

## 3 Responses to Comments

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### 3.1 Introduction

This chapter includes copies of the written comments received electronically via gary.kupp@dcd.cccounty.us by email, or by mail during the public review and comment period on the Draft EIR. This chapter also presents consolidated Master Responses that address recurring comments or topics raised throughout individual comment letters.

As required by CEQA Guidelines Section 15088(c), the focus of the responses to comments is “the disposition of significant environmental issues raised.” Therefore, detailed responses are not provided to comments that do not relate to environmental issues. However, in some cases, additional information has been added for reference and clarity.

### 3.2 Master Responses

Because several of the comment letters received had similar concerns relating to the Draft EIR, a set of consolidated responses, or “Master Responses”, were developed to address common concerns and avoid repetition within this chapter. References back to these Master Responses are made throughout the individual responses presented in this chapter:

- Master Response No. 1 CEQA Baseline
- Master Response No. 2 CEQA Alternatives
- Master Response No. 3 Cumulative Impacts
- Master Response No. 4 Land Use and Feedstocks
- Master Response No. 5 Renewable Fuels Processing
- Master Response No. 6 Purpose of the Project
- Master Response No. 7 Project Description – Piecemealing
- Master Response No. 8 Non-CEQA Topics and Project Merits

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## **MASTER RESPONSE NO. 1 CEQA BASELINE**

Comments received state that if the Rodeo Renewed Project does not obtain applicable agency approvals, or otherwise does not become operational, Phillips 66 would decrease and eventually cease petroleum refining at the San Francisco Refinery, which consists of the Rodeo Refinery facilities (i.e., the Rodeo Site and the Carbon Plant) and the Santa Maria Refinery. Based on this, these comments assert that the Draft EIR's baseline methodology is flawed.

Section 3.13 of the Draft EIR describes the CEQA baseline used in the analysis. In summary, calendar year 2019 is the appropriate baseline year for all project impacts other than marine vessel emissions for, in large part, the following reasons:

- calendar year 2019 is the most recent full calendar year prior to the EIR Notice of Preparation release date (December 21, 2020);
- market conditions during 2020 were unusual due to the Covid-19 pandemic;
- emissions of the criteria pollutants nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), precursor organic compounds (POC), and GHGs were lower in 2019 than in 2018 and, therefore, more conservative for the Draft EIR analysis due, in part, to lower annual throughput; and
- further reduction in SO<sub>2</sub> from 2018 to 2019 reflects the installation of sulfur oxides control equipment at the Carbon Plant to comply with lower SO<sub>2</sub> emission limits in BAAQMD Regulation 9 Rule 14 that went into effect January 1, 2019.

Also, the most recent 3-year (2018-2020) average for facility emissions is higher or similar to the baseline of 2019. Although they are similar, 2019 was chosen as the baseline year for the facility emissions due to the modifications implemented at the Carbon Plant as a result of BAAQMD Regulation 9, Rule 14. In addition, neither a 5-year nor 3-year average baseline was selected because neither would be representative of the emissions under this regulation. Further, a 2019 baseline year requires analysis of greater project emissions impacts relative to an average baseline period and also reduces the amount of emissions reduction credits that can be claimed when the Carbon Plant is shut down. Thus, for all Project emissions other than marine vessel emissions, 2019 is a more conservative baseline than is a 3-year or 5-year average.

The facts surrounding marine vessel emissions require that a different baseline be used. As explained in Section 3.13.3 of the Draft EIR, vessel activity has a different operational cycle than facility emissions and vessel activity varied as much as 50 percent year-to-year when comparing the years between 2016 and 2020. For the reasons set forth in the Draft EIR, the 3-year average from 2017 to 2019 was chosen as the appropriate baseline for marine vessel emissions.

Comments state, however, that these baselines are inappropriate, and instead suggest that the appropriate baseline is a future scenario under which neither the Rodeo Refinery nor the Santa Maria Refinery exist. The County considers this an inappropriate baseline since it relies on a hypothetical future scenario and would be inconsistent with the requirements of CEQA.

The general premise of comments is that the petroleum refining industry is economically and operationally challenged and, therefore, any particular refinery would be pressured and/or will shut down in the near term. From this general premise, comments state that the Rodeo Refinery and Santa Maria Refinery, are geographically- and design-challenged, such that these negative national refining pressures will be magnified at these facilities. However, this is not accurately based on how the Rodeo Refinery operates. The comments state that the baseline should be based on a hypothetical scenario of no future refinery operations, rather than actual facility emissions. As discussed below, the County has determined that this suggested approach would result in an inadequate EIR that misinforms the public and agency decision-makers.

### ***CEQA Guidelines and Baseline Requirements***

CEQA Guidelines require that the baseline is the point in time or the set of conditions against which expected future environmental conditions associated with the Project are compared. Changes in the baseline environmental conditions resulting from a project represent the project impacts that must be disclosed under CEQA. Therefore, definition of an appropriate baseline is an integral part of the CEQA process.

Section 15125 of the CEQA Guidelines provides the following direction for establishing the baseline:

An EIR must include a description of the physical environmental conditions in the vicinity of the project, *as they exist at the time the notice of preparation is published*, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

The baseline year is typically selected as the year in which the Notice of Preparation ("NOP") is released for a proposed project. However, the lead agency has the discretion to select a more appropriate baseline year for purposes of the environmental analysis conducted in the EIR if conditions warrant such a selection. *Neighbors for Smart Rail v. Exposition Metro. Line Constr. Auth.*, 57 Cal.4th 439, 449 (2013) (agency has discretion to decide how existing physical conditions are to be realistically measured, subject to support by substantial evidence). The NOP for the Project was released in 2020 but, as described in the Draft EIR and above, 2020 was not an appropriate year for the Project baseline because of the Covid-19 pandemic and compliance with BAAQMD Regulation 9 Rule 14.

The California Supreme Court in *Neighbors for Smart Rail* made clear that the "default" or "norm" for an EIR analysis is "existing conditions." 57 Cal.App.4th at 454 (quoting CEQA Guidelines Section 15125(a) that an EIR "should normally limit its examination to changes in the *existing* physical conditions in the affected area"). The existing conditions "default" or "'norm" applies even if a project is predicted to operate many years or decades into the future:

The CEQA Guidelines establish the default of an existing conditions baseline even for projects expected to be in operation for many years or decades. That a project will have a long operational life, by itself, does not justify an agency's failing to assess its impacts on existing environmental conditions. For such projects as for others, existing conditions constitute the norm from which a departure must be justified—not only because the CEQA Guidelines so state, but because using existing conditions serves CEQA's goals in important ways. *Neighbors for Smart Rail*, 57 Cal.4th at 455.

The court in *Communities for a Better Environment v. South Coast Air Quality Management District*, 48 Cal. 4th 310, 322 (2010) ("CBE") determined that the actual existing physical conditions, not maximum permitted capacities, were to be used as the baseline. The court expressly rejected the maximum permitted capacities as a hypothetical operational scenario, stating: "An approach using hypothetical allowable conditions as the baseline results in 'illusory' comparisons that 'can only mislead the public as to the reality of the impacts and subvert full consideration of the actual environmental impacts,' a result at odds with CEQA's intent."

The future hypothetical operational scenario as baseline was addressed by the court in the *Neighbors for Smart Rail* decision and expressly stated that the CBE decision "did not, however, decide either the propriety of using solely a future conditions baseline or the standard of review by which such a choice is to be judged."

Comments received do not support the request to use a future conditions baseline scenario or where existing permitted operations were to be presumed not to exist for an adequate baseline. Other cases

indicate that recent historic levels of operations were appropriate for permitted operations, even where operations had ceased for several years.<sup>2</sup>

The court in *Cherry Valley Pass Acres & Neighbors v. City of Beaumont*, 190 Cal.App.4th 316 (2010) explained the flexible process afforded an agency in selecting an existing conditions baseline:

Though the baseline conditions are generally described as the "existing physical conditions in the affected area," or the "real conditions on the ground" (*CBE, supra*, 48 Cal.4th at page 321), "the date for establishing baseline cannot be a rigid one. Environmental conditions may vary from year to year and in some cases it is necessary to consider conditions over a range of time periods" (*id. at pages. 327–328*, quoting *Save Our Peninsula, supra*, 87 Cal.App.4th at page 125). Environmental conditions may also change during the period of environmental review, and temporary lulls or spikes in operations that happen to occur during the period of review should not depress or elevate the baseline. (*CBE, supra, at page 328.*) Accordingly, "[n]either CEQA nor the CEQA Guidelines mandates a uniform, inflexible rule for determination of the existing conditions baseline. Rather, an agency enjoys the discretion to decide, in the first instance, exactly how the existing physical conditions without the project can most realistically be measured, subject to review, as with all CEQA factual determinations, for support by substantial evidence. [Citation.]" (*CBE, supra, at page 328.*) *Cherry Valley Pass Acres & Neighbors v. City of Beaumont*, 190 Cal.App.4th at 336-337.

For the Rodeo Renewed Project, the County used actual existing operating conditions for a fully-permitted facility in determining baseline conditions, consistent with these court decisions. The comments assert that a hypothetical, future scenario constitutes the "inevitable near-term future conditions" and, therefore, the baseline assumed in the Draft EIR is inappropriate resulting in a deficient EIR.

Comments state that the appropriateness of a future baseline is based on evaluation of "[a]ll available information" that point to, or predict, that the Rodeo Refinery nor the Santa Maria Refinery would exist in the near-term future since there would be a reduced demand for crude oil production. The County determined that this prediction is not appropriate based on actual data for existing operations, and substantial information regarding the industry as a whole, particularly in California. Furthermore, the comments do not consider data regarding US crude oil production (EIA predictions for increases in 2022 and 2023 [EIA 2022a]), OPEC production and the price of crude, the capacity of US refineries, the impact of COVID-19, status of pipelines (OCS Plains pipeline [County of Santa Barbara 2022]) (EIA 2022b), and many other market components, all of which affect continued oil and gas operations. These numerous market variables demonstrate that the future cannot easily be predicted, and comments urging utilization of a baseline based on this speculative future scenario is not required by CEQA. Accordingly, the County properly relied on actual data for existing operations.

**Comment: Closure of the Santa Maria Refinery is not identified as part of the Rodeo Renewed Project.**

Comments state that the Rodeo Renewed Project Application "does not identify closure of the Santa Maria refinery as a component of the Project," implying closure of the Santa Maria Refinery as a reason why Rodeo Renewed Project is necessary. The Project Description section of the Draft EIR clearly lists the closure and demolition of the Santa Maria Refinery as part of the Project. (Section 3.9 describes "Project Components" and Section 3.9.3 is "Discontinue Use of Santa Maria Facility."). Because Phillips 66 proposes to convert its Rodeo Refinery from the refining of petroleum feedstocks to the manufacture of renewable feedstocks, its Santa Maria Refinery operation would become obsolete (the Rodeo Refinery is the sole outlet for petroleum feedstocks generated at the Santa Maria Refinery). In other words, because the Rodeo Refinery would no longer refine petroleum feedstocks, it would no longer need the Santa Maria

<sup>2</sup> *N. Cnty. Advocates v. City of Carlsbad*, 241 Cal.App.4th 94 (2015) (court upheld baseline determined by historic occupancy levels for permitted but vacant shopping center); *Cherry Valley Pass Acres & Neighbors v. City of Beaumont*, 190 Cal.App.4th 316 (2010) (court upheld baseline determined by historic water usage under entitlements although egg farm had ceased operating years earlier).

Refinery to ship petroleum feedstocks to the Rodeo Refinery. The project description accurately states that the Santa Maria Refinery would be idled and demolished as part of the Project.

**Comment: Infeasibility of an alternative indicates oil refining at the Rodeo Refinery is infeasible.**

The comment refers to the Draft EIR's evaluation of an alternative dismissed from further consideration (Draft EIR, page 5-3). Comments incorrectly state that all "continued crude refining" would be infeasible at the Rodeo Refinery without the Santa Maria Refinery. (NRDC, page 16.) The alternative – Continued Operation of Rodeo Refinery and Shut-Down of Santa Maria and Pipeline Sites – was rejected from further consideration as not meeting most of the Project objectives and as being infeasible. The Draft EIR explains that this alternative is infeasible because it would reduce operational capacity to 42 percent, underutilize existing facilities, and fail to provide transportation fuels to meet regional demand.

The assumptions used to define an alternative – particularly an alternative that is rejected from further consideration – do not necessarily reflect existing or anticipated future conditions for purposes of baseline. For example, this alternative assumes that the Santa Maria Refinery has been shut down and that no further action would be taken by Phillips 66 to increase deliveries of crude oil by other means, e.g., rail, truck, and marine terminal. It is unlikely that Phillips 66 would do nothing if the Santa Maria Refinery was required to shut down. Instead, as discussed below, Phillips 66, would assess the marketplace and pursue other operational opportunities to maintain asset viability. Accordingly, the Draft EIR properly determines that this alternative is infeasible, but that determination cannot be extrapolated to conclude that continued crude oil processing is impossible, as crude oil feedstocks could be delivered by other means to the Rodeo Refinery.

**Comment: Infrastructure constraints limit crude oil feedstocks.**

Comments state that infrastructure constraints limit the sources of crude for the Santa Maria Refinery, relying in large part on data from 2014-2020, which shows a decline in crude oil processing at the Santa Maria Refinery during that time period. However, the decline resulted primarily from shutdown of the Plains All American Pipeline ("Plains") pipeline segment in Central California that experienced a pipeline release near Gaviota, California in 2015. That segment of the pipeline, in part, allowed the Santa Maria Refinery to access California's offshore oil production via pipeline. In addition, Plains is progressing its plan to restart the pipeline, which would again allow transport of crude oil produced offshore of California to inland processing facilities, including the Santa Maria Refinery (County of Santa Barbara 2022). Restart of this pipeline would allow additional sources of crude oil in Central California to become available for processing in Central California.

Comments also state that infrastructure constraints limit the Rodeo Refinery to such a degree that if the Santa Maria Refinery is shut down, the Rodeo Refinery will not be able to sustain a historical level of operations (see e.g., NRDC page 18, concluding that the "only potential source of crude is the limited volume of crude it can bring in over the wharf at currently permitted volumes."). The baseline conditions used in the Draft EIR reflect actual production numbers from 2019 using existing infrastructure. Any existing constraints inherent in the infrastructure are taken into account as a part of actual operations.

If the Santa Maria Refinery were to shut down because of future economic, operational, or other reasons, the Rodeo Refinery can use its current infrastructure to obtain alternative sources and volumes of crude oil to replace crude oil historically obtained from the Santa Maria Refinery. In addition to receiving petroleum feedstock from the Santa Maria Refinery via pipeline, the Rodeo Refinery could obtain crude oil from Central California using the currently-configured Pipeline Sites (e.g., crude oil is currently gathered from Central California via Line 100's connection with Line 200 at a location that does not involve the Santa Maria Refinery), from tanker and barge vessels, and from trucks. Refer to Draft EIR, page 3-4 and

Figure 3-5: Pipeline Sites.<sup>3</sup> Although the quantity of feedstock delivered to the Rodeo Refinery via pipeline from the Santa Maria Refinery has been relatively low since 2015 because of the Plains pipeline release and shutdown, Rodeo Refinery petroleum refining has continued. The following table shows that the total processed inputs at the Rodeo Refinery has remained relatively steady from 2014 through 2020 (accounting for major turnarounds and the Covid-19 pandemic).

	2014	2015	2016	2017	2018	2019	2020
Crude Oil Processed at the Santa Maria Refinery (bbl/d)	40.4	31.1	30.6	30.1	28.9	26.7	25.7
Total Feedstocks Processed at the Rodeo Refinery (bbl/d)	126.3	126.2	117.3 <sup>a</sup>	124.3	125.4	119.9 <sup>b</sup>	103.9 <sup>c</sup>

<sup>a</sup> A major turnaround at the Rodeo Refinery in calendar year 2016 resulted in less feedstocks processed.

<sup>b</sup> A major turnaround at the Rodeo Refinery in calendar year 2019 resulted in less feedstocks processed.

<sup>c</sup> Total feedstocks processed at the Rodeo Refinery in 2020 were affected by the Covid-19 pandemic. This is consistent with what refineries throughout the United States experienced as well. The U.S. Energy Information Administration ("U.S. EIA") reported that "[r]efinery crude oil inputs and overall operations have been lower since the early 2020 start of the COVID-19 pandemic because of less demand for higher-value refined products such as gasoline and distillate." (The U.S. Energy Information Administration, *Petroleum & Other Liquids, This Week in Petroleum* (February 2, 2022); <https://www.eia.gov/petroleum/weekly>).

As explained further below, Phillips 66 and prior owners and operators of both the Rodeo Refinery and Santa Maria Refinery have consistently and appropriately adjusted operations to what is a volatile and dynamic marketplace and industry.

**Comment: The Draft EIR does not disclose the relationship between existing facilities and the Rodeo Renewed Project.**

Comments state that the Draft EIR fails to disclose the various components of the existing facilities and how they are related. The Draft EIR Chapter 3, Section 3.4, Project Sites is presented in part below. This section describes the existing facilities that would be affected by the Rodeo Renewed Project, including the Rodeo Site, the Carbon Plant, the Santa Maria Refinery and the Pipeline Sites.

**3.4 Project Sites**

**3.4.1 Terminology**

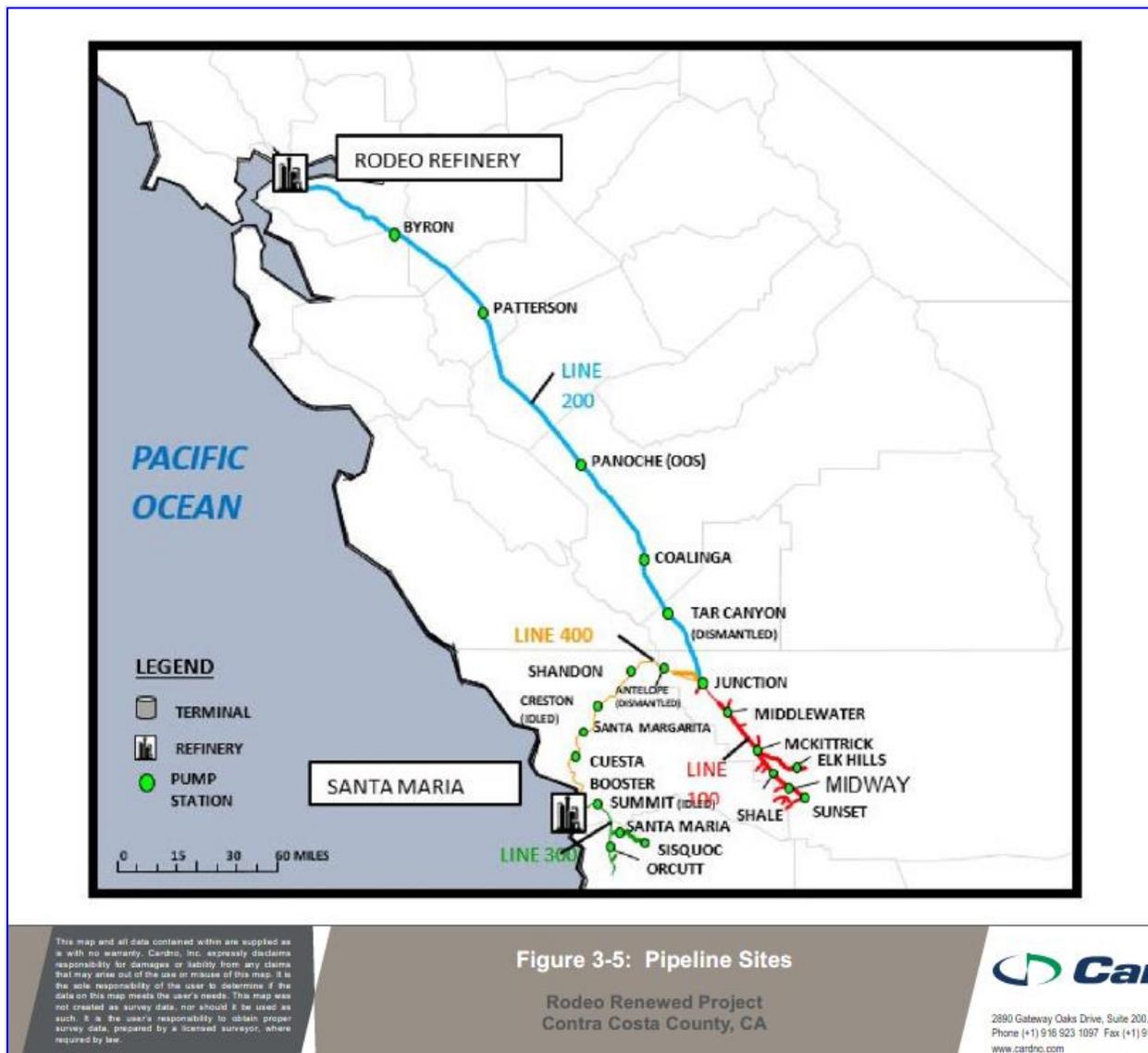
The Project consists of activities at several sites owned and operated by Phillips 66 located throughout the state. These sites include the Rodeo Site (Figure 3-2), Carbon Plant Site in nearby Franklin Canyon (Figure 3-3), Santa Maria Site in San Luis Obispo County (Figure 3-4), and Pipeline Sites locations (Figure 3-5). The following terminology is used in this document:

- **Rodeo Refinery** is used to describe the approximately 1,100 acres composing the current Rodeo Refinery, including the Carbon Plant, located approximately 1.5 miles east of the Rodeo Site;
- **Rodeo Site** refers to the 495 developed acres within the Rodeo Refinery where the main Project activities would occur;

<sup>3</sup> Crude oil from Central California fields and elsewhere is currently transported from source locations via Line 100 to Phillips 66's Junction Station, where it is mixed with a diluent for further transport on Line 200 northward to the Rodeo Refinery. One source of current diluent used for the Line 200 transportation leg is petroleum distillate provided by the Santa Maria Refinery. If the Santa Maria refinery were to cease operations, Phillips 66 could obtain alternative sources of diluent for the Line 200 transportation segment, including Elk Hills 18G, which is available in the marketplace, third-party naphtha, or alternatively, reduce the rate at which Line 200 operates, which proportionally requires that less diluent be added to the crude oil shipped northward.

- **Carbon Plant Site** refers to the current location of the Carbon Plant in Franklin Canyon (within the 1,100-acre Rodeo Refinery);
- **Santa Maria Site** refers to the Santa Maria Refinery, including the applicant-owned buffer land, located near Nipomo, San Luis Obispo County; and
- **Pipeline Sites** refers to the four pipelines (i.e., Lines 100, 200, 300, and 400) that transport crude oil and/or pressure petroleum distillate from the Santa Maria Site to the Rodeo Refinery.

As noted in the excerpt provided above, these are depicted in four figures, including Draft EIR Figure 3-5, Pipeline Sites, which depicts the locations of Lines 100, 200, 300 and 400.



Comments identify a discrepancy in the description of the lines on page 3-21, but this discrepancy does not alter the actual production numbers from existing operations that determined baseline conditions from 2019.

Section 3.4.4 of the Draft EIR is revised as follows:

### 3.4.4 Existing Pipeline Sites

The Project includes the Pipeline Sites—four regional pipelines serving the Santa Maria Site and the Rodeo Refinery. The Santa Maria Site is connected to the Rodeo Refinery by approximately 200 miles of subterranean pipeline (Figure 3-5), designated Line 400 and Line 200. Line 400 runs north and east from the Santa Maria Site through the Coastal Range of central California in San Luis Obispo and Kern Counties, a region of dry grassland, pasture, and open live oak woodland, to connect with Line 200 north of McKittrick. Line 200 runs northwest up the west side of the San Joaquin Valley, through a mixture of Coastal Range grasslands and pasture and San Joaquin Valley agricultural land, and then west to the Rodeo Refinery. Line 200 runs through Kern, Kings, Fresno, Merced, Stanislaus, San Joaquin, Alameda, and Contra Costa Counties. ~~Two other pipelines—Line 100 and Line 300—connect the Santa Maria Site to crude oil collection facilities elsewhere in California (Figure 3-5). Line 100 runs underneath San Joaquin Valley agricultural land and Coastal Range grasslands and pasture lands in Kern County, and Line 300 runs beneath agricultural land and grasslands in the Santa Maria Valley area in San Luis Obispo and Santa Barbara Counties.~~ Line 100 is used to transport crude oil from several collection facilities in Central California to Line 200 at the Junction Pump Station. Line 100 runs underneath San Joaquin Valley agricultural land and Coastal Range grasslands and pasture lands in Kern County (Figure 3-5). Line 300 connects crude oil collection facilities elsewhere in California to the Santa Maria Site and runs beneath agricultural land and grasslands in the Santa Maria Valley area in San Luis Obispo and Santa Barbara counties (Figure 3-5).

Comments state that additional analysis is required of historical feedstocks for the Santa Maria Refinery, and how future market trends may impact the types and locations of feedstocks for the Santa Maria Refinery in years to come. However, Phillips 66 has proposed to close the Santa Maria Refinery as part of the Rodeo Renewed Project, and as such further analysis of the Santa Maria Refinery is not related to or associated with any potential environmental impacts resulting from the Project.

**Comment: The Draft EIR improperly considered California's crude oil production in the baseline.**

Comments state, based on data cited in the comments, that California petroleum supplies are declining and therefore, Phillips 66 will discontinue operations at the Santa Maria Refinery. For example, the graphs provided show relatively steep declines beginning in 2015 in "Outer Continental Shelf oil resources accessible to the Phillips 66 Santa Maria Facility through pipelines" and "Decline in total economically accessible crude oil resources for the Santa Maria Facility." However, these graphs and other cited information do not explain that the declines beginning in 2015 are almost solely attributable to the shutdown of the Plains pipeline as a result of the Gaviota spill. Plains recently announced its intention to restart the pipeline. Refer to the previous discussion.

The comments also did not correctly account for the variability of future market forces. California production is heavily influenced by economic factors. The most important factor is, perhaps, the price of oil. If oil prices increase, which economics principles indicate will happen, assuming the scenario predicted in the comment that future supplies shrink, oil wells and techniques not employed currently (because the break-even point of oil prices is too low) will sequentially come online, increasing the supply of California crude oil. Therefore, a rise in crude oil prices will likely lead to technological advancements that, in turn, increase the supply of California crude oil.

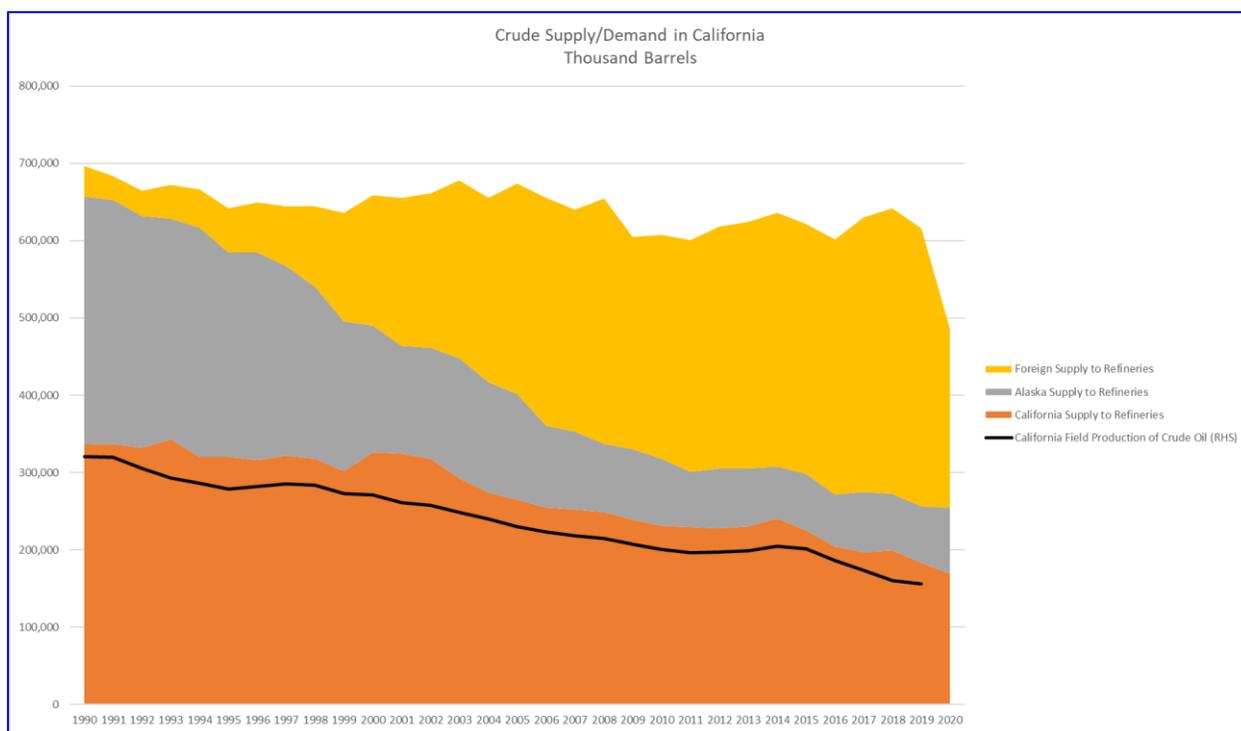
**Comment: Correspondence between Phillips 66 and the BAAQMD contradict actual baseline production numbers.**

Comments point to the September 6, 2019 letter from Carl Perkins (Phillips 66) to Jack Broadbent (BAAQMD) as evidence that expected crude constraints will necessarily lead to "processing rate curtailments at the Refinery" or a hypothetical baseline of no San Francisco Refinery. However, the letter also offers substantial evidence to the contrary. The letter begins with the following:

The viability of any manufacturing business depends upon the reliable availability of process inputs. The thoughtful advancement of the Marine Terminal permit application will greatly enhance the continued viability of the Rodeo Refinery if and when California-produced crude oil becomes restricted in quantity or generally unavailable as a refinery process input.

Comments characterize the request for increased throughput at the Marine Terminal as an indication that the Santa Maria Refinery and the pipelined petroleum feedstocks it supplies to the Rodeo Refinery are in imminent danger of abandonment. This Marine Terminal throughput project, however, was proposed in 2013, more than eight years ago. The Santa Maria Refinery continues in service today, and the baseline conditions in the Draft EIR are based on actual production numbers from 2019.

California refineries have been supplied over 600,000,000 barrels of petroleum feedstocks on an annual basis for the past 30 years (prior to the pandemic), with the sources from California, Alaska, and foreign markets (CEC 2020). In the past several years, the percentage of California sources has declined to approximately 30 percent, and foreign sources have increased. Contrary to assertions made in the comments, the decrease in California production has not reduced overall supply of petroleum feedstocks to California for refining. Based on data from the California Energy Commission (CEC), imports of petroleum feedstocks to California for refining have increased, as the chart below demonstrates.



The Rodeo Refinery is one of many refineries in California and increased imports to California may require new or modified permits, including air permits and the Marine Terminal project referenced by comments.

Further, the concessions referred to in comments were voluntarily proposed supply restrictions by Phillips 66 as a part of the permit processing at BAAQMD. Phillips 66 voluntarily proposed these restrictions on the types of crude oil that could be transported across the Marine Terminal because the supply of available petroleum feedstocks was sufficient to account for these restrictions, not because they were decreasing overall refining capacity or shutting down the Rodeo Refinery.

**Comment: Other permit proceedings contradict the EIR baseline numbers and reflect imminent closure of the Santa Maria Refinery.**

Comments point to three specific projects being considered in southern California, as evidence there are declining sources of crude indicating an acute operational need at the Santa Maria Refinery. These projects include the Santa Maria Refinery rail car project, ExxonMobil's temporary trucking project, and the Santa Maria pipeline replacement project. As discussed below, the three projects do not reflect the imminent closure of the Santa Maria Refinery.

The Santa Maria Refinery rail car project was proposed at a time when crude oil supply and demand economics, and transportation logistics and costs favored rail transportation of crude oil loaded elsewhere in the United States and shipped to the Santa Maria Refinery. The rail project is typical for the petroleum refining industry – as economics, markets, and logistics change, companies search for ways to optimize operations, particularly with respect to a petroleum refiner's main cost (i.e., crude oil inputs, including at the Santa Maria Refinery).

Since the rail car project was considered, rail imports of crude into California have been increasing steadily over the past five years prior to the pandemic from 1.7 million barrels in 2016 to 8.2 million barrels in 2019 (CEC 2019). Comments regarding the Santa Maria rail car project are not indicative of rail imports into California in general or whether other future rail projects will be considered by Phillips 66 (or others) for the Santa Maria facility or, alternatively, for locations that could receive crude-by-rail and then transport the crude oil via truck, pipeline (or other means from such a location to the Santa Maria Refinery).

The third project referenced in comments is ExxonMobil's 2017 proposal to temporarily truck crude oil to the Santa Maria Refinery. This is not a proposal put forth by Phillips 66. It is unclear how this proposal supports the premise that Phillips 66 intends to shut down the Santa Maria Refinery, when in reality an additional source of crude oil to refine at the Santa Maria Refinery would be beneficial to Phillips 66 operations, further indicating that Phillips 66 did not need to shut down the Santa Maria Refinery. Although comments state that Santa Barbara County voted to deny the project, it should be noted the denial was a recommendation to the Board of Supervisors, who is scheduled to hear the item sometime in 2022 (County of Santa Barbara 2021).

Lastly, comments note that Phillips 66 abandoned its "Santa Maria facility pipeline replacement project in August 2020" and that "[t]his fact strongly indicates that the company's plan to decommission the Santa Maria facility was developed independently from the Project, and was already underway before Phillips 66 filed its Application with the County". The County believes that the "Santa Maria facility pipeline replacement project" referenced in the comments refers to Phillips 66's Line 300 Project, which was a pipeline maintenance project spanning pipeline segments in Santa Barbara County, San Luis Obispo County, and the City of Santa Maria. The Line 300 Project had two purposes: (1) to proactively perform maintenance on the pipeline in advance of when required to do so by industry-standard and regulatory requirements; and (2) to relocate portions of the pipeline away from residential areas. Phillips 66 discontinued work on the Line 300 Project because of its pursuit of the Rodeo Renewed Project (e.g., given that Line 300 would be idled and no longer used, there was no need to relocate segments of the pipeline).

**Comment: If the Santa Maria Refinery shuts down, the Rodeo Refinery will necessarily be required to shut down.**

Comments make this conclusion assuming that if economic, operational, logistical, or other factors result in Phillips 66 deciding to idle or permanently shut down the Santa Maria Refinery, the company would not take any actions to obtain alternative crude supplies for the Rodeo Refinery. For example, comments state the following at page 18 of NRDC comment letter:

Thus, in baseline conditions – without the 'transitional' marine terminal throughput increase – the Refinery's only potential source of crude is the limited volume of crude it can bring in over the wharf at currently permitted volumes. Those permitted volumes are enough to supply only 47 percent of the Refinery's throughput capacity, as explained in the DEIR analysis of the alternative of shutting down the Santa Maria facility but keeping the Refinery open. DEIR at 5-3. Processing only these limited volumes brought in over the wharf over current limits would result in the refinery operating at a far lower throughput rate than described in the DEIR's baseline scenario. The DEIR functionally already recognizes that this scenario is not realistic, having acknowledged that continued crude refining would be infeasible at the Refinery if and when the Refinery loses access to crude and semi-refined crude from the Santa Maria facility and pipeline system.

This analysis and conclusion are not correct. Comments appear to interpret language from a hypothetical project being evaluated as part of the CEQA-required alternatives analysis, as an admission about current operating scenarios (see above discussion regarding hypothetical assumptions used in the alternatives analysis). The comments assume that if Santa Maria were to become "crude-constrained" and, therefore, economically unviable, Phillips 66 would not undertake any actions to obtain additional sources of crude oil for the Rodeo Refinery. Such an assumption does not consider the nature of petroleum refining and the manner in which operational, economic, logistic, and other adjustments are made on a constant basis.

With respect to how Phillips 66 might react to further constraints of the historically-available crude oil supply resources for the Santa Maria Refinery, some potential future adjustments include, but are not limited to, the following:

- obtaining additional petroleum feedstocks for the Santa Maria Refinery, such as via rail, truck, or constructing additional pipelines (by way of example, Phillips 66 has constructed approximately 1,100 miles of new pipelines in the past five years);
- obtaining additional petroleum feedstocks for the Rodeo Refinery via new pipeline systems;
- obtaining additional petroleum feedstocks for the Rodeo Refinery via its Marine Terminal (in 2013, Phillips 66 submitted an application to the BAAQMD to increase the daily petroleum feedstock throughput at the Marine Terminal from 51,182 barrels per day to ultimately 130,000 barrels per day; that permitting effort was abandoned once Phillips 66 decided to pursue the Rodeo Renewed Project to convert the Rodeo Refinery from a petroleum refinery to a renewable feedstocks manufacturing facility);
- modifying the existing rail rack infrastructure at the Rodeo Refinery to allow offloading of petroleum feedstocks other than butane;
- modifying Rodeo Refinery infrastructure to allow offloading of trucked-in petroleum feedstocks from nearby company-owned and third-party marine and rail terminals; and/or
- processing pre-treated renewable feedstocks in other existing units.

There is no evidence to suggest that Phillips 66 would, in light of a Santa Maria Refinery shutdown, retain the status quo and not attempt to obtain other petroleum feedstock supplies for the Rodeo Refinery, or pursue other economic, operational, or logistical options. Several projects and changes have been pursued or occurred at both the Rodeo and Santa Maria Refineries since the 1990s. Refer to Table 1, Phillips 66 Projects Implemented to Respond to Changed Conditions, at the end of this Master Response. Each of these projects was undertaken to adjust and adapt to different market, regulatory, economic, operational, and/or logistical changes. Such adjustments and adaptations have been the norm and there is no evidence to suggest that Phillips 66 would not continue to adjust and adapt in the same manner going

forward. Suggesting otherwise assumes a hypothetical baseline of zero, based on an unrealistic assumption that the project proponent will "close up shop" and cease to exist if the project is not pursued.

**Comment: The Draft EIR did not properly evaluate the No Project Alternative.**

CEQA requires the consideration and discussion of alternatives to the proposed project, including the evaluation of a "no project" alternative. The purpose of the "no project" alternative "is to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." CEQA Guidelines, § 15126.6(e)(1). As further explained in the CEQA Guidelines, if the "project is other than a land use or regulatory plan, for example a development project on identifiable property, the 'no project' alternative is the circumstance under which the project does not proceed." CEQA Guidelines, § 15126.6(e)(3)(B). The "no project" alternative analysis "is not the baseline for determining whether the proposed project's environmental impacts may be significant, unless it is identical to the existing environmental setting analysis which does establish that baseline." CEQA Guidelines, § 15126.6(e)(1).

Based on the CEQA Guidelines, the "no project" alternative for the proposed Project is the continued operation of the Rodeo Refinery (including the Carbon Plant), the Santa Maria Site and the Pipeline Sites, since this would be the "circumstance" if the proposed Project did not proceed. The propriety of utilizing the continued operation of an existing facility for the "no project" alternative was explained in *Ctr. for Biological Diversity v. Dep't of Fish & Wildlife*, 234 Cal. App. 4th 214, 253-254, 183 Cal. Rptr. 3d 736 (2015):

Discussing a no project alternative in an EIR provides the decision makers and the public with specific information about the environment if the project is not approved. It is a factually based forecast of the environmental impacts of preserving the status quo. It thus provides the decision makers with a base line against which they can measure the environmental advantages and disadvantages of the project and alternatives to the project.<sup>4</sup>

The continued operation of the Rodeo Refinery (including the Carbon Plant), the Santa Maria Site, and the Pipelines Sites as set forth in the "no project" alternative reflects 2019 conditions – the status quo – and the 2019 conditions also constitute the baseline conditions for the proposed project.

Comments suggest that the "proper no project" alternative should be based on the assumptions that the Santa Maria Refinery would close and that an increase in imports over the Marine Terminal would not be allowed, resulting in decreased production at the Rodeo Refinery. This suggestion for the "no project" alternative is based on speculation as to future conditions, and such speculation does not provide the basis for a "no project" alternative under CEQA. CEQA cautions against speculating on some future event in defining the "no project" alternative. The court in *Planning & Conservation League v. Castaic Lake Water Agency*, 180 Cal. App. 4th 210, 246 (2009) rejected demands to evaluate a "no project" alternative based on speculative assumption:

Under CEQA, '[t]he purpose of describing and analyzing a 'no project' alternative is to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.' (Guidelines, § 15126.6, subd. (e)(1)) In addressing the 'no project' alternative, the EIR must 'discuss the existing conditions at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, as well as what would be reasonably expected to occur in the foreseeable future if the

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<sup>4</sup> *Planning & Conservation League v. Department of Water Resources* (2000) 83 Cal.App.4th 892, 917–918 (100 Cal. Rptr. 2d 173). When a project involves a proposed change to an ongoing operation, or even the continuation of an ongoing operation, a decision to reject the project would leave the operation in place. In such a situation, CEQA defines the no project alternative as a continuation of the existing operation. See also *Saltonstall v. City of Sacramento*, 234 Cal. App. 4th 549, 573-574, 183 Cal. Rptr. 3d 898 (2015) ("no project" alternative consists of continued operation of arena at its current location).

project were not approved, based on current plans and consistent with available infrastructure and community services.' (Guidelines, § 15126.6 subd. (e)(2)) As an EIR need not consider 'an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative' (Guidelines, § 15126.6, subd. (f)(3)), an EIR is not obliged to examine 'every conceivable variation' of the 'no project' alternative).<sup>5</sup>

Comments claim that the Santa Maria Refinery would close whether or not the proposed Project is approved, using as evidence statements from prior applications from Phillips 66 for a pipeline replacement project, for a Santa Maria Refinery rail project, and for a project to increase crude oil delivery over the Marine Terminal. These application materials include statements regarding the potential for local production of crude oil to decline.

However, declining production is not equivalent to no production. California crude oil production has been declining since 1985, but based on current reserve estimates, these oil fields could be productive for decades or longer. Accordingly, the Rodeo Refinery and the Santa Maria Refinery have continued to operate at consistent production levels through 2019 (with 2020 affected marginally by COVID-related reduction in demand). The "no project" alternative is appropriately based on 2019 actual production, which is "what would be reasonably expected to occur in the foreseeable future if the project were not approved."

Comments also state that the Santa Maria Refinery is not operating at capacity, and that this also shows that the Santa Maria Refinery would close. As previously stated, the "no project" alternative is based on actual operations at the Rodeo Refinery and the Santa Maria Refinery, not capacity, and this reflects reasonable expectations if the Project is not approved. Further, one of the reasons that Santa Maria Refinery has not been operating at full capacity stems from the 2015 closure of the Plains pipeline in Central California. Plains, however, has begun the process to restart the pipeline, which could move up to nearly 1.7 million gallons of crude oil a day. Restart of that pipeline would enable the Santa Maria Refinery to access additional sources of crude oil for processing and increase its viability well into the future.

Comments also cite various industry articles regarding an overall decline in crude oil refining, speculating that the Rodeo Refinery and/or the Santa Maria Refinery could be "forced by current circumstances to limit or cease crude oil production." This seems to imply that the "no project" alternative should be no production at all, which negates the required "no project" alternative of existing conditions or the status quo. Actual 2019 operations form the basis for the "no project" alternative for the proposed Project, and speculation regarding the future of the refining industry and further speculation regarding these particular facilities is not appropriate under CEQA. CEQA does not require the "no project" alternative to reflect conditions that did not precede the project. *County of Inyo v. City of L.A.*, 124 Cal. App. 3d 1, 12-13 (1981) (court rejected "synthetic" "no project" alternative that did not reflect conditions that preceded the project).

**Table 1. Phillips 66 Projects Implemented to Respond to Changed Conditions (refer to discussion on page 3-12)**

Phillips 66 Projects	
1995	A long-term lease for use of the Marine Terminal was entered into with the California State Lands Commission, which ensured long-term marine access for refinery operations.
2005	Refinery equipment was modified to allow for the production of ultra-low sulfur diesel.
2007	A new hydrotreater and hydrocracking facilities were constructed to increase gasoline and diesel production, particularly from heavier feedstocks and boost the overall clean product yield from the refinery; in addition, the refinery incorporated facilities needed to obtain hydrogen produced from an adjacent third-party hydrogen plant.

<sup>5</sup> *Residents Ad Hoc Stadium Com. v. Board of Trustees* (1979) 89 Cal.App.3d 274, 286-288 (152 Cal. Rptr. 585).

<b>Phillips 66 Projects</b>	
2012	The maximum daily throughput for offloading crude oil and gas oil at the Marine Terminal was increased by 20,500 barrels per day ("bbl/d"), from 30,682 bbl/d to 51,182 bbl/d on a 12-month rolling average, which allowed the refinery to obtain increased amounts of feedstocks via the marine terminal as opposed to other routes, such as by pipeline.
2012	Phillips 66 initiated a project to recover propane and additional amounts of butane from the refinery fuel gas stream, thereby reducing refinery stationary source emissions and helping to ensure increased economic returns (this application was abandoned and has not been pursued further once the decision to pursue Rodeo Renewed was implemented).
2012	Phillips 66 obtained a permit modification allowing an increase in the maximum allowable crude oil throughput at its Santa Maria Refinery from 44,500 bbl/d to 48,950 bbl/d.
2013	Phillips 66 submitted an application to increase the maximum daily throughput for offloading crude oil and gas oil at the Marine Terminal even further (up to 100,182 bbl/d), which would allow the refinery to obtain increased amounts of feedstocks via the marine terminal as opposed to other routes, such as by pipeline.
2013	Phillips 66 initiated a project and submitted an application to San Luis Obispo County to receive crude oil at its Santa Maria Refinery by rail – the County ultimately denied the application.
2016	Phillips 66 amended its application for a Marine Terminal increase to 130,000 bbl/d (this application was abandoned and has not been pursued further once the decision to pursue Rodeo Renewed was implemented).
2016	Phillips 66 undertook modifications to its Santa Maria Pump Station, which feeds the Santa Maria Refinery, allowing for the additional offloading of crude oil delivered by truck in response to the Plains All American Pipeline shutdown.
2017	Phillips 66 applied for and received a permit to offload additional crude oil via truck at its Santa Maria Refinery in response to the Plains Pipeline shutdown.
2021	Phillips 66 began using renewable feedstocks to produce renewable diesel at the Rodeo Refinery's Unit 250.

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## **MASTER RESPONSE NO. 2: CEQA ALTERNATIVES**

Comments assert that the Draft EIR's alternatives analysis did not comply with the provisions of CEQA, stating that the No Project Alternative was not evaluated properly, that the Draft EIR improperly evaluated regional demand for transportation fuels, and that the Hydrogen Generation Technology Alternative should not have been dismissed from further consideration. For a discussion of the Draft EIR's No Project Alternative, refer to Master Response No. 1, Baseline. The remaining comments are addressed below.

### ***Alternatives Rejected***

Comments state that the Draft EIR improperly rejected three alternatives because the County wrongly assumed that "the Refinery is essential to meet regional refined product demand." (NRDC, page 64.) Each of the three alternatives were dismissed from further consideration for several reasons:

- Failure to meet the fundamental purpose of the Project to transition the facility to a renewable transportation fuels production facility. (Draft EIR, pages 5-3, 5-9.)
- Failure to meet Project objectives. (Draft EIR, pages 5-3, 5-4, 5-9.)
- Infeasibility. (Draft EIR, pages 5-3, 5-4, 5-9.)

The inability to meet regional demand was one consideration in these analyses, and it was based on a presentation prepared by the CEC for the BAAQMD Board of Directors and on the CEC's 2021 report entitled California's Petroleum Market (see Draft EIR, page 5-33). The comments express disagreement with the analysis of the CEC, but disagreement among experts is not a basis to invalidate an EIR. See CEQA Guidelines, Section 15151.

### **Comment: The Marathon Draft EIR considered the Hydrogen Generation Technology Alternative, so the Rodeo Refinery Project Draft EIR should also consider this alternative.**

Comments also express disagreement with the Draft EIR's analysis regarding the Hydrogen Generation Technology Alternative. This alternative was dismissed from further consideration because "it would be infeasible for technical and financial reasons, it would not substantially reduce environmental impacts, and it could result in new environmental impacts, particularly regarding the use of energy." (Draft EIR, page 5-9.) Comments suggest that the analysis is not supported by substantial evidence.

Comments first note that "this same alternative was treated as feasible" in the Marathon Draft EIR, and argues therefore, that the hydrogen alternative should be feasible for the Rodeo Renewed Project. (NRDC, page 68.) The existence of two different EIRs for two different projects, both of which address a hydrogen alternative, does not mean that the Martinez Refinery Renewable Fuels Project (Marathon Project) Draft EIR's characterization of the alternative applies to the Rodeo Renewed Project. Conversely, using similar reasoning, the hydrogen alternative in the Marathon EIR could be determined to be infeasible based on the Rodeo Renewed Project Draft EIR's analysis of the Hydrogen Generation Technology Alternative. Neither approach is dispositive. The question is whether the evaluation of alternatives satisfied CEQA's requirements, and the County has determined it did.

CEQA intends that each project's evaluation of alternatives is to be judged on its own merits:

CEQA establishes no categorical legal imperative as to the scope of alternatives to be analyzed in an EIR. Each case must be evaluated on its facts, which in turn must be reviewed in light of the statutory purpose.<sup>6</sup>

Thus, it is not a violation of CEQA for two different projects to evaluate a potential alternative in a different manner. As discussed below, there are differences in approach to the analysis of an electrolysis alternative between the two EIRs.

<sup>6</sup> *Citizens of Goleta Valley v. Bd. of Supervisors*, 52 Cal. 3d 553, 566 (1990).

CEQA requires an evaluation of “potentially” feasible alternatives. CEQA Guidelines Section 15126.6(a) (“An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of *potentially* feasible alternatives . . .”). “An EIR is not required to consider alternatives which are infeasible.” CEQA Guidelines Section 15126.6(a). In *Mira Mar Mobile Cmty. v. City of Oceanside*, 119 Cal. App. 4th 477, 489 (2004), the court upheld the City’s decision to reject as infeasible alternatives that had been included for discussion in the EIR:

Although the City ultimately rejected these alternatives as “infeasible,” this conclusion does not imply these alternatives were improperly included for discussion. Alternatives included in an EIR need only be “potentially feasible” (CEQA Guidelines, § 15126.6, subd. (a)), meaning they are “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors”.

One of the primary differences between the two EIRs is that the Marathon Draft EIR did not consider the same factors as the Rodeo Renewed Project Draft EIR regarding the technical and economic feasibility of a large scale electrolysis operation. Comments criticize the Rodeo Renewed Project Draft EIR’s determination of infeasibility, referring to the analysis as “a statement of arithmetic that is both obvious and meaningless” and asserting that the Draft EIR failed to consider a “facility-specific evaluation of feasibility. . . .” (NRDC, pages 68-69.) Neither are true.

Infeasibility for the Hydrogen Generation Technology Alternative is based on the actual current capacity of the Air Liquide Hydrogen Production Plant, which is 120 million standard cubic feet per day (MM scf/day)<sup>7</sup>. As stated on Draft EIR page 5-8, using an estimated hydrogen usage of 120 MM scf/day of hydrogen (production capacity of the Air Liquide facility), the Draft EIR estimated that the facility would “require approximately 750 MW of electrical generating capacity to power enough electrolyzers to meet the Project’s hydrogen demand.”

This estimate is based on published information from the U.S. Department of Energy and other sources. Specifically, the theoretical minimum energy to produce a normal cubic meter (Nm<sup>3</sup>) of hydrogen is 3.54 kWh (DOE 2020; IEEE 2004). Current electrolyzer system efficiency of 65 percent (DOE 2020) yields an actual energy requirement of 5.45 kWh/Nm<sup>3</sup>. Converting “scf” to “Nm<sup>3</sup>,” 120 MM scf/day of hydrogen equals 3.4 MM Nm<sup>3</sup>/day of hydrogen. Multiplying 3.4 MM Nm<sup>3</sup> of hydrogen by 5.45 kWh equals 18.5 MM kWh/day. Converting kWh/day to MW provides 772 MW. The Draft EIR explains that “existing equipment would not have the capacity to power both the renewable processing and the electrolyzers” and that “a new source or sources of electricity would need to be developed.” (Draft EIR, page 5-8.) Therefore, this analysis is facility specific.

The Draft EIR explains the technical infeasibility of such a large-scale electrolysis operation. Although comments challenge this conclusion, comments do not provide an example of a large scale electrolysis project in operation for comparison. Instead, comments refer to “plans” to scale up a hydrogen electrolysis plant in Germany, from 20 to 100 MW, which is a fraction of the 750 MW that the Rodeo Renewed Project would require. Further, the Draft EIR estimated capital costs using estimates from the U.S. Department of Energy, concluding that such a large scale electrolysis facility would be between \$0.75 billion and \$1.1 billion. If the electricity required were sourced from a third party, that cost would be \$788 million, or ten times the Rodeo Refinery’s current utility bill (see Draft EIR, page 5-8).

Comments challenge these estimates. Using the estimates provided in comments, the costs could be “\$0.37 billion to \$0.48 billion” which supports the Draft EIR’s conclusion that this alternative is economically infeasible. Comments claim that Phillips 66 could achieve cost savings in various ways, but

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<sup>7</sup> Major Facility Review Permit (Title V) issued by Bay Area Air Quality Management District to Air Liquide Large Industries, US LP, Facility No. B7419, page 7. “Air Liquide is not increasing its hydrogen production capacity as a result of the Project.” (Draft EIR, page 4.3-49.)

those claims are an opinion and based on speculation, neither of which constitute substantial evidence under CEQA.

Comments also overlooked the Draft EIR's analysis of infeasibility that is based on the lack of sufficient space to site a renewable energy-based dedicated facility to power the electrolyzers. Based on National Renewable Energy Laboratory (NREL) estimates, a 750 MW installation would require at least 3,000 acres and possibly as much as 30,000 acres, which is not available at the 1,100-acre Rodeo Refinery site. Comments also overlook the potentially significant environmental effects of constructing a dedicated electrical generation facility, including air quality impacts and terrestrial habitat loss, and with an offsite renewable energy facility, these impacts could be greater as stated on Draft EIR, page 5-8. Further, because this technology would use substantially more electricity to produce hydrogen than the current technology at the refinery, it "could result in an inefficient, wasteful, and unnecessary use of energy." (Draft EIR, page 5-8.)

The Rodeo Renewed Draft EIR estimates between 4 to 9 acres of land per megawatt of solar capacity based on the Technical Report prepared by the NREL – "Land-Use Requirements for Solar Power Plants in the United States" (June 2013), which reviewed numerous solar projects. It should be noted, more recent news confirms the overall acreage estimate of 4 or more acres per megawatt and the costs for large solar projects.<sup>8</sup>

The Solar Star project at 579 MW is considered to be the largest solar project in the U.S. until the Indiana or Texas projects are constructed. Thus, the development of a 750 MW solar project would be a substantial project in the solar industry and not an ancillary energy source for a renewable fuels project, further supporting a determination that this hydrogen alternative is infeasible.

Comments also claim that greater attention should have been afforded the Hydrogen Generation Technology Alternative because it helps to mitigate significant impacts that comments state exist. (NRDC, page 69.) However, as explained in Master Response No. 4, Land Use and Feedstocks and Master Response No. 5, Renewable Fuels Processing, the Rodeo Renewed Project does not result in any significant impacts with respect to GHG emissions or in other environmental areas where comments suggest significant impacts will occur.

### ***Combining Alternatives***

Comments state that some of the alternatives should be combined, but do not explain why the alternatives as presented are not in compliance with CEQA. CEQA Guidelines, Section 15126.6(a) requires the evaluation of a range of reasonable alternatives, and the Draft EIR has evaluated four alternatives including the No Project Alternative, and considered (but dismissed) another six alternatives. As discussed above, an EIR need not consider every conceivable alternative to a project. The analysis of alternatives in the Draft EIR is more than sufficient to allow informed decision-making.

Comments also state that the Project objectives are too narrowly drawn by referring to the repurposing of Refinery infrastructure twice, which preclude alternatives such as the hydrogen alternative. (NRDC, page 72.) However, the Draft EIR's analysis of the hydrogen alternative recognizes that it would meet "several key project objectives to increasing the availability of renewable fuels and meeting federal and state goals for renewable fuels and GHG reduction . . . ." (Draft EIR, page 5-9.) While the Draft EIR also noted that the Hydrogen Generation Technology Alternative "would introduce a new stand-alone electrolyzer and

<sup>8</sup> Doral Solar Project, with 1.3 gigawatts on 13,000 acres for investment of \$1.5 billion  
<https://www.businesswire.com/news/home/20220114005072/en/Indiana-Governor-Acknowledges-Doral-LLC%E2%80%99s-1.5-Billion-Mammoth-Solar-Project-During-the-2022-State-of-the-State-Address>  
Solar Energy Center in Texas with 1,310 MW and 18,000 acres at \$1.6 billion  
<https://digitalmag.altenerg.com/?shareKey=I3xY8t>)  
Solar Star in Kern and Los Angeles Counties has 579 MW on over 3,000 acres and others cited therein  
(<https://constructionreviewonline.com/biggest-projects/top-5-biggest-solar-farms-in-the-us/No.-:text=1..Solar%20Star%2C%20California&text=Completed%20in%20June%202015%2C%20Solar.and%20Los%20Angeles%20Counties%2C%20California>.)

electricity project component not contemplated by the objectives,” this alternative was dismissed from further consideration due its technical and economic infeasibility and due to the evaluation of this alternative’s potential environmental effects. (Draft EIR, pages 5-8, 5-9.)

In addition, the Project has eleven objectives, two of which relate to repurposing the Rodeo Refinery’s existing equipment, and those two objectives did not preclude the evaluation of the hydrogen alternative or any other alternative. As stated in the Draft EIR:

### **3.6 Project Objectives**

The Project has the following objectives:

- Convert the Rodeo Refinery to a renewable transportation fuels production facility;
- Provide/maximize production of renewable fuels to assist California in meeting its goals for renewable energy, GHG emission reductions, and reduced CI for transportation fuels;
- Convert existing equipment and infrastructure to produce transportation fuels from non-hazardous renewable feedstocks and discontinue the processing of crude oil at the Rodeo Refinery;
- Preserve and protect existing family-wage jobs in Contra Costa County during and after the transition to a renewable transportation fuels production facility;
- Repurpose and reuse the facility’s existing equipment capacity, including the Marine Terminal and Rail Butane Loading Rack;
- Preserve marine, rail, and truck offloading facilities to access national/international renewable feedstocks to provide renewable transportation fuels and conventional fuels and conventional fuel components;
- Provide the ability to process a comprehensive range of renewable feedstocks, including treated and untreated feedstocks;
- Maintain the facility’s current capacity to supply regional market demand for transportation fuels, including renewable and conventional fuels;
- Ensure California transportation fuel supply needs are met during the transition to a renewable fuels facility by temporarily (approximately 7 months) increasing gas oil and crude deliveries at the Marine Terminal to maintain current transportation fuel production at the Rodeo Refinery;
- Provide a beneficial use for recyclable fats, oils, and grease (FOG) within the state of California; and
- Provide a mechanism for compliance with the federal RFS and the state LCFS through processing facilities in California.

Comments cite the decision in *N. Coast Rivers All. v. Kawamura*, 243 Cal. App. 4th 647 (2015) to support this argument, but in that case the California Department of Food and Agriculture approved a control program for an invasive pest based on an EIR for a “narrowly drawn” eradication program for the pest – the EIR had not even evaluated the program that was actually approved. Those circumstances are not present for this EIR.

Instead, comments request that the County eliminate the objectives to repurpose the Rodeo Refinery facility, but CEQA does not require this. See *Sierra Club v. Cnty. of Napa*, 121 Cal. App. 4th 1490, 1508-9 (2004) (County’s reliance on winery applicant’s objectives to minimize costs and reduce highway usage were valid considerations for determining alternatives were infeasible). The court in *Sierra Club* stated: “The EIR was not required to analyze the effects of a project that Beringer did not propose, or to

analyze the effects of an alternative that would not feasibly attain most of the basic objectives of the project.” *Sierra Club*, 121 Cal. App. 4th at 1509. Similarly, CEQA does not require that the Draft EIR evaluate inclusion of the electrolyzer and a 750 MW solar project. Therefore, the Project objectives are not narrowly drawn.

CEQA requires the evaluation of alternatives to the project as a whole, not to its various parts or components. The Hydrogen Generation Technology Alternative is an alternative for a component of the Project – hydrogen production – not to the Project as a whole, and thus, does not satisfy CEQA’s fundamental requirements for an alternative. Even if the hydrogen alternative were combined with another alternative such as the Reduced Project Alternative, the technological and economic infeasibility of the green hydrogen component remains; a 500-550 MW solar facility would still require at least 2,000 acres (4 acres x 500 MW), would be as cost-prohibitive and would result in additional environmental effects. Further, with a Reduced Project Alternative, the ability to absorb these significant costs would be more limited as compared to the proposed Project that fully utilizes existing facilities.

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## **MASTER RESPONSE NO. 3: CUMULATIVE IMPACTS**

Several comments were received regarding the extent of the geographic area of projects considered within the cumulative impact analysis. Specific comments expressed that the area should include local and statewide projects and include a “*universe of projects*” beyond the “*3-mile geographic scope*” to cover “upstream”, “downstream” and indirect environmental and market impacts at the global scale. For the Rodeo Renewed Project, cumulative projects were more defined for issue areas with greater potential for significant impacts, such as air quality, GHG, water quality, marine and aquatic resources, and risk of upset. For these areas, the analysis included projects that were located regionally. CEQA Section 15130 allows the lead agency, “... to define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.” This approach is consistent with direction provided in CEQA.

### ***Geographic Area***

As discussed on page 6-3 of the Draft EIR, the approach to the cumulative analysis presents specific projects within a 3-mile radius of the Project. The analysis considers projects anticipated to have similar, potentially overlapping impacts with those of the Project (refer to Draft EIR, pages 6-3 through 6-5). The Draft EIR evaluates the Project’s impacts taking into account these additional projects to identify impacts that would be cumulatively considerable. Considering the Project in connection with the effects of these other projects, the Draft EIR identifies cumulatively considerable impacts with respect to Biological Resources, Hazardous Materials, and Hydrology and Water Quality. Refer to pages 6-6, 6-8, and 6-9.

In addition, the Draft EIR cumulative analysis is also based on future development projections from adopted local and regional plans and planning documents. This is considered a hybrid approach because it uses a list of projects as well as projections. Using a list of projects is better suited to assess localized and near-term impacts, whereas using projections from a local or regional plan provides a more accurate evaluation of cumulative conditions within a regional context. To complete the analysis, the proposed Project’s incremental impacts were assessed together with the incremental cumulative impacts to determine whether significant impacts result.

To exemplify, for cumulative air quality impacts, the geographic area is regional to account for the dispersion of certain pollutants over a larger area. To set the analysis boundary, planning documents and projections for the affected air basins were used to evaluate whether the Project, together with the cumulative projects, would affect compliance with air emission attainment standards. For cumulative construction noise impacts, it was determined that using a 500-foot setback from construction activities was sufficient and that impacts would not occur beyond this setback from the construction site or along roadways used for construction traffic to access the site.

To provide clarification on the method used for each issue area, the following table is added to Section 6.4, Cumulative Impacts, page 6-3.

**Table 6-1 Geographic Context of Cumulative Impacts**

<u>Resource Topic</u>	<u>Geographic Area</u>
<u>Aesthetics</u>	<u>Local – area surrounding Project sites that encompass public viewpoints</u>
<u>Air Quality</u>	<u>Regional - for pollutant emissions that have regional effects, combined air basins within the following air districts were used: BAAQMD; SJVAPCD; San Luis Obispo County Air Pollution Control District; and Santa Barbara County Air Pollution Control District</u>  <u>Local/Immediate Vicinity – a refined area was used to evaluate areas with highly localized air emissions, such as NOx and PM</u>
<u>Biological Resources</u>	<u>Regional - within 3-mile radius for more localized effects</u>
<u>Cultural Resources</u>	<u>Local/Immediate Vicinity – area of potential effect (APE)</u>
<u>Energy Conservation</u>	<u>Regional – energy grids serving Project Sites</u>
<u>Geology and Soils</u>	<u>Local/Immediate Vicinity</u>
<u>Greenhouse Gas Emissions</u>	<u>Statewide and Global</u>
<u>Hazards and Hazardous Materials</u>	<u>Regional and Local</u>
<u>Hydrology and Water Quality</u>	<u>Regional and Local</u>
<u>Land Use and Planning</u>	<u>County</u>
<u>Noise and Vibration</u>	<u>Local/Immediate Vicinity</u>
<u>Tribal Cultural Resources</u>	<u>Local/Immediate Vicinity</u>
<u>Wildfire</u>	<u>Local/Immediate Vicinity</u>
<u>Solid Waste</u>	<u>Local – service areas</u>
<u>Environmental Justice</u>	<u>Local/Immediate Vicinity</u>

**Cumulative Contribution**

Another issue raised in the comments is that cumulative air quality and GHG emission impacts should have been analyzed together within a nationwide and global context to accurately identify potential impacts. In terms of GHG emissions, the Project is analyzed against the goals and policies of applicable state, federal, and global guidelines. Refer to Section 4.8, Greenhouse Gas Emissions, Impact 4.8-2 and 4.8-3. For both air quality and GHG analyses, operation of the proposed Project would result in a net emissions decrease of all pollutants compared to baseline levels. Thus, the operational impact would be less than significant, no mitigation would be required (i.e., the proposed Project in itself encompasses mitigation), and aggregated impacts are not cumulatively considerable.<sup>9</sup>

CEQA Guidelines state an EIR’s discussion of cumulative impacts “should be guided by the standards of practicality and reasonableness.” 14 Cal. Code Regs. § 15130(b). An EIR must assess a project’s cumulative impact on the environment if the project has a “cumulatively considerable” incremental effect in combination with other projects. *Id.* § 15130(a). To conduct this analysis, the County must

<sup>9</sup> CEQA Guidelines Section 15130(a): “An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.” See also *Santa Monica Chamber of Commerce v. City of Santa Monica*, 101 Cal. App. 4th 786, 799 (2002) (“Just as zero when added to any other sum results in no change to the final amount, so, too, when no environmental impacts cognizable under CEQA are added to the alleged environmental impacts of past projects, there is no cumulative increased impact.”).

contemplate the project's incremental effect on the environment "viewed in connection with" effects from past projects, other current projects, and "probable" future projects. *Id.* § 15065(a)(3). A project "must make *some* contribution to the impact; otherwise, it cannot be characterized as a cumulative impact of that project." *Sierra Club v. West Side Irrig. Dist.* (2005) 128 Cal.App.4th 690, 700 (emphasis supplied). If the County finds that a project's incremental effect is not cumulatively considerable, the EIR need only "briefly describe the basis" of this determination. 14 Cal. Code Regs. § 15130(a). In analyzing cumulative impacts, "[a]n agency's selection of the geographic area impacted by a proposed development . . . falls within the lead agency's discretion, based on its expertise."<sup>10</sup>

Within the cumulative analysis, discussion of each relevant resource area noted that the cumulative contribution of the Project would be minimal or negative, mitigation measures would be implemented and no significant cumulative impacts would occur locally, regionally, statewide, and globally (with exception of vessel spills and effects on marine biological resources and water quality impacts in the Bay).

Note that the analysis need not examine options for mitigating or avoiding impacts not attributable to the Project's contribution to the significant cumulative effects identified in the EIR, but only the Project's contribution to those effects. CEQA Guidelines Section 15130(c) notes that, for some projects, it may not be feasible to mitigate for cumulative impacts by imposing conditions on a project-by-project basis.

For additional discussion regarding analyzing global and market upstream effects, refer to Master Response No. 5, Land Use and Feedstocks.

### ***Cumulative Feedstock Demand***

Other comments suggest that the Draft EIR inadequately analyzes the potential cumulative impacts brought about by the Project's feedstock demands, and that the Draft EIR's cumulative impacts analysis should have considered the feedstock demands of additional California and national biofuels projects and their combined effect on the marketplace. These comments point to a number of existing and forthcoming biofuel projects that should have been included in the cumulative impacts analysis, and which based on comments, would have resulted in identifiable cumulative impacts had those projects been considered.

Based on assessment of the existing and future projects considered relevant,<sup>11</sup> certain comments contend that these projects could triple the total amount of lipids consumed to a total capacity of 693,000 barrels per day. (NRDC at page 76.) These comments conclude, "[i]t is foreseeable that cumulatively, these projects will require massive increases in domestic oil crop production or foreign imports, either of which will be associated with massive environmental and climate impacts from land use changes." (NRDC at page 76.)

As addressed in Master Response No. 4, Land Use and Feedstocks, statements about the market impacts of the Project contain assumptions and speculative conclusions about the Project and its feedstock supply chain. The County need not adopt those conclusions about the foreseeability or likelihood of "massive increases" in crop oil production. In addition, the Project is not expected to rely exclusively on domestic supplies of feedstocks. As a participant in the global feedstock market, the Project's demand will constitute less than 2 percent of the current feedstock market of more than 4.3 million barrels per day—or enough feedstock to produce 65 billion gallons per year of lower carbon intensive transportation fuel. Assuming the comments assertion of 693,000 barrels per day estimate for a

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<sup>10</sup> *South of Market Community Action Network v. City and County of San Francisco* (2019) 33 Cal.App.5th 321, 341 ("SOMAN") (citing 14 Cal. Code Regs. § 15130(b)(3) and *City of Long Beach v. Los Angeles Unified School Dist.* (2009) 176 Cal.App.4th 899, 907).

<sup>11</sup> NRDC discusses feedstock use by eight operating renewable biofuel facilities and 75 biodiesel facilities (NRDC at pages 75–76, Table 8) as well as 16 future projects proposed, under construction, or under active consideration by refineries in addition to the Martinez Refinery Renewable Fuels Project (Marathon Project) discussed in the Draft EIR (NRDC at page 76); it also provides a table of over 75 current and future lipid-based biofuel projects across the United States (NRDC at pages. 77–79, Table 9). The Center for Biological Diversity points to three refineries in addition to the Martinez Refinery that it says should have been considered: "Chevron in Richmond, PBF in Martinez, and Valero in Benicia." (Ctr. for Bio. Diversity at page 6.)

set of projects taken together, there is no evidence to suggest that the market will be unable to absorb these demands or that the stated environmental impacts will result.

Like the Project's own individual feedstock-related impacts, the contribution to cumulative impacts of the Project's feedstock use is also speculative and unable to be quantified. Irrespective of the market-based projections that may or may not be available for other projects, this Project's feedstock mixes and sources cannot be predicted at this time without speculation (refer to Master Response No. 4, Land Use and Feedstocks). In turn, because the identities and availability of the Project's feedstocks cannot be determined at this time, the County cannot reasonably evaluate the Project's cumulative impacts related to these inputs beyond the information provided in the Draft EIR. Assessment of the Project's incremental contribution to cumulative impacts related to feedstocks would necessarily involve several layers of speculation. Because speculation precludes assessment of this Project's own feedstock cultivation impacts, it is unknowable whether the Project's feedstock demands will have an adverse environmental impact at all, let alone one that is cumulatively considerable. Market volatility, individual decision-making, and global governance issues are unpredictable in ways that do not allow for the analysis of the Project's incremental contribution to feedstock-related impacts. CEQA requires only that the County analyze impacts that are "reasonably foreseeable," and the overall effect of the Project's feedstock demands on its cumulative impacts cannot be reasonably predicted due to many uncertainties.

Notably, the Low Carbon Fuel Standard Environmental Assessment (LCFS EA) (CARB 2018) helps illustrate the speculative nature of the cumulative impacts determinations mentioned in comments. Statements made in the LCFS EA repeatedly emphasize that its program-level evaluation is based on certain predictions about responses to the LCFS program—responses that may or may not be borne out through any given set of projects under examination. The LCFS EA states directly that its predictions are merely "illustrative," and are rife with uncertainty (refer to LCFS EA, pages 33 and 34), noting the unpredictability of feedstock sourcing locations and market movements. Such language demonstrates CARB's uncertainty about the occurrence, location, and significance of any feedstock-related impacts *even in that aggregated setting*. The likelihood of any individual project contributing to potential impacts is only less certain. This supports the County's determination that it is overly speculative to draw conclusions about the Project's feedstock-related incremental contribution to any supposed cumulative impact.

In addition, an EIR's discussion of cumulative impacts must "reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." (CEQA Guidelines § 15130(b)). Though comments raise more than 175 additional projects (in California and further afield) for the County's consideration, the Draft EIR is not insufficient for failing to include these projects in determining the area in which the Project's reasonably foreseeable effects might result in cumulative impacts in combination with other projects.

#### ***Martinez Refinery Renewable Fuels Project***

The comments also focus certain critiques on the Draft EIR's degree of analysis regarding the Martinez Refinery Renewable Fuels Project (Marathon Project), forecasting impacts caused by an increase in feedstock consumption from the projects taken together. The Draft EIR considers the Marathon Project among the relevant projects for cumulative impacts analysis (see Draft EIR, page 6-4).

Comments refer to the Marathon Project, stating that "the document contains functionally zero cumulative impacts analysis of the Project as considered together with the closely related Marathon Martinez project . . ." (Comment 35-144). Setting aside air quality and GHG impacts for the Rodeo Renewed Project, which were negative (less than zero) and thus, did not contribute to a cumulative impact, the Draft EIR evaluated impact areas where the Rodeo Renewed Project could contribute to a cumulative impact. In Section 6.4.2.3, Biological Resources, the Draft EIR acknowledged the Marathon Project and the cumulative impacts to marine biological resources:

However, the Project would result in significant and unavoidable impacts to marine biological resources as a result of an accidental spill of renewable feedstocks enroute, at or near the Marine Terminal. The frequency and size of potential spills could be lessened but not completely eliminated (refer to Mitigation Measure BIO-3, BIO-6 and BIO-7, which require implementation of HAZ-1 and HAZ-2). In addition, significant and unavoidable impacts would occur related to increased vessel traffic that would increase the presence of nonindigenous species. Mitigation Measure BIO-4 would reduce impacts but not to a less-than-significant level. Despite these recommended mitigation measures, the potential for a substantial adverse impact on special-status marine species or their habitat cannot be eliminated. The Project, in combination with specifically the Martinez Refinery Renewable Fuels Project, which identifies the same significant and adverse impacts, would be cumulatively considerable.

In Section 6.4.2.8, Hazards and Hazardous Materials, the Draft EIR refers to the Marathon Project relative to marine vessel spills:

However, the transitional phase and operational phase of the Project could result in discharges into waters of the San Pablo and San Francisco Bays from vessels (barges and tankers) transporting feedstocks and blending stocks to, and refined products from, the Marine Terminal. A marine vessel spill could impact a range of areas, depending on the tide, the wind and other factors. The spill sizes could cover a substantial range, with the worst-case discharge volume at the Marine Terminal estimated to be 3,976 bbls.

Although compliance with existing regulations and implementation of Mitigation Measures HAZ-1 and HAZ-2 for the Project would reduce the frequency and size of spills the potential for a substantial adverse impact on water quality cannot be eliminated. Therefore the Project, in combination with other projects, specifically the Martinez Refinery Renewable Fuels Project, which identifies the same significant and unavoidable impacts, would result in adverse impacts that would be cumulatively considerable.

In Section 6.4.2.9, Hydrology and Water Quality, again, the Draft EIR evaluates the Marathon Project in the context of marine vessel spills and water quality:

Although compliance with existing regulations and implementation of Mitigation Measures HAZ-1 and HAZ-2 for the Project would reduce the frequency and size of spills the potential for a substantial adverse impact on water quality cannot be eliminated. Therefore the Project, in combination with other projects, specifically the Martinez Refinery Renewable Fuels Project, which identifies the same significant and unavoidable impacts, would result in adverse water quality impacts that would be cumulatively considerable.

With respect to the level of detail required in a cumulative impacts analysis, CEQA provides that “the discussion need not provide as great detail as is provided for the effects attributable to the project alone.” See also *Fairview Neighbors v. County of Ventura*, 70 Cal. App.4<sup>th</sup> 238, 246 (1999) (court upheld cumulative impacts analysis with “brief discussions” of cumulative impacts).

Comments contend that the Draft EIR did not adequately evaluate potential impacts that might result from the feedstock demands of the Marathon Project and the Project combined. Specifically, these comments urge, with respect to agricultural resources and land use, “the combined impact of the two projects together could be catastrophic in scale.” (NRDC at page 80.)

As noted above and specifically in Master Response No. 4, Land Use and Feedstocks, analysis of the upstream impacts would necessarily require speculation about the feedstock types, sources, and relative demands of the Project that cannot be established at this time. As a result, the Draft EIR properly confines its cumulative consideration of the Marathon Project and the Rodeo Renewed Project to those impacts that are reasonably foreseeable.

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## **MASTER RESPONSE NO. 4: LAND USE AND FEEDSTOCKS**

Comments indicate that the Draft EIR does not adequately identify and analyze the Project's feedstocks and related potential impacts. These comments are addressed below.

**Comment: The Draft EIR must describe “geographic sources and existing volumetric supplies of each potential feedstock”.**

Comments state that the Project will consume “unprecedented volumes of feedstock” and, “inevitably much of it [will] consist of agricultural food products such as soybean oil.” (NRDC at page 24.) Comments provide “exemplary” data related to feedstock availability (NRDC at page 25) that contradicts the County's conclusion that the Project's likely mix of feedstocks cannot be predicted without speculation. Based on the selected studies cited, comments claim that the Project “will largely rely on non-waste food system oils, primarily soybean oil,” and assert that the Draft EIR should indicate as much. (NRDC at page 28.)

Section 3.8 of the Draft EIR devotes a section of the Project Description to identifying the Project's anticipated feedstocks and their role in the Project's processes. This section discusses the agricultural factors, commodity uses and substitutions, incentives and government regulations, and transportation costs affecting the Project's anticipated feedstock use. As further explained, the Project's exact mix of feedstocks and their sources cannot presently be determined because it depends on a web of interconnected variables including weather, commodity prices, individual market participants, and national and international incentives and regulations. The impacts of such variables on availability and sources of feedstocks cannot and need not be modeled as part of this project-level CEQA analysis as described in more detail below.

### ***Global Marketplace***

The complex and ever-evolving state of the marketplace means that the mix of feedstocks that will be economically and physically available to the Project cannot be predicted with any reasonable means of analysis at this time. “CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commentors.” (CEQA Guidelines § 15204(a)). In addition, the County has the authority to determine whether a particular source of information or requested analysis will be helpful or will be capable of providing meaningful, accurate information about a project.

The Draft EIR identifies the potential feedstock array and noting the factors that prevent further forecasting of their relative proportions or sources. See Draft EIR, Section 3.8 at page 3-28. There is no legal authority requiring the County to undertake the global analysis that would be needed to predict the likelihood of any particular feedstock type or source being relied upon by the Project<sup>12</sup>. The County reasonably determined that it could not predict the market movements that may make certain feedstocks more or less available over the Project's operation, and thus concluded that the available information does not allow it to determine the specific types or sources of the Project's feedstocks beyond the discussion provided in the Draft EIR.

### ***Agricultural Food Products and Feedstocks***

Conclusions that the Project's feedstocks will “inevitably” consist of agricultural food products does not recognize the complex dynamics that will affect the Project's choice of feedstock mix and sourcing. Comments state that, had the County attempted such a forecast, the County “would have determined that the very large majority of the feedstock the Project will use will almost certainly come from food crop and

<sup>12</sup> See *Berkeley Keep Jets* (2001) 91 Cal.App.4th at 1356 (explaining, “the determination of EIR adequacy is essentially pragmatic”). The Draft EIR's identification of feedstocks properly attempted “to provide meaningful information about the [P]roject, while providing for flexibility needed to respond to changing conditions and unforeseen events” destined to impact the Project's final selection, relative volumes, and sources of those feedstocks. *Citizens for a Sustainable Treasure Island v. City & Cnty. of San Francisco* (2014) 227 Cal.App.4th. 1036, 1053.

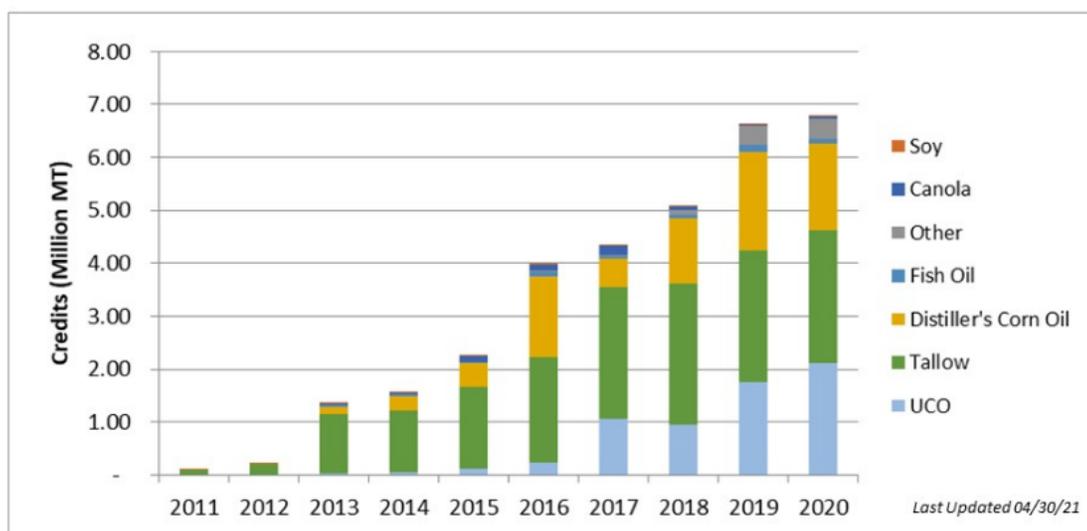
food system oils.” (NRDC at page 29.) However, as mentioned above, such feedstock selection will be market-driven, and California’s LCFS program “incentivizes growth in fuels derived from non-land based sources,” including waste oils (CARB 2021). In addition, recent California LCFS market data demonstrates that “[i]n 2020, 93percent of total credits generated by biodiesel and renewable diesel production were derived from wastes or residues rather than conventional crop-based fuel credit generation.” (CARB 2021).

It should be noted Phillips 66 has been able to access feedstocks from a variety of sources internationally. For example, at the Humber Refinery in the United Kingdom, Phillips 66 was able to source used cooking oils from over 21 countries.

The comment that feedstocks will utilize food crops and oils, particularly soybean, are not consistent with available data. Based on the credit generation and carbon intensities under the LCFS program, the majority of feedstocks used for renewable fuels in California beginning in at least 2013 have been waste-oil feedstocks—used cooking oil (UCO) and tallow (refer to CARB, LCFS Data Dashboard, Figure 6). The price or value of the credit is based on the reduction in carbon intensity. The credit price for soy oil-based renewable diesel is about \$0.70 per gallon, while the credit price for used cooking oil renewable diesel is about \$1.70 per gallon. As stated in the Cerulogy report (SGS 2021), “The extra value available to waste-oil-based renewable diesel under the LCFS system means that renewable diesel supplied to California overwhelmingly uses waste-oil feedstocks, and no use of soy oil is reported.”<sup>13</sup> Thus, as stated in the Draft EIR, the incentives provided by the LCFS program affect the types of feedstocks utilized.

While the post-Project Rodeo facility would be a substantial contributor to the production of renewable fuels in the United States (1.2 billion gallons/year), it would constitute approximately 15 percent of the combination of existing capacity and targeted capacity (791 million gallons and 6,370 million gallons) in the United States (Cerulogy, Tables 2 and 4), and less than approximately 9 percent of global production capacity (EIA 2019). Given this information, Phillips 66 would not control the renewable feedstocks market globally or nationally.

**Crops and Residues used in Biomass-based Diesel Production  
Q1 2011 – Q4 2020**



<sup>13</sup> The report does note that soy oil could be captured in the “Other” category, but even in that category would constitute a smaller percentage of overall feedstocks.

### ***Renewable Diesel vs. Biodiesel***

Comments state that there is a limited domestic supply of alternatives to food crop sources of feedstocks, and therefore, current feedstock demand for biodiesel will limit the availability of non-food crop feedstocks for the Project. (NRDC at page 29.)

Renewable diesel and biodiesel are distinct fuels. Renewable diesel processing has higher market margins than biodiesel production due to blending limitations and poor cold flow properties of biodiesel. Renewable diesel is generally further incentivized as compared with biodiesel by higher renewable credit generation and trading prices<sup>14</sup>. Market dynamics are such that demand for biodiesel production (and thus its associated feedstock demand) is not expected to continue along current lines.

The availability of feedstocks to the Project will be influenced by these market factors. Therefore, current biodiesel feedstock demand will not affect feedstock availability. The relatively poor blending properties and lower credit generation of biodiesel may actually lead renewable diesel production to pull the market away from biodiesel production. Comments on domestic feedstock supply also do not account for the availability of global feedstock sources to the Project, as discussed above, and the unpredictability of the Project's sources as discussed in the Draft EIR.

### **Comment: The Draft EIR improperly relies on the LCFS Environmental Assessment for potential feedstock impacts.**

Comments describe the LCFS's carbon intensity scoring system for evaluating fuels and their life cycles, noting that California Air Resources Board (CARB) modeling provided in the LCFS Environmental Assessment (EA) does not evaluate the significance of any impacts of a particular project's fuel production and thus cannot serve as a stand-in for CEQA analysis by the County. These comments also claim that the LCFS EA's "programmatic level of analysis" does not obviate the need for the County to "determine project-level impacts and require project-level mitigation." (NRDC at page 27.) Comments emphasize that the LCFS's carbon intensity scoring does not take into account non-carbon impacts resulting from upstream land use change potentially associated with a particular type of fuel and its feedstock. Therefore, comments conclude that the County cannot rely on the LCFS for assessment of land use impacts of the Project.

The feedstocks analysis conducted by CARB in its LCFS EA is identified in the Draft EIR. However, the Draft EIR does not adopt or rely on the LCFS EA or otherwise use the existence of the LCFS to stand in for the County's own analysis of the Project's impacts related to land use or otherwise. As allowed under CEQA's multi-layered framework, the County recognized that its Draft EIR must evaluate the direct and indirect impacts of the Project subject to its approval (CEQA Guidelines § 15126.2(a)). The analysis necessarily includes changes in the physical environment that are caused indirectly by the project. However, if there are uncertainties that render potential impacts unforeseeable and their assessment speculative, those impacts reasonably cannot be evaluated (CEQA Guidelines § 15145).

Comments do acknowledge that the LCFS EA anticipates that additional analysis will be conducted and certain site-specific impacts addressed at the project level. Specifically, certain feedstock-related impacts noted in the LCFS EA, such as those to biological resources, refer to future evaluation and mitigation measures to be imposed at the project level by the approving local, state, federal, or other relevant regulatory authority (LCFS EA, page 89). The comments suggest that the County avoids responsibility by determining that the Project's feedstock-related impacts are too speculative for evaluation. The LCFS EA's discussion of project-level evaluation and mitigation states that such impacts must be addressed by the authorities contemplating the projects in the places when and where those impacts will occur. Like CARB, the County anticipates that projects related to feedstock cultivation and harvest, for example, will

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<sup>14</sup> Argus Media (Argus Media subscription). Pricing Data for v3 Renewable Diesel R99 San Francisco month, USC/USG, delivered, month, Houston close and v3 Biodiesel B99 FAME fob San Francisco, USC/USG, fob, prompt, Houston close. Available at: <https://www.argusmedia.com/en>

be subject to land use approvals and environmental review when those projects and their impacts are reasonably foreseeable. The County analyzed the reasonably foreseeable impacts of the Project at hand, and for the reasons discussed in the Draft EIR, certain feedstock-related impacts of the Project are not reasonably foreseeable at this time. See Draft EIR, pages 2-27 and 2-28. This aligns with the LCFS EA's recognition that site-specific impacts can only be evaluated when the location and design of those activities are known.

The analysis provided in the LCFS EA helps make clear why the Project's feedstock-related impacts are too speculative for evaluation. As stated in the LCFS EA, pages 64–65:

Because the LCFS program is market-driven, it is not possible to determine the exact locations where these feedstocks may be cultivated. The amount of land required to produce enough biofuel to meet projected demand depends entirely on the productivity of a given feedstock on a given parcel of land. Feedstocks may be sourced from forest and agricultural lands and would be dependent on available quantities and location of processing facilities. The productivity is, in turn, governed by a wide variety of physiological factors, including genetic diversity, agronomic practice, and environmental factors, such as soil quality, water availability, and climate. Thus, predicting the amount of land required to produce enough low-carbon biofuel to impact existing agricultural practices would require speculation.

The LCFS EA's conclusion is that the program itself—through a statewide “compliance response scenario” consisting of one proposed universe of hypothetical activities—may have potentially significant impacts. CARB has the discretion to conclude its chosen hypothetical “compliance response scenario” could cause a significant impact, but that same “compliance response scenario” is not required in every CEQA analysis. To the contrary, the LCFS EA itself enumerates many uncertainties with respect to the occurrence, location, and significance of any feedstock-related impacts in the aggregate, and it also explains that its compliance response scenario is but one possible set of activities resulting from the LCFS program as a whole. As a result, the LCFS EA's formulation does not provide or dictate a conclusion regarding any specific project like the Rodeo Renewed Project. In addition, the EA's repeated emphasis on the uncertainty of feedstock-related impacts even when considering statewide projects and activities all together, reinforces how speculative it would be to draw any conclusions about the impacts of any one individual project's feedstock needs, or its role in the market, even in terms of cumulative impact.

The Project's Pre-Treatment Unit (PTU) component is designed to ensure that the Project can treat and subsequently process a wide variety of renewable feedstocks from a wide variety of sources. The Project's feedstock selection—and the feedstock market at large—will be influenced by the LCFS program's incentives for growing the fuel market for those derived from non-land-based sources. Ultimately, the impact of these incentives on the overall market and the availability of particular feedstocks from particular sources at any given time would require settled and reliable inputs, which for the reasons discussed here, cannot be determined by the County without speculation at this time.

Therefore, the Draft EIR does not attempt to rely on the LCFS in lieu of analyzing the Project's feedstock-related land use impacts; rather, the Draft EIR discusses the potential feedstocks to be used by the Project without speculating about legal, economic, and climate variables that cannot be feasibly analyzed at this time. Nonetheless, the LCFS EA compliance response scenario serves as a helpful backdrop for the Project (CARB 2018).

**Comment: The Draft EIR should evaluate a worst case scenario of possible feedstock mix scenarios.**

The comments indicate that “the County should have evaluated a ‘reasonable worst case scenario’ for feedstock consumption and its impacts” (NRDC page 28 [citing *Planning & Conserv. League v. Castaic Lake Water Agency* (2009) 180 Cal.App.4th 210, 252; *Sierra Club v. Tahoe Reg'l Planning Agency* (E.D. Cal. 2013) 916 F.Supp.2d 1098, 1151–52]), and suggest that, “the County was required to evaluate a reasonable array of scenarios, including but not necessarily limited to the worst case scenario, in order to provide full disclosure.” (NRDC at page 28 [citing *City of Long Beach v. City of Los Angeles* (2018) 19

Cal.App.5th 465, 487–88]). Comments also contend that appropriate Draft EIR impact analysis should reflect historic, current, and projected feedstock availability that will influence the proportional selection of feedstocks as demand for feedstocks increases.

Additionally, comments state that had the County conducted the requested analysis of foreseeable feedstock mix scenarios, it “would have determined that the very large majority of the feedstock the Project will use will *almost certainly come from food crop and food system oils* . . . with little coming from waste oils such as tallow.” (NRDC at page 29.) Some of the comments suggest that this prediction is possible given certain “indicator[s]” such as the current breakdown of feedstock demand for biodiesel and the limited domestic supply of alternative feedstock sources. (See NRDC at page 29.) In sum, comments assert that these indicators demonstrate that “a large fraction of feedstock likely to be used for the Project will be food crop oils—both purpose-grown food crop oils, such as SBO [soybean oil], canola, rapeseed, and cottonseed oils; and oils currently used in the food system, such as DCO [distiller’s corn oil].” (NRDC at page 29.)

CEQA does not require the County to generate a worst case scenario in order to evaluate the Project’s impacts<sup>15</sup>. A lead agency is entitled to use its experience and the available information to identify whether and what impacts might occur within the reasonably foreseeable future. As such, the lead agency should “use its best efforts to find out and disclose all that it reasonably can,” 14 Cal. Code Regs. § 15144, but must avoid speculating when the information necessary to predict the requested likelihoods is unavailable (§ 15145). CEQA does not require a lead agency to use an extreme, maximum possible worst case scenario—it requires analysis of reasonably foreseeable impacts “in terms of what is reasonably feasible.” *Id.* § 15204(a); § 15064(d) (explaining that only reasonably foreseeable impacts need be evaluated).

In addition, comments cite no case law regarding requiring a worst case scenario. The cases cited show that it is acceptable for the County to use a worst case scenario analysis where certain inputs were known<sup>16</sup> or the cases explain why the selected worst case scenario provided insufficient detail when presenting only an aggregate estimate of foreseeable impacts<sup>17</sup>.

The Draft EIR identifies the feedstocks anticipated to be used by the Project, but in accordance with CEQA, avoids undue speculation. Pursuant to CEQA Guidelines § 15204(a), “[T]he adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project.” It is not reasonably feasible for the County to construct models of regional, national, or global feedstock, land, and food markets. A project-level EIR is an inappropriate vehicle for conducting such comprehensive analyses under the auspices of CEQA<sup>18</sup>. CEQA is a state environmental statute, and it has never been interpreted to require an analysis of the global supply chain for a project’s inputs.

The Draft EIR provides the available information about the Project’s potential feedstock selection, but “[w]hen, as here, an EIR must address controversial matters that resist reliable forecasting, CEQA requires only that the County use its best efforts to find out and disclose all that it reasonably can, and

<sup>15</sup> “[I]t has been held that an EIR is not required to engage in speculation in order to analyze a ‘worst case scenario.’” *High Sierra Rural Alliance v. Cnty. of Plumas* (2018) 29 Cal.App.5th 102, 122 (quoting *Napa Citizens for Honest Gov’t v. Napa Cnty. Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 373).

<sup>16</sup> *Planning & Conservation League* (2009) 180 Cal.App.4th 210, 252 [rejecting the contention that an EIR’s worst case scenario had been inadequately justified]; *Tahoe Reg’l Planning Agency* (E.D. Cal. 2013) 916 F.Supp.2d 1098, 1152 [determining that a worst case scenario for noise generated by a snowmaking system adequately evaluated that project’s potential to result in significant noise impacts].

<sup>17</sup> Refer to *City of Long Beach v. City of Los Angeles* (2018) 19 Cal.App.5th 465, 487–88 (explaining why a single composite emissions scenario did not allow the reader to compare the relative concentrations in the project and no project scenarios, where the composite showed that there “could be an impact, but it did not examine what that impact might be, who might be affected, and for how long” (quoting the trial court)).

<sup>18</sup> See *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 574 (explaining that requiring even regional comprehensive planning analysis as part of any individual project’s permit process “would impose an unnecessary and wasteful burden on local governments”).

that the EIR display adequacy, completeness, and a good faith effort at full disclosure.” *Planning & Conserv. League* (2009) 180 Cal.App.4th at 253. CEQA does not require the County to “quantify[ ] the unquantifiable”.

Lastly, comments contend that the County “could have readily used the same analysis conducted by CARB for the LCFS” in order to “quantify” the upstream feedstock-related impacts of the Project. (NRDC at page 34.) In contrast with this Project’s Draft EIR, the LCFS EA addresses a statewide programmatic policy shift affecting market movement. An equivalent type of investigation to assess the Project’s inputs is not consistent with the CEQA Guidelines’ specification that EIR adequacy is tethered to the scale of the project under consideration. See 14 Cal. Code Regs. § 15204(a).

#### ***Use of Indicators Provided in Comments***

The County could not use the “indicators” cited in the comments as inputs for forecasting likely feedstock mix scenarios. For example, as noted above, biodiesel demand is not a reliable input for predicting feedstock availability for the Project, given that the future market for biodiesel is in flux. In addition to the relative market weaknesses of biodiesel discussed previously, the future of biodiesel is further made uncertain because it is not a drop-in fuel and thus would require vehicle engine conversions on a substantial scale. There is no evidence that vehicle fleet conversions to run higher percentages of biodiesel will occur, and thus biodiesel has an uncertain future and an uncertain impact on feedstock availability.

The current supply of domestic feedstocks likewise is not a useful indicator for purposes of this Project’s analysis, as there is no expectation that the Project will be constrained to use of domestic sources. The United States supplies less than 10 percent of the global feedstock market (see previous footnote). The Project’s Marine Terminal and Phillips 66’s global logistical reach, open up the Project to the international market. The Project’s feedstock selection will be driven by market incentives favoring lower carbon intensity feedstocks, and Phillips 66 has the ability to procure such feedstocks in the global market, as well as benefit from domestic sources.

#### **Comment: The Draft EIR does not address upstream environmental impacts related to feedstocks.**

Comments state that using the provided predictions of the Project’s likely feedstock types and their geographic sources (referring to the NRDC’s response to the Notice of Preparation), the County should have projected possible upstream environmental impacts brought about by the Project’s demand for feedstocks. Comments critique the level of analysis provided on several points.

#### ***Land Use Changes***

Comments state that there is “broad consensus” among experts that increased demand for food crop oil feedstocks will result in land use changes with significant environmental impacts. (NRDC at page 29.) Because of such impacts, other countries such as the European Union and Belgium have taken steps to reduce reliance on one crop-based feedstock, soybean oil, in particular. (NRDC at page 30.) Comments further explain how, in general, food crop biofuel feedstocks such as soybean oil can induce land use changes by incentivizing conversion of lands for a particular crop’s production on both existing agricultural land (by replacing one crop with the lucrative feedstock crop) and on newly cleared land in order to meet feedstock demands. The comments also discuss how increased prices for a desired feedstock can generate additional land use changes by incentivizing increased production of another food crop consumers could use as a substitute for the valuable feedstock crop, indicating that this effect has been seen with soybean oil, distiller’s corn oil, and tallow. (NRDC at page 31.)

It is contended that, “all of the feedstocks demanded by the Project would lead to either direct or indirect increases in crops, such as soy, oil palm, and corn, which will require land use conversion”, and that the Project has the “potential to significantly disrupt food crop agricultural patterns.” (NRDC at page 32.) The comments suggest that the County should have analyzed the Project’s proposed consumption of up to

80,000 barrels per day of lipid feedstocks relative to total biofuel demand and total agricultural production data. (NRDC at page 32.) Comments note that the Project would increase the nationwide total of oil crop and animal fat demand currently associated with biodiesel production by 71 percent. (NRDC at page 32.) It is further stated that the Project “would consume approximately a 22 percent share of current total US production of lipid feedstocks,” and based on this figure, comments project that U.S. biofuel feedstock demand could claim as much as 52 percent of total U.S. farm yield for all uses. (NRDC at pages 33–34.) Noting the volume of soybean oil presently used in biodiesel production, comments claim that the Project could use as much as 39 percent of total domestic soybean oil production, which “would lead to rapid price spikes and substitution across the oil markets.” (NRDC at page 34.)

An EIR must identify and analyze all of a project’s significant effects on the environment, whether those effects are directly or indirectly caused by the project. An EIR need only analyze the significance of potential impacts that are reasonably foreseeable. “A change which is speculative or unlikely to occur is not reasonably foreseeable.” *Id.* § 15064(d)(3). If the County is unable to forecast whether a particular activity will occur, where the activity will occur, and/or what environmental impacts that activity may have, the agency should indicate that further analysis would require speculation and terminate its discussion without analyzing the potential significance of any hypothetical impacts<sup>19</sup>.

Assuming the Project’s feedstock selection were to rely on food crops, the conclusion that any increased demand will necessarily result in land use change does not account for the fact that crop yields can often be optimized without additional planting or any land use conversion, as when feedstock crops are substituted for cover crops on land that is already dedicated for agriculture. In developing the federal Renewable Fuel Standard, the U.S. Environmental Protection Agency (“U.S. EPA”) established a baseline number of acres for U.S. agricultural land in 2007 and determined that as long as this baseline number of acres was not exceeded, it was unlikely that new land outside of the 2007 baseline would be devoted to crop production based on historical trends and economic considerations. In 2020, U.S. EPA evaluated data from the U.S. Department of Agriculture Farm Service Agency and Natural Resources Conservation Service and “estimated that U.S. agricultural land reached approximately 379.8 million acres in 2019 and thus did not exceed the 2007 baseline acreage of 402 million acres.” (USDA 2022<sup>20</sup>) As explained in the Draft EIR, the County has properly declined to speculate about land conversions, given that the Project’s feedstock mix and their sources cannot reasonably be predicted.

Regarding the numerical estimates of demand increases and supply limitations, comments noted that these numbers are on domestic feedstock production alone, while the renewable feedstock market accessible to the Project is international. There is no evidence that the Project will rely on only domestic feedstocks or crops. As stated in the Draft EIR and reiterated above, the types and sources of the Project’s feedstocks cannot be determined without speculation. To the contrary, based on the credit generation and carbon intensities under the LCFS program, the majority of feedstocks used for renewable fuels in California beginning in at least 2013 have actually been waste-oil feedstocks—used cooking oil (“UCO”) and tallow (refer to CARB, LCFS Data Dashboard, Figure 6 and accompanying note, linked above).

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<sup>19</sup> CEQA Guidelines § 15145; *Envtl. Council of Sacramento v. City of Sacramento* (2006) 142 Cal.App.4th 1018, 1031–33 (determining that, even where a city and county had executed a memorandum anticipating future development beyond the proposed project, “far too little [wa]s known about the scope, the location, or the types of projects that might be proposed in the future to assist decision makers in evaluating any potential environmental tradeoffs,” such that a final EIR did not need to further analyze these “amorphous” activities). “[W]here future development is unspecified and uncertain, no purpose can be served by requiring an EIR to engage in sheer speculation as to future environmental consequences.” *Atherton v. Bd. of Supervisors* (1983) 146 Cal.App.3d 346, 351.

<sup>20</sup> PSD Reports, Tables 6 and 14, Global and U.S. data, January 2021/2022). USDA data is in million metric tons, annually, and one metric ton is approximately 6.88 barrels. Daily barrels per day were calculated by multiplying metric tons by 6.88 and dividing by 365. ; K. Swisher, U.S. Market Report, *Render Magazine*, April 2021, at page 12 (citing Trade Data Monitor, EIA for biodiesel inputs, NASS Fats & Oils: Oilseed Crushings, Production, Consumption, and Stocks Annual Summary). Available at: [https://pubs.rendermagazine.com/2021-04/page\\_14.html](https://pubs.rendermagazine.com/2021-04/page_14.html) (U.S. animal fat and used cooking oil data).

The Draft EIR discusses the Project's potential feedstocks, but it does not attempt to analyze the national and international marketplace for the variety of crops identified as potential inputs for the Project. As explained above, such an analysis is not required by CEQA, and would require speculation, which CEQA instructs lead agencies to avoid. See 14 Cal. Code Regs. § 15145. The purpose of an EIR is to "provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences." An EIR's evaluation of impacts "need not be exhaustive;" rather, an EIR's sufficiency will be reviewed "in light of what is reasonably feasible." See 14 Cal. Code Regs. § 15151.

As concluded in the Draft EIR, weather, market dynamics, changing transportation costs, and related uncertainties preclude determination of the Project's exact feedstocks, their sources, and their availability, and the associated impacts are thus too speculative for reasonable analysis. Courts have specifically recognized that variable inputs across a dynamic marketplace can preclude forecasting and make even existing historical indicators "an unreliable predictor of the future"<sup>21</sup>.

The foreseeability of forced land use changes is not able to be determined at this time. The comments describe a chain of inflection points, stating that the Project's additional demand for a given feedstock will increase the price of that feedstock, farmers will correspondingly devote more land to that crop, and this will encourage land conversions and/or clearance. The County is not required to assume that this string of events will come to pass and is unable to predict their likelihood. It would be pure speculation to state whether the existing feedstock market will absorb the Project's demand, whether new demand would be met from existing agricultural resources or would cause land conversions or clearance, whether any land changes would result in environmental harms, what kind of environmental harms might occur, and whether local environmental controls would allow those harms to come about. Further, as noted above, comments assume the Project will substantially rely on crop-based feedstocks, not supposing that the Project will rely on a mix of feedstock sources including non-food crop waste oils, which the project proponent can access. In any event, the Project's total anticipated feedstock demand is expected to amount to less than 2 percent of the 4.3 million barrels per day comprising the total global feedstock market. The influence of the Project's market participation on global feedstock supply, let alone on specific crop sources and land uses, is therefore not foreseeable.

If land conversions were to occur as comments hypothesize, the types, locations, and relationship to food markets would still be unpredictable. Forecasts such as the 3 million acres of land to be converted if the Project were to rely exclusively on soybean oil, (NRDC at page 34), are extrapolations from highly unpredictable inputs and constitute the type of speculation that CEQA instructs the County to avoid. There is no basis in the available information to presume that 100 percent of the Project's feedstock consumption would be soybean oil, though comments make such a presumption in calculating their 3-million-acre estimate. (NRDC at page 34.) The complex regulatory and physical landscape across which land use decisions are made does not allow the County to forecast the amount of land that would need to be converted, let alone its likely location or the potential impacts associated with those conversions, which are necessarily location-dependent.

### ***Other Upstream Impacts***

Certain comments stress that indirect land use impacts from "induced growth of croplands" will result in habitat loss for species. (Ctr. for Bio. Diversity at page 4.) Because these comments believe the Project will result in forced upstream land use changes, it is suggested that "an array of environmental impacts related to habitats, human health, and indigenous populations" may result from the Project's approval. (NRDC at page 35.) Comments discuss impacts that may come to pass when natural habitat is converted to cropland, stating that such impacts were identified in the LCFS EA as bearing relation to feedstock cultivation.

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<sup>21</sup> Rodeo Citizens Ass'n v. Cnty. of Contra Costa (2018) 22 Cal.App.5th 214, 227 (crediting the project proponent's explanation that the "state of transition" of the fuels market—in part due to government incentives designed to move the market—made the extent and "the fundamental direction of the impact, i.e., whether the change may be beneficial or adverse" unpredictable).

Comments specifically contend that increased soybean oil consumption resulting from the Project could lead to expanded palm oil production that will have “a particularly severe environmental impact.” (NRDC at page 35.)

It is further suggested that the Project’s feedstock-related impacts include net greenhouse gas emissions increases in addition to non-climate impacts related to land use. Comments provide examples of deforestation and loss of carbon sinks that can result from cropland expansion, stating that “substantial increases in GHG emission” will result from an increase in feedstock demand due to the interconnectivity of a “global food system.” (NRDC at page 36.)

Comments also assert that “modeled soy-based biofuel net carbon emissions are virtually the same as fossil diesel, with even worse climate impacts for greater quantities of soy-based biofuel produced.” (NRDC at pages 36–37.)

Impacts resulting from the land use changes are not reasonably foreseeable in light of the uncertainties discussed above, and set forth in the Draft EIR. The County cannot generate likely feedstock mix scenarios for the Project due to the intersecting variables laid out in the Draft EIR, including costs, transportation logistics, and other market conditions. Without a predictable set of these inputs—and likewise a reasonably feasible set of projections about feedstock mixes—the requested analysis of upstream impacts cannot be performed without relying on guesswork.

**Comment: The Draft EIR should address potential mitigation of feedstock-related impacts.**

Comments have asserted that the Project has feedstock-related impacts that are potentially significant and must be mitigated. Specifically, comments indicate that the County should have considered as mitigation a cap on use of certain specific feedstocks, such as soybean oil and potentially an overall cap on feedstock volume. These comments state that the County “should take steps to ensure that California does not consume a disproportionate share of available feedstock, in exceedance of its per capita share, in accordance with the prudent assumptions in CARB’s climate modeling.” (NRDC at page 37.)

Certain comments also assert that best management practices (BMPs) for feedstock crops should have been considered and included as mitigation, with reference to the LCFS EA’s notation that local governments would use their land use authority to require feedstock sources to develop BMPs. Comments simultaneously suggest that BMPs “ha[ve] no meaningful application here.” (NRDC at page 37.)

CEQA only requires evaluation of mitigation measures for impacts that are potentially significant, not those that are insignificant or not reasonably foreseeable (see Pub. Res. Code § 21100(b)(3); 14 Cal. Code Regs. § 15126.4(a)(3) [“Mitigation measures are not required for effects which are not found to be significant.”]). As such, the impacts comments state will arise as a result of the Project’s use of feedstocks are speculative, and therefore cannot be considered reasonably foreseeable (CEQA Guidelines § 15064(d)(3)). The Draft EIR does not need to attempt to mitigate impacts that are not reasonably foreseeable.

The restrictions on feedstock type and volume as proposed by comments are unnecessary absent identification of a significant impact, but are, in practice, an improper route to imposing competitive restrictions on a particular project.

California state regulators and federal agencies including the U.S. Environmental Protection Agency have far-reaching policies designed to encourage and control the development of lower carbon intensity fuels. Both state and federal regulators have imposed regulations on the renewable fuels market—including the LCFS and the federal Renewable Fuel Standard program.

For discussion regarding the cumulative impact analysis of feedstocks, refer Master Response No. 3, Cumulative Impacts.

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## **MASTER RESPONSE NO. 5: RENEWABLE FUELS PROCESSING**

Comments state that the Draft EIR fails to disclose information regarding the proposed processing of renewable fuels for the Rodeo Renewed Project, affecting the project description and the evaluation of environmental effects. The comments provided Attachments A, B and C to the NRDC Comment Letter 36, which are addressed as a part of the comments in the letter. While the attachments are presented as technical references, they are not peer-reviewed technical papers.

**Comment: The Draft EIR does not adequately describe the proposed processing methods, including the use of hydrogen.**

Comments state that the Draft EIR fails to disclose that the processing method to be utilized for renewable feedstocks to produce renewable fuels are Hydrotreating Esters and Fatty Acids (HEFA), but also acknowledge that the Project is relying on “repurposed refinery hydrotreaters and hydrocrackers for feed conversion to fuels, and upon repurposed refinery hydrogen plants to produce and supply hydrogen for that hydro-conversion processing.” (NRDC, page 9) The comment suggests that HEFA processing is something different than the process described in the Draft EIR, but HEFA fuel is primarily renewable diesel in the United States (or hydrotreated vegetable oil [HVO] abroad). The U.S. Energy Information Administration (EIA) explains:

HEFA fuels are hydrocarbons rather than alcohols or esters. Hydrocarbons from nonpetroleum sources are known as drop-in fuels because they are nearly identical to comparable petroleum-based fuels. During the refining process, the oxygen present in the alcohols and esters is removed, leaving only hydrocarbons. HEFA fuels are the most common drop-in biofuels; they can be used in diesel engines without the need for blending with petroleum diesel fuel. Currently, HEFA fuels are approved by American Society of Testing and Materials (ASTM) International for use in jet engines at up to a 50 percent blend rate with petroleum jet fuel.

The most common HEFA biofuel production to date has been a diesel replacement fuel alternately marketed as HVO abroad, or as renewable diesel in the United States. HEFA fuels are produced by reacting vegetable oil or animal fat with hydrogen in the presence of a catalyst. The equipment and process are very similar to the hydrotreaters used to reduce diesel sulfur levels in petroleum refineries (EIA 2015).

The process to make renewable diesel (or HEFA fuel) is described in the Draft EIR, including “repurposed” refinery equipment and continued use of hydrogen, as noted in the comments. More specifically, the key components of the renewable fuels processing – the use of hydrotreaters, the use of hydrogen, and the use of vegetable oils or animal fats – are all set forth in the Draft EIR. The Project Description section depicts the proposed processing in Figure 3-7: Rodeo Facility Post Project Block Flow, which shows Unit 240, Hydrotreater, and Unit 246, Hydrotreater. Section 3.9.1.1, Reconfiguration of Process Units for Renewable Feedstock Processing, lists Units 240 and 246, each identified as a Hydrocracker, along with the existing Hydrogen Plant.

As stated in Section 3.4.2 of the Draft EIR, “Other feedstocks required in the refining process are transported by pipeline from the Santa Maria Site, by tanker vessel, and by truck (small quantities of transmix), while other feedstocks, such as hydrogen, are produced on the Rodeo Site or nearby.” The Hydrogen Plant (Unit 110) produces hydrogen at the Rodeo Site, and is described in Section 3.4.2.2, Additional Rodeo Refinery Facilities. The “nearby” production of hydrogen refers to an existing third-party supplier, Air Liquide. Although Air Liquide’s production and supply of hydrogen is an independent operation, the continued use of that hydrogen for Rodeo Renewed is considered in the Draft EIR.

In Section 4.3, Air Quality, the Draft EIR again describes the existing setting and the existing use of hydrogen: “Other feedstocks are required in the refining process; some are brought by tanker vessel and by truck, while others, such as hydrogen, are produced by a third-party facility adjacent to the refinery.” (Draft EIR, Section 4.3.4, Project Setting.) The Air Quality analysis also describes the Project’s potential

increase in the use of hydrogen relative to baseline, although the production capacity at the Air Liquide facility is not increasing: “In addition, operations of third-party plant operator Air Liquide, which supplies hydrogen gas (H<sub>2</sub>) for the refinery operations, may indirectly increase due to the Project and therefore, its emissions are included in the evaluation against significance criteria. However, no modification will occur at Air Liquide as a result of the Project. Air Liquide is not increasing its hydrogen production capacity.” (Draft EIR, Section 4.3.4.1.)

Similarly, the use of hydrogen, including the Air Liquide facility, is evaluated in Section 4.6, Energy Conservation. Under Operational Energy Estimates, the Draft EIR states: “In addition, operations of the adjacent third-party plant operator Air Liquide, which supplies hydrogen for the refinery operations, may indirectly increase due to the Project.” (Draft EIR, page 4.6-205.) Table 4.6-5b, Operational Energy Usage, includes the energy usage from the Rodeo Site, including the Hydrogen Plan (Unit 110), and the Air Liquide facility, e.g., “Air Liquide will be increasing natural gas purchases to provide hydrogen for the Project . . . .” (Draft EIR, page 4.6-210, footnote to table). Section 4.8, Greenhouse Gas Emissions also includes an analysis of the use of hydrogen, including the Air Liquide facility. Under Operational GHGs estimates, the Rodeo Site and the Air Liquide facility are considered (Draft EIR, page 4.8-257) and are tabulated in Table 4.8-5, Total Annual Project Operational GHG Emissions (Draft EIR, page 4.8-263).

With respect to the use of vegetable oils or animal fat and their role in the processing of renewable fuels, Section 3.8.2, Anticipated Project Feedstocks, describes the various feedstocks to be utilized, including used cooking oils (UCO), fats, oil and grease (FOG), vegetable-based oils, including inedible corn oil, canola oil soybean oil and tallow.

In other words, all of the components of the renewable fuels process – the use of hydrotreaters, the use of hydrogen and the use of vegetable oils or animal fats - are described appropriately in the Draft EIR. The use of the acronym “HEFA” and the phrase “Hydrotreating Esters and Fatty Acids” is not required to describe the process to produce renewable fuels. Furthermore, an EIR is to be “written in plain language and may use appropriate graphics so that decision makers and the public can rapidly understand the documents.” CEQA Guidelines, Section 15140. The Draft EIR provides sufficient information to evaluate the environmental effects of the proposed processing method for renewable fuels, including the use of hydrogen.

**Comment: Renewable fuels processing is “radically different” from petroleum processing.**

Comments suggest that the HEFA process is “radically different from petroleum processing.” (NRDC, page 10.) However, numerous authorities confirm that the renewable fuels process is similar to the petroleum refining process. See discussion above explaining that the process to produce renewable fuels is “very similar” to the process used in petroleum refineries.

In addition, the process of hydrotreating of fats, oils, and greases (all renewable feedstocks) to renewable diesel is completed at temperatures and pressures similar to existing petroleum processing steps (Energy Fuels 2011; Jones 2009; Hongloi(a) 2021; Cheah 2021; Hongloi(b) 2021; Di Vito Nolfi 2021; Scaldaferrri 2019; Douvartzides 2019; Yusup 2019; Bezergianni 2010; Amin 2019; Hancsók 2007; Jakkula 2004; Neste Oil 2016; Jenistova K 2017; Hsu K-H 2018; Peng B 2012). One of the Project process units will be operating at a lower system pressure than current operations (the other process unit will remain at approximately the same system pressure as baseline operations). Because the conditions are so similar, existing process equipment designed for petroleum feeds can be used with minimal modification to process renewable feeds. More specifically, of the 450 vessels, exchangers and pumps/compressors currently used in Units 240 and 246, only 18 of them, or about 4 percent, will be new or modified as a part of the Project, and 17 are to be decommissioned.

It should be noted, in November 2021 the BAAQMD adopted administrative amendments to numerous rules regulating air emissions from refineries (“the Refinery Rules”) to ensure that renewable fuels manufacturing facilities are subject to the same rules as petroleum refineries (BAAQMD recognized that some petroleum

refineries, such as the Rodeo Refinery, would be converted to renewable fuels manufacturing facilities). As stated by the BAAQMD in its October 15, 2021 Staff Report (BAAQMD 2021):

The purpose of the proposed amendments is to ensure that the facilities that produce fuels and other products from non-petroleum feedstocks remain subject to and in compliance with the same emission standards and rule requirements that were in effect when the feedstock was petroleum based.

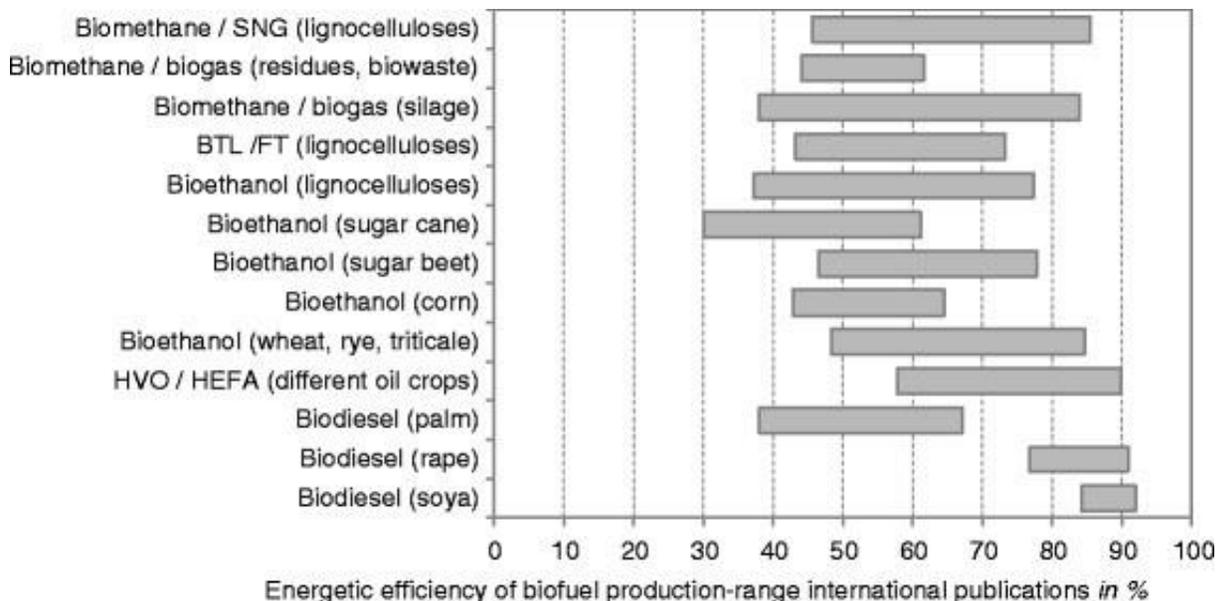
The Staff Report also explains the administrative nature of the amendments and the similarities between renewable fuels processing and petroleum-based refining:

While it appears that the volume of fuels produced will be lower than the current petroleum operation, the products will be very similar, if not identical, to the current products produced by the petroleum operation. Furthermore, each facility is likely to import petroleum-based products for distribution or blending, so there will be both petroleum and non-petroleum materials at the facility.

The types of air pollution emitted by the repurposed facilities will be similar to current operation. The proposed amendments will ensure emissions will not increase, keeping existing community protections in place.

**Comment: Renewable fuels processing yield is limited.**

Comments state that renewable fuels processing is limited due to its “low yield on feedstock”. However, technical authorities indicate that the yields from hydrotreating to produce renewable diesel are approximately 90-95 percent of renewable diesel produced for a given volume of feedstocks, similar to the clean product yield conventional hydroprocessing of crude oil feedstocks (Kubička 2012; Renewable and Sustainable Energy Reviews 2017 and 2022; Vasquez 2017; Sonthalia 2019; Müller-Langer 2014; NREL 2015; Crocker 2010). The yields of the HEFA technology have been documented and compared in numerous academic literature articles, including those by U.S. Department of Energy National Laboratories and Research Institutes, as well as government agencies. These studies demonstrate that since HEFA is selective towards liquid phase hydrocarbons, there is less loss of carbon in gas form when compared to other biofuels pathways, resulting in high yields mentioned above. In addition, HEFA technology also has one of the highest energy efficiencies among commercially viable renewable technologies. As reported by Müller-Langer: “... conventional biofuels with a high technology readiness level (TRL) (Müller-Langer 2014, Table 1), such as HVO/HEFA, show the highest overall conversion efficiencies.”, also shown in the plot below. The combination of high yields and high energy efficiency makes HEFA technology comparably better than other renewable technologies.



**Comment: The Draft EIR does not disclose and evaluate the Project's hydrogen usage.**

As noted above, the hydrogen usage for the existing facility was described in the Draft EIR through its description of the Hydrogen Plant at the Rodeo Site and the third-party supplier of hydrogen, Air Liquide. For the Project, the Draft EIR identified an increase in hydrogen usage, but it is no greater than the production capacity of the Air Liquide facility and the Hydrogen Plant (Unit 110). Hydrogen usage post-Project is fully described by the Draft EIR and evaluated against the baseline. The impacts are less than significant. In addition, the Project will not be operated continually using the maximum hydrogen amounts available from Unit 110 and the Air Liquide facility evaluated in the Draft EIR.

Comments state that the Draft EIR failed to disclose the hydrogen demand for the Project and claim that the Project would use "nine times more hydrogen per barrel" than the average refinery. (NRDC, pages 10, 38.) While this hydrogen demand per barrel is higher as the number of barrels of renewable diesel to be produced (67,000 barrels) is less than the existing refining capacity (120,000 barrels), the amount of hydrogen usage for the Project is approximately 30 percent over baseline (and within the production capacity of Unit 110 and the Air Liquide facility), and is not nine times more per barrel.

While the hydrogen demand does depend on the renewable feed, theoretical estimates can show that the differences are not as large as the comments suggest. The hydrogen demand depends largely on the number of unsaturated bonds in the molecule. Analysis of Table 2 (Karras, Changing Hydrocarbons Midstream) shows that this can vary as much as ~400 standard cubic feet of natural gas per barrel of crude oil at stock tank conditions (SCF/B), whereas the total demand for a diesel target is shown to be ~2,300 SCF/B. The Project estimates that the hydrogen usage per barrel will be approximately 2,100 SCF/B. This variation is less significant to the evaluation of emissions or other hazards because the process hazard analysis is performed using the overall hydrogen production capacity of the Refinery, which does not change with the implementation of the Project. The overall hydrogen usage of each processing unit is within the range of historic hydrogen usage for that unit; this may be accomplished because fewer barrels of renewable feedstock are being processed through each unit as compared to crude oil feedstocks.

The comments also state that the hydrogen consumption for jet fuel production would be higher than diesel fuel by 800 SCF/B based on theoretical calculations. However, hydrogen consumption for the production of jet fuel would be far less than estimates based on theoretical calculations. Determining the incremental hydrogen consumption when producing jet fuel requires experimental data for the reaction conditions and catalyst for a particular process unit. Moreover, the Project is limited by the total hydrogen production as determined by production capacity of the Air Liquide facility and Unit 110 and the capacity of the processing units.

**Comment: Phillips 66 proposes additional hydrogen production by processing gasoline feedstocks.**

Comments also state that Phillips 66 proposes to produce additional hydrogen through processing of gasoline feedstocks to address a "bottleneck" created by the theoretical hydrogen demands cited in the comments. The Draft EIR evaluates the Project based on the production capacities of the equipment and facilities, including the hydrogen used for the renewable fuels process as supplied by the Hydrogen Plant (Unit 110) and third-party supplier Air Liquide. A "bottleneck" implies that the Project has the capacity to produce more renewable fuels if it only had more hydrogen, and comments suggest that Phillips 66 intends to relieve this "bottleneck" by producing additional hydrogen to produce more renewable fuels than reported in the Draft EIR. The Draft EIR evaluates the production capacities and hydrogen usage as set forth for this Project and no "bottleneck" has been created.

**Comment: Phillips 66 failed to consider alternative technologies.**

Comments state that the Draft EIR failed to evaluate the renewable fuels process and its associated environmental effects by positing a different project to be evaluated in the EIR based on theoretical calculations using “new technology” (HEFA) that will consume “nine times” the amount of hydrogen per barrel and have additional environmental effects. The Draft EIR evaluates the Project that is proposed, which is defined by the processing capability of the Project’s equipment and facilities. Also, as explained above, the Draft EIR analyzes the Project based on the technologies, equipment, and processes that will be utilized. Phillips 66 is not creating a new facility to produce renewable fuels – it is transforming an existing facility to produce renewable fuels, with the addition of a PTU. The processing capabilities of existing equipment and facilities define the production capacity of the Project.

Specifically, the Project uses its existing hydroprocessing units (Units 240 and 246), each of which have their own processing capabilities, and while Phillips 66 proposes to alter those units to process renewable fuels, the units continue to have defined processing capabilities. Similarly, hydrogen has been used by the Rodeo Refinery for petroleum feedstocks processing and hydrogen usage will continue up to, but not in excess of, the production capacity of the Unit 110 Hydrogen Plant and the Air Liquide facility. The proposed increase in hydrogen usage as compared to the 2019 baseline is evaluated in the Draft EIR.

Other comments challenge the Project’s objectives related to converting the Rodeo Refinery to a renewable fuels transportation production facility, claiming that the Project’s objectives are drawn in an “artificially narrow” manner. (NRDC, pages 11, 72.) Comments state that the goal of the Project “is to manufacture biofuels” and that objectives to reuse existing equipment prevent the County from evaluating alternative biofuel production technology such as Fischer-Tropsch synthesis. The Project’s objectives do include the production of renewable fuels, but alternative technologies that do not reuse the existing equipment would not meet these project objectives (see Master Response No. 2, CEQA Alternatives) and likely necessitate the development of an entirely new industrial facility.<sup>22</sup> The Project has not been developed from the ground up to manufacture biofuels, but instead is the conversion of an existing refinery to produce renewable fuels, and the processing capabilities of the Project’s equipment and facilities define the Project.

Comments also suggest that there is something improper about reusing the existing facilities of a refinery to produce renewable fuels. Repurposing existing industrial facilities supports sustainability goals by reducing waste, reducing overall construction activities and reducing environmental effects. Further, the importance of these refinery conversions was emphasized in Governor Newsom’s Executive Order N-79-20, which directed State agencies to “expedite regulatory processes to repurpose and transition upstream and downstream oil production facilities . . . .”

**Comment: The Draft EIR fails to describe energy consumed for hydrogen production by third-party supplier.**

The comments state that the Draft EIR “fails to specifically disclose that the type of hydrogen production proposed for this ‘renewable’ fuels Project would use fossil gas hydrogen production . . . .” (NRDC, pages 10-11.) Section 4.6, Energy Conservation of the Draft EIR, details the 2019 baseline energy use and the Project’s energy requirements, including information regarding Air Liquide’s energy consumption. The Air Liquide facility is not part of the Rodeo Renewed Project. The energy consumption for the existing

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<sup>22</sup> Fischer-Tropsch (FT) synthesis and gasification are significantly more capital intensive technologies compared to the hydroprocessing of oils and fats (HEFA) due to the significantly higher number of process steps (5 to 6 steps for gasification and FT synthesis compared to 1 or 2 for HEFA). None of the steps required for gasification and FT synthesis are currently present in a petroleum refinery and would require a new development and a significant land footprint. The expected capital investment required for a new, 2,000-3,000 barrels per day (bpd) gasification and FT facility would exceed \$200,000 per bpd of capacity (4Q2021 US dollars). See Ryan M. Swanson, Justinus A. Satrio, Robert C. Brown; Techno-Economic Analysis of Biomass Gasification Scenarios, DOE/NREL Report No. NREL/TP-6A2-46587, 2009, DOI: 10.2172/994017, <https://www.nrel.gov/docs/fy11osti/46587.pdf>; Udengaard, Niels; Knight, Richard; Wendt, Jesper; Patel, Jim; Walston, Kip; Jokela, Pekka; Adams, Cheryl, Green Gasoline from Wood using Carbona Gasification and Topsøe TIGAS Process, 2015, DOE Report no. DOE-TOPSOE-EE0002874-F, DOI: 10.2172/1173129 <https://www.osti.gov/servlets/purl/1173129/>.

Rodeo Refinery is set forth in Section 4.6.2.2 and Tables 4.6-2a and 4.6-2b, which identify for the 2019 baseline the natural gas purchased and the electricity produced, consumed, imported and exported.

Table 4.6-5b, Operational Energy Usage, sets forth the 2019 baseline, the Project's energy usage and the change from the CEQA baseline. The table includes electricity, natural gas and fuel consumption. Overall, the Project will result in a reduction of natural gas purchases of 8,261,200 MMBtu/year. Although the Air Liquide facility is not owned by Phillips 66 and is an independent facility, the table includes a reference stating: "The Rodeo Site will be greatly decreasing natural gas purchases, as indicated above. Air Liquide will be increasing natural gas purchases to provide hydrogen for the Project (approximate increase of 4,439,100 MMBtu/r above baseline)." The use of natural gas by third-party supplier Air Liquide is disclosed, including consideration of the hydrogen usage of a third-party supplier, thus, overall natural gas consumption will be reduced by approximately 3,800,000 MMBtu/year.

**Comment: Renewable fuels processing increases the risk of hazards.**

Comments suggest that renewable fuels processing increases the "risk of upsets, fires, explosions, and flaring" as compared to crude oil processing "because the extra hydrogen that must be added to convert the new biofuel feedstock to hydrocarbon fuels generates more heat in process reactions that occur under high pressure and are prone to runaway reactions." (NRDC, pages 11, 37-38). The comment is based on the hydrogen usage for the average refinery and does not consider the hydrogen usage for the Rodeo Refinery and the Project. Furthermore, the nature of renewable feedstocks and the catalysts used to hydrotreat them result in similar or reduced hazards.

The comments state the project would use roughly nine times more hydrogen per barrel of biorefinery feed as compared to the average petroleum refinery. The hydrogen usage of an average refinery is not an appropriate standard to apply, because all petroleum refineries are not the same, and they process different petroleum feedstocks. More specifically, crude oil varies greatly in sulfur concentration (can vary from 0.5 to 6.0 wt percent) and density, both reflective of the hydrogen requirements to process a given crude oil, and this process may or may not require hydrogen. For example, distillation units require no hydrogen, catalytic reforming units generate hydrogen (1000 SCF/B or greater), and hydrotreating units consume hydrogen. Thus, there is a varying range of hydrogen demand at each refinery. In the reference cited in the comments (Karras, 2010. Environ. Sci. Technol. 44(24): 9584), the average hydrogen demand for different crude oil feedstocks across the 5 (Petroleum Administration for Defense Districts (PADDs) varies by 6 times. This variation is expected to be greater for individual sites because these are averages of individual sites based on the type of crude oil feedstocks and the PADD. Comparing hydrogen demand of this Project to the average petroleum refinery is not as relevant as comparing the Project's usage with the existing usage of the Rodeo Refinery as was done in the Draft EIR.

As explained above, the overall hydrogen usage for the Project is based on the production capacity of the refinery's Hydrogen Plant (Unit 110) and the Air Liquide facility. The Draft EIR evaluates the increase in hydrogen usage over baseline, and given that the amount of renewable fuels to be processed and produced (67,000 bbls) is less than the amount of petroleum-based fuels (120,000 bbls), the amount of hydrogen per barrel is increased. Nonetheless, the hazards associated with hydrogen usage are not increased.

The comment also states that the process hazards are correlated with the hydrogen demand per barrel. but this does not consider the overall volume of renewable feedstocks being processed in the hydroprocessing units. A more accurate assessment of this Project would be to compare the hydrogen demand of hydrocracking units with the hydrotreating of triglycerides. The hydrogen demand for these hydroprocessing units ranges from 1500 to 2500 SCF/B. Even though the hydrogen use per barrel of feed may increase, the processing units will process fewer barrels of renewable feedstocks as compared to crude oil feedstocks, and the overall hydrogen usage per processing unit is within this historic range of the Rodeo Refinery. Accordingly, hydrogen demand of a renewable diesel hydrotreater (or hydroprocessor) is similar to that of existing process units at Rodeo Refinery.

As noted in the comments, the hydrodeoxygenation of triglyceride reactions are exothermic and require proper safeguards to control the heat release. The heat release under normal operating conditions is handled with well-established process technologies such as co-feeding with inert liquids and gases to dilute the concentration and reduce the exotherm (Zhang 2018; Kalnes 2018; Kubička 2013). In all hydroprocessing technologies, the potential for a so-called runaway or reactor excursion is one that needs to be considered. A reactor excursion is more likely to occur with hydrocracking catalysts for crude oil feedstocks, which are more prone to cracking reactions, unlike the reaction mechanism for the hydrotreating of fats, oils, and greases (all renewable feedstocks). The product from renewable feedstock processing contains predominantly paraffins (any of the saturated hydrocarbons) while petroleum feedstocks contain aromatics. Cracking of paraffins is significantly less exothermic, and therefore, less prone to a reactor excursion, than processing aromatics. The endothermic nature of cracking reactions of paraffins (leading to reduction in reactor temperature) has been documented in technical reports (Köhler 2007; Deldari 2005; Weitkamp 1991; Hsu 2019). The catalysts used for renewable feedstock processing (metal sulfide supported on unreactive oxides) are inherently safer than the conventional hydrocracking catalysts (metal supported on acidic catalysts) because they contain fewer acidic sites required to facilitate cracking reactions. Specifically, hydrocracking catalysts are zeolite-based catalysts with acidic site densities of 300 – 600 micromol/g as documented in numerous research articles (Dik 2019). In contrast, catalysts for hydrotreating of fats, oil, and greases have amorphous alumina as support with acidic sites density of 3-10 micromol/g (Emiel 2012). In hydrotreating of triglyceride (renewable) feedstocks, a runaway reaction or reactor excursion would only occur at higher temperatures (>800 F), and are therefore, less likely to occur than in the hydrocracking of crude oil feedstocks, which may occur at typical operating conditions (500-750 F). The Project employs process safety measures to reduce the potential for a risk of upset (IEC 2016).

Comments also state that renewable feedstocks that are high in “free fatty acids” may be “highly corrosive” and that such reactions could “gum or plug process flows.” (NRDC, page 38.) However, the Rodeo Renewed Project will have a dedicated PTU to remove the contaminants from the feed and significantly reduce the fouling and plugging in the equipment. Unique processes including polyethylene removal, degumming and adsorption (reduction of solids, phospholipids, phosphorous compounds, metals, proteins, nitrogen and sulfur containing compounds) will remove contaminants to specified levels to increase processing reliability and decrease corrosion and fouling risks.

In addition, free fatty acids in triglyceride feedstocks present similar corrosion risks as naphthenic acids in crude oils. This corrosion risk is mitigated by blending feedstocks to limit free fatty acid content, materials selection, and detailed inspection and maintenance plans, similar to naphthenic acid corrosion control in crude oil refining (Yao 2014; The International Nickel Company Inc. 1963; Sandvik Materials 2021; Dobson 1984; Gutzeit 2016).

More specifically, in the hydroprocessing units, there will be three safeguards to prevent side reactions that could lead to gum formation that may plug process flows. First, the preheat temperature of the triglyceride feeds is lowered to less than 250 F – which is below the temperature at which gum formation or corrosion has been seen. Following that, the feed will be pumped directly into the reactor without further heating or exposure to other processing equipment where gums may form and cause the equipment failures that were cited.

Inside the reactor Phillips 66 will dilute the reactive materials with product renewable diesel to reduce the potential for fouling by reducing the concentration of the reactive materials contacting the catalysts. Dilution with recycled product also limits the temperature rise and potential for fouling due to higher operating temperatures.

The catalysts that will be employed in the reactor have been specifically designed to have lower activity at the top of the bed and then also high void fractions to prevent plugging from particulates that may have survived pre-treatment or from polymerization reactions.

These catalysts are efficient in removing selectivity components from the feed that initiate and catalyze the polymerization reactions that would cause gumming and fouling. Moreover, the dilution of the feed with inert liquids and gases will further reduce the rate of such reactions leading to lower corrosion, gumming, and fouling risk.

Although free fatty acids are present in renewable feedstocks and share similar corrosion traits to naphthenic acids, there are a few notable differences. Free fatty acids have a wider temperature range at which they are corrosive as compared to standard refinery metallurgies; at low temperatures the presence of water aggravates corrosion, and at high temperatures corrosion resistant alloys must be used.

Low temperature mitigations for the highest free fatty acid content feedstocks include coating of storage tanks, installation of stainless steel fixed roofs on storage tanks, tank dewatering and sampling, and enhanced NDE (non-destructive equipment) inspections at low points, dead legs, and turbulent areas. Certain processes in the PTU where these feedstocks will be combined with water during different steps will be constructed from stainless steel to prevent free fatty acid corrosion. Upon exiting the PTU the renewable feedstocks will be dried to prevent free fatty acid corrosion in low alloy transportation systems.

High temperature mitigations for free fatty acid corrosion include alloy upgrades to high molybdenum content materials, which have proven track records of resisting high temperature acid attack. Also, the process is designed to minimize the amount of time and surface area of exposure to high temperature free fatty acids to minimize risk. Comments express concern over an increased risk of High Temperature Hydrogen Attack (HTHA) with renewable fuels processing. HTHA, while a present challenge across refining in general, is well-documented and there are existing internal and external resources, guidelines, and mitigation methods that cover the expected H<sub>2</sub> partial pressures and temperatures for renewables processing (API 2016). HTHA risk in future renewable processing was carefully evaluated through process modeling and material reviews. Although both Units 240 and 246 are being converted to renewable processing, these units have established HTHA process alarms and inspection programs which were leveraged into design decisions for the future. In addition, equipment and piping systems are being upgraded to HTHA resistant alloys to further mitigate any HTHA risk. The conversion of these hydrocrackers to renewable fuels will not increase the risk of HTHA. The comments also express concern regarding carbonic acid corrosion of the reactor effluent, which is a mechanism not expected in traditional crude oil hydroprocessing but is a potential mechanism with oxygenated renewable fuels. The risks of carbonic acid corrosion in the reactor effluent and additional mechanisms have been thoroughly modeled and evaluated across multiple internal studies for Rodeo Refinery since 2019 (DeBerry 1979), and are detailed in external resources as well (Akpanyung 2019). Mitigative steps, monitoring strategies, material upgrades (including metallurgical), and operating limits have been developed internally to address these various mechanisms. Specifically, sour water pH monitoring and control via neutralizer is key to controlling carbonic acid corrosion at the conditions and relatively lower carbon dioxide partial pressures expected in renewables processing (DeBerry 1979; Akpanyung 2019), and ionic modeling tools (e.g., OLI) were used to determine the potential pH ranges in the Rodeo Renewed units.

Comments state that historic hydrogen-related incidents “contributed to significant flaring incidents” and that “the Project’s new feedstock and process system” will “worsen the underlying conditions” that are the “root causes of hazardous incidents.” (NRDC, pages 39-40.) As described above, renewable fuels processing is very similar to crude oil processing and the purported increase in hazards described by comments is not supported by the science. Therefore, the Project is not expected to have an increase in flaring incidents.

Furthermore, flaring at refineries (and now renewable fuels facilities pursuant to the amendments to BAAQMD’s Refinery Rules mentioned above) is strictly regulated by the BAAQMD, including Regulation 12, Rule 11: Flare Monitoring at Refineries and Regulation 12, Rule 12: Flares at Refineries. In addition, the Rodeo facility’s BAAQMD Major Facility Review Permit includes conditions for flaring which will continue to apply with the Rodeo Renewed Project. The BAAQMD is aware of the incidents

mentioned by comments (as the data cited by comments is from the BAAQMD's website), and the BAAQMD has regulated refineries and renewable fuels facilities to address these concerns.

The comments express that the Project should have considered various process operation mitigation measures to address increases in safety hazards. (NRDC, page 41.) The Project's operations are not expected to increase safety hazards and therefore, no such mitigation measures are required by CEQA. The Rodeo Refinery employs and the Rodeo Renewed Project will continue to employ process safety measures to address the reduced risk of hazards (IEC 2016).

The comments state that additional mitigation measures should have been considered in the Draft EIR to address the safety hazards purportedly created by "high-process hydrogen demand feedstocks." (NRDC, page 42.) However, the Rodeo Renewed Project does not have an increased risk of hazards as a result of the hydrogen usage or the processing of renewable feedstocks. Therefore, the Project does not result in a significant impact with respect to hazards from renewable fuels processing. CEQA requires mitigations for significant environmental effects of a project, and in the absence of a significant impact, no additional mitigation measures are required. Cal. Publ. Res. Code § 21002.

**Comment: The Draft EIR improperly evaluates the greenhouse gas emissions from hydrogen usage in renewable fuels processing.**

Comments state that processing renewable feedstocks results in increased carbon emissions as compared to crude oil processing. The assertion is based on the increase in hydrogen assumed in the comments. As stated above, the Project's usage of hydrogen is described in the Draft EIR, and it is being supplied by the on-site Hydrogen Plant (Unit 110) and by Air Liquide, an independent third-party supplier. The potential greenhouse gas (GHG) emissions resulting from the Project are evaluated in the Section 4.8 of the Draft EIR. While the comments state that the hydrogen usage is not considered in the Draft EIR, Table 4.8-5 sets forth the annual operational GHG emissions for the Project, which includes all of the Rodeo Site emissions, including the Hydrogen Plant (Unit 110), and a separate line item for the Air Liquide facility, even though it is a third-party supplier operated by an independent company. The Project results in a reduction of GHG emissions as compared to the 2019 baseline.

Further, the GHG emissions evaluation in the Draft EIR conservatively underestimates GHG emissions reductions from the Project by orders of magnitude. This is because the GHG reductions resulting from the combustion of renewable fuels as opposed to the combustion of petroleum-based fuels have not been relied upon to determine that the Project's impacts to greenhouse gas emissions are less than significant, as the precise amount of the reductions would depend on the feedstocks being used. However, these reductions range from 45-75 percent and would far exceed the Project's GHG emissions even without taking into consideration the 2019 baseline. Based on the average carbon intensity of the renewable diesel sold in California in 2021, the Project would reduce the lifecycle carbon emissions of transportation fuels by approximately 8.5 million metric tons per year.

Comments suggest that the Project will actually increase GHG emissions by "pushing them overseas" based on a greater amount of petroleum distillate has been refined in California and exported out of state. (NRDC, pages 52-53.)

With respect to the Project's analysis of GHG emissions, the Project does not take credit for the combustion of renewable fuels as opposed to petroleum-based fuels. The comments misinterpret the Draft EIR's analysis of GHG emissions (NRDC, footnote 211) and suggest that these references refer to combustion emissions from transportation products produced by the Project. Instead, those references refer to the emissions of the Project's use of transportation fuels, i.e., construction vehicles. The comments that suggest the Draft EIR should have discounted the benefits of GHG reductions from the combustion of renewable fuels by considering petroleum distillate exports is not valid, because the Draft EIR did not consider those GHG reductions in determining that the impact was less than significant.

Furthermore, the comments state that increased petroleum distillate exports from California prove that the increase in renewable fuels' production in California did not supplant the use of petroleum distillate. Comments imply that the overall use of petroleum distillate either remained the same or increased, despite the production of renewable fuels. However, the petroleum distillate market is a global one and an increase in petroleum distillate exports from California does not necessarily mean that global demand for petroleum distillate remained the same or increased. Supply from California could be replacing other sources globally. Global demand for transportation fuels is driven by a multitude of factors, and supply is only one factor to consider. The comments speculate that increased petroleum distillate exports from California means that the global demand stayed the same or increased, but the market is far more complex. CEQA does not require speculation regarding the global market, particularly when global market changes are not a "reasonably foreseeable" consequence of this Project.

In addition, the chart provided in the comment (NRDC, page 53) shows that the petroleum distillate burned in California has been steadily replaced by renewable transportation fuels. Thus, while the Draft EIR did not take credit for the GHG reductions in the combustion of renewable fuels as compared to petroleum-based fuels, this chart supports the State's programs for the production and development of renewable fuels as the GHG emissions for fuels burned in California are decreasing.

The comments also state that the transformation of the Rodeo Refinery to the production of renewable fuels worsens the "in-state petroleum refining overcapacity." Stated in the comments: "California refining capacity, especially, is overbuilt." (NRDC, page 54.) The Project eliminates petroleum refining at the site, and therefore reduces the State's capacity of petroleum refining and could not possibly worsen any overcapacity.

The comments appear to attribute to this Project, GHG emissions from petroleum distillate exports, but such an analysis would be contrary to CEQA's fundamental requirements. (NRDC, pages 55-56.) CEQA requires the evaluation of the Project's direct or reasonably foreseeable indirect effects, and data regarding the State's overall exports of petroleum distillate does not provide any evidence that this Project (which is not refining petroleum distillate) will result in increased GHG emissions from the combustion of that petroleum distillate.

**Comment: The Draft EIR improperly evaluates the air quality effects of hydrogen usage in renewable fuels processing.**

Comments state that air quality impacts have not been evaluated properly in the Draft EIR as a result of increases in GHG emissions, flaring, and odors. The Draft EIR explains that the Project is not expected to increase GHG emissions, but to decrease them, with additional GHG reductions associated with the combustion of renewable fuels as compared to petroleum-based fuels. The likelihood of process upsets and flaring incidents due to reactor temperature excursions is lower in renewable fuels operations than crude oil processing. The catalysts used for the hydroprocessing of renewable feedstocks into renewable transportation fuels are inherently safer than the conventional hydrocracking catalysts due to the significant difference in their chemical structures and cracking reaction ability. To address potential process upsets and minimize flaring incidents, the Project is designed to meet or exceed industry standards and best practices for process safety (IEC 2016). These approaches include designing hydrogen quench for temperature increases, automatic interlocks, and emergency depressuring systems. Therefore, the processing of renewable feedstocks does not increase the likelihood of upsets.

Furthermore, Section 4.3 of the Draft EIR evaluates the air quality effects of hydrogen usage in renewable fuels processing. Tables 4.3-15 and 4.3-16 shows that the Rodeo Site, including the Hydrogen Plan (Unit 110), was included for evaluation along with third-party supplier Air Liquide. These tables also demonstrate that the Rodeo Site air quality effects are less than significant, as the Project results in reduced levels of criteria pollutants across the board – VOC, NOx, PM10, PM2.5, SO2 and CO.

Comments state that contaminants in the feedstocks can be released during processing, adding to the air emissions burden. However, renewable feedstocks are primarily composed of long-chain fatty acids and

esters with extremely low vapor pressure (significantly lower than crude oil). Because of their lower vapor pressure, they would produce less air emissions compared to crude oil. With very few exceptions, constituents of renewable feedstocks, unlike the constituents of crude oil, are not toxic. That is why soybean oil and vegetable oil, unlike crude oil, are edible and used for human consumption. Any trace levels of contamination present in renewable feedstock would still be at significantly lower levels than crude oil. Therefore, switching from crude oil to renewable feedstocks will only reduce air pollution.

Last November 2021, the BAAQMD adopted administrative amendments to the Refinery Rules to ensure that petroleum refineries that have proposed to modify their facility operations to process renewable (or alternative) feedstocks would continue to be subject to these rules. As stated by the BAAQMD in its October 15, 2021 Staff Report (BAAQMD 2021):

The purpose of the proposed amendments is to ensure that the facilities that produce fuels and other products from non-petroleum feedstocks remain subject to and in compliance with the same emission standards and rule requirements that were in effect when the feedstock was petroleum based.

The comments also state that increased risk of upset, increased flaring and increased hazards will result in increased air pollution, but as explained above, the Project's potential hazards were fully evaluated and these risks are not expected to increase. Similarly, flaring at the site is also not expected to increase, and based on the recent BAAQMD amendments, the Rodeo facility will continue to be subject to Regulation 12, Rule 11: Flare Monitoring at Refineries and Regulation 12, Rule 12: Flares at Refineries. Permit conditions related to flaring currently contained in the refinery's BAAQMD Major Facility Review Permit will apply post-Project.

Regarding odor, comments state that the Draft EIR does not provide sufficient information with respect to the mitigation of any potential odors from the Project. (NRDC, pages 61-62.) Refer to Response to Comment 1-3, which revises Mitigation Measure AQ-4.

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## **MASTER RESPONSE NO. 6: PURPOSE OF PROJECT**

### **Comment: The Project is inconsistent with climate goals.**

Various comments suggest that the Project, in general, risks exacerbating climate change for a variety of reasons, including extending reliance on fossil fuels or continuing with heavy industrial operations. It should be noted that a key Project objective is to “[p]rovide/maximize production of renewable fuels to assist California in meeting its goals for renewable energy, GHG emission reductions, and reduced CI [carbon intensity] for transportation fuels,” and the Project has been designed to achieve this objective and assist California in ultimately transitioning to carbon neutrality (see Draft EIR at page 3-22).

As described in the Draft EIR, GHG emissions are regulated at the federal and state levels, and local and regional entities have also adopted plans designed to reduce GHG emissions consistent with statewide mandates. Refer to Draft EIR at 4.8-245 to 4.8-255. At the federal level, a suite of measures, policies, and regulations aim to reduce GHG emissions from a variety of sources, including industrial sectors and transportations fuels through mandates and incentive programs. Chief among these is the federal Renewable Fuels Standard (RFS). The RFS was enacted as part of the 2007 Energy Independence and Security Act (Public Law 110-140) [EISA] whose purpose includes effort to “*move the United States toward greater energy independence and security, to increase the production of clean renewable fuels,...*” EISA, preamble. The RFS is a federal mandate for the commercialization of biofuels, requiring fuel refiners and importers to commercialize increasing volumes of different types of biofuels, up to 36 billion gallons through 2022.

At the state level, executive orders have set goals to reduce GHG emission along set milestones, with subsequent rulemaking and legislation designed to achieve these goals. The Global Warming Solutions Act of 2006 (AB 32) (California Health and Safety Code, Division 25.5) sets forth GHG emissions reduction targets and requirements for implementing regulations to achieve them. Among other mandates, AB 32 directed CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020. As explained in the Draft EIR, at pages 4.8-249 through 4.8-251, the initial Scoping Plan, adopted in 2008, included recommendations for development of a Cap-and-Trade program, and adopting and implementing measures pursuant to existing laws and policies, including the LCFS. Subsequent updates to the Scoping Plan in 2014 and 2017<sup>23</sup> acknowledged the successes achieved in GHG emissions reductions from the adopted programs and measures, and accordingly recommended expanding the Cap-and-Trade program, extending the LCFS, and incorporating the 2016 Mobile Source Strategy with its recognition of the importance of renewable fuels in reducing the CI of the transportation sector. These three programs, and their relevance to the Project, are discussed at length in the Draft EIR. Draft EIR at pages 4.8-251 through 4.8-253. Once operational, the Project will be a source of renewable transportation fuel – and part of the solution to GHG emissions reductions in the state – as contemplated by these programs.

The Project’s renewable fuels are intended as part of the state’s GHG emissions reduction strategies. Consistent with the Governor’s Executive Order EO B-55-18, which sets a goal to achieve carbon neutrality no later than 2045, CARB is currently in the process of developing the 2022 update to the Scoping Plan with a focus on achieving carbon neutrality by 2045.<sup>24</sup> The EO notes that that “*clean renewable fuels play a role as California transitions to a decarbonized transportation sector,*” and although a draft plan has not yet been published, CARB has conducted numerous public workshops to outline conceptual approaches to the update as well as solicit feedback from stakeholders that indicate low CI fuels will, indeed, be part of the pathway in this transition.

<sup>23</sup> CARB. 2017. The 2017 Climate Change Scoping Plan Update: The Proposed Strategy for Achieving California’s 2030 Greenhouse Gas Target. January 20, 2017.

<sup>24</sup> In addition, Executive Order N-79-20 highlights the importance of repurposing downstream assets and the role of renewable fuels in achieving California’s GHG emission reduction objectives.

Among the reports that CARB has stated are informing the 2022 update<sup>25</sup> is a study developed for CARB entitled “*Achieving Carbon Neutrality in California - PATHWAYS Scenarios Developed for the California Air Resources Board*”<sup>26</sup> which evaluates potential scenarios for achieving carbon neutrality by 2045. In developing this report, the authors reviewed numerous carbon neutrality studies published to date (primarily in Europe) and observed several commonalities among them, including a reliance on “low-carbon fuels, including low-carbon electricity and some reliance on low-carbon liquid and gaseous fuels, such as hydrogen, for hard-to electrify sectors,” (E3 Report at page 11). The report goes on to note that “Most decarbonization pathways show a significant reliance on low-carbon (or zero carbon) liquid and/or gaseous fuels across all sectors of the economy (buildings, industry, transportation, and electricity) in order to meet climate goals, and in particular when targeting net zero emissions,” and includes renewable diesel and renewable jet fuel in its use of the term biofuel. (E3 Report at page 27). Of the three pathways to 2045 carbon neutrality considered in this report, renewable transportation fuel is a consistent component in each of them. See, E3 Report at pages 30-31.

Another report informing the Scoping Plan update is “*Driving California’s Transportation Emissions to Zero*,”<sup>27</sup> which notes that in addition to renewable diesel’s GHG reductions of 30-60percent<sup>28</sup> when compared to petroleum diesel taking into account the refining process, renewable diesel also “significantly reduces PM and slightly reduces NOx when substituted for petroleum diesel.” (UC Report, at page 95).

Local and regional agencies have also addressed GHG emissions reduction strategies within their jurisdictions, consistent with the state’s goals and mandates. Contra Costa County’s Climate Action Plan (CAP) inventories emissions from unincorporated areas of Contra Costa County, provides GHG reduction measures for, and is applicable to all unincorporated areas, including the Project area. The quantification of the CAP’s GHG emissions inventory is consistent with guidance set forth by the BAAQMD. (See, CAP, 2016, at page D-1). The reduction measures in the CAP, while generally focused on local-scale activities such as facilitating solar installation or incentive programs for energy efficient home improvements, nonetheless dovetail with the broader purposes of the statewide programs, including a self-imposed requirement to reduce County fleet use of traditional fuels 25 percent by the year 2020, and to advocate for regional, state, and federal activities that support GHG emissions reductions in the county. CAP at page 73.<sup>29</sup> (Subsequent updates to the CAP, such as the 2020 progress report, indicate the County is continuing to green its fleet, although the percentages achieved are not specified.)<sup>30</sup> Ