</sup>	Exports <sup>b</sup>	Demand °	Demand <sup>d</sup>	Demand <sup>e</sup>
2015	378	- 1.50	27.8	38.3	369	364	358
2016	401	+ 0.20	20.2	42.4	378	371	365
2017	409	+ 2.28	14.6	46.9	375	374	367
2018	404	- 1.65	13.3	50.4	368	370	366
2019	381	+ 0.64	27.7	46.4	361	369	360

**Note:** Relatively close agreement of various demand estimates supports the CEC import and export estimates. **a:** CEC Fuel Watch; https://www.energy.ca.gov/data-reports/reports/weekly-fuels-watch. **b:** CEC Attachment 1. **c:** Calculated as product supplied: net production – stock change + import – export. **d.** CARB GHG Inventory, 2022 Edition, https://ww2.arb.ca.gov/ghg-inventory-data. **e.** US Energy Information Administration State Energy Consumption Estimates; Table CT 1, www.eia.gov/state/seds/sep-use/notes/use\_print.pdf

# 2. Diesel: Annual California demand estimates based on CEC data are within 1–8 percent of CARB and US Energy Information Administration estimates, 2015–2019.

MM b/y	Net Prod.a	Stock ƻ	Imports <sup>b</sup>	Exports <sup>b</sup>	Demand °	Demand <sup>d</sup>	Demand <sup>e</sup>
2015	137	+ 0.31	6.41	43.81	99.2	98.6	98.3
2016	130	- 0.26	5.01	39.60	95.2	100.5	97.2
2017	135	- 0.03	8.24	43.82	99.4	101.8	100.3
2018	135	- 0.05	11.51	45.18	101.8	105.0	100.0
2019	132	+ 0.94	12.85	47.71	95.9	104.4	98.4

Note: Relatively close agreement of various demand estimates supports the CEC import and export estimates. a: CEC Fuel Watch; https://www.energy.ca.gov/data-reports/reports/weekly-fuels-watch. b: CEC Attachment 1. c: Calculated as product supplied: net production – stock change + import – export. d. CARB GHG Inventory, 2022 Edition, https://ww2.arb.ca.gov/ghg-inventory-data. e. US Energy Information Administration State Energy Consumption Estimates; Table CT 1, www.eia.gov/state/seds/sep-use/notes/use\_print.pdf

In a third example, we compare the Commission's monthly data for gasoline and diesel exports to other nations with those from the US Census Bureau<sup>6</sup> during the period from January 2012 through June 2023. Charts 1 and 2 reveal a close match between the two data sets with respect to the timing of substantial monthly, seasonal and interannual swings in export volumes. A few differences in the volume of monthly peaks are evident (see charts), and these seem to appear more frequently in more recent years, suggesting that one or both export measurements may be affected by our accelerating energy transition. Indeed, independent verification of the reason(s) for the observed monthly discrepancies is another reason for transparent data sharing now. Yet again, the comparisons of annual and multi-year export data noted above support their general accuracy for purposes of multi-month and multi-year analyses.





# 3. Fuel- and feedstock-specific suggestions

We recommend publicly accessible online reporting of petroleum and petroleum product imports and exports across the state borders with a minimum reporting frequency of monthly. Some fueland feed-specific considerations and suggestions are outlined in this section.

3.1 Gasoline and diesel

Report volumes for the fuel category including CARB as well as non-CARB product, distinguishing the transportation mode (e.g., pipeline, marine vessel, rail) and their origin and destination (e.g., export from N. California to Arizona; import from foreign or domestic source to S. California) as shown in Attachment 1 and discussed in Attachment 2. Consider including movements from other US refining districts to Arizona and Nevada because, for example, this could help in tracking the displacement of other supply sources by California refinery exports.

3.2 Diesel-additional suggestion

We have the same suggestions as for gasoline (above), and further note significant ongoing changes in supply and demand which are being driven by refinery conversions here to produce "renewable diesel" and low carbon fuel standards in states to the north. Consider reporting the volume of each type of biomass-based substitute for petroleum diesel which is imported and exported monthly.

3.3 Jet fuel

With the exception of distinguishing CARB product (which may not be necessary for jet fuel), we have the same suggestions as for gasoline and diesel (above), and further suggest that it may be useful to break out volumes of in-state fueling for US government (military) flights, commercial passenger flights, and commercial air freight.

## 3.4 Other refined liquids

All other exported refined liquids, such as No. 5 and No. 6 fuel oils, should be reported. This is needed to confirm the disposition of Fuel Watch "residual" production.

3.5 Petroleum coke

We suggest reporting petroleum coke imports and exports across state borders monthly. Note that the US EIA does this online for exports aggregated across the West Coast (PADD 5),<sup>7</sup> and the Bureau of the Census does this online for exports from California to other nations.<sup>6</sup>

3.6 Crude oil feeds

We suggest reporting the volume, sulfur content, and density of crude oil imports from each country of origin, processed at each individual refinery, each month. We note that the US EIA does this online reporting for each foreign crude oil import processed at each refinery in the United States.<sup>8</sup> Refinery-specific feedstock volume and quality is often critical to analysis of refinery emission, process safety, maintenance, and outage issues.

3.7 Gas oil feeds

We suggest reporting the country of origin and volume of heavy gas oil imports processed by each individual refinery each month, and note that the US EIA does this online reporting for each foreign gas oil import processed at each refinery in the US. At least two California refineries rely on separately "imported" gas oil feeds in volumes which exceed those they report importing from other nations. And again, refinery-specific feedstock volume and quality is often critical to analysis of refinery emission, process safety, maintenance and outage issues.

# Closing

Thank you, in advance, for considering these preliminary comments. If you or your staff have a question about them please let us know. We hope to continue and build on our discussions toward a just transition from petroleum technology-based combustion fuels.

Greg Karras Community Energy reSource gkarrasconsulting@gmail.com Matt Krogh Stand.earth mattkrogh@stand.earth 21 November 2023 Vice Chair Gunda Page six

## References

1. CEJA, 2022. Climate Pathways in an Oil State—2022. A California Environmental Justice Alliance Report. Prepared by Greg Karras. Available at www.energy-re-source.com/publications

2. State Data Reveal Refining for Export. A Community Energy reSource fact sheet. Revised June 2023. Available at https://www.energy-re-source.com/latest

3. Refiners exported inventory in run up to record gas price spike. A Community Energy reSource fact sheet. Revised 18 Nov 2023. Available at https://www.energy-re-source.com/latest

4. Testimony of Greg Karras on behalf of Communities for a Better Environment, 19 April 2013, Project: Interim Investigation Report, Chevron Refinery Fire. See written testimony available at https://www.energy-re-source.com/expert-opinions

5. CARB, 2022. 2022 Climate Change Scoping Plan. See November 2022 Revisions, page 101.

6. U.S. Bureau of the Census; https://usatrade.census.gov. Data for harmonized codes as follows. Gasoline: 2710121510, 2710121514, 2710121519, 2710121805, 2710121890. Diesel: 2710191106, 2710191109. Petroleum coke: 2713110000, 2713120000.

7. US Energy Information Administration (EIA); *West Coast (PADD 5) Supply and Disposition;* https://www.eia.gov/dnav/pet/pet\_sum\_snd\_d\_r50\_mbbl\_m\_cur.htm

8. US Energy Information Administration (EIA); *Company Level Imports;* https://www.eia.gov/ petroleum/imports/companylevel/

#### Attachments

1. Excel spreadsheet electronically labeled "Data Import Export data for California Gasoline\_ Diesel\_Jet" including 11 tabs: Gasoline Data; Gasoline Breakdown; NC Gasoline; SC Gasoline; Diesel Data; Diesel Breakdown: NC Diesel; SC Diesel; Jet Fuel Data; NC Jet Fuel; SC Jet Fuel.

2. Eggers, Ryan. Personal communication with G. Karras, 7 Nov. 2023. Screenshot of email correspondence between Ryan Eggers, California Energy Commission and Greg Karras, Community Energy reSource regarding "Data request related to PIIRA–questions."

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	RE: Data request related to PIIRA-questions Inbox ×						Ø	Ø
C	← Eggers, Ryan@Energy <ryan.eggers@energy.ca.gov> to me, Chad@Energy, Andrea@Energy, Eric@Energy ▼</ryan.eggers@energy.ca.gov>					C Nov 7, 2023, 9:31AM (11 days ago)	¢	1

Hello Greg:

The numbers that were in the Excel file you attached in your email (reattached) were for marine, pipelines, and rail movements. Trucks movements are the only movement excluded as sizes are negligible.

Numbers provided within the spreadsheet attached are a combination of CEC-M700, State Lands Commission data, Kinder Morgan Pipeline data, UP and BNSF rail information, EIA, and iPIERs data.

Regarding your question about "CARB" specific product, the information for import/export movements are often not specific enough/tend to disagree between different datasets. Based on TFDAU experience with this information, staff has little confidence in making a CARB versus another type of fuel specific determination for many of these fuels and components.

Ryan Eggers Supervisor, Transportation Fuels Data & Analysis Unit California Energy Commission

From: G Karras <<u>gkarrasconsulting@gmail.com</u>> Sent: Friday, November 3, 2023 3:15 PM To: Eggers, Ryan@Energy <<u>Ryan.Eggers@energy.ca.gov</u>> Subject: Data request related to PIIRA–questions

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Mr. Eggers, this follows up on my voice message a few minutes ago. I'm hoping to schedule a short phone call to clarify the scope of public records regarding petroleum importexport data before making a written records review request in the next few days. My questions relate to comparing the current M700 reporting format with the electronic database excerpt your staff provided to Consumer Watchdog (attached). Were any import or export modes in form M700 excluded from the attached public records response? Also, are aggregated data for imports and exports of CARB Reformulated gasoline and CARB diesel deemed public records, in addition to those for the "gasoline" and "diesel" exports shown? Thanks in advance for your help with these questions. I realize it might be more efficient to discuss them by phone, and if so, I could schedule a short phone call next week with you or your staff for any time Monday or Tuesday morning or late afternoon. GK

Greg Karras, G Karras Consulting Community Energy reSource (415) 902-2666 www.energy-re-source.com

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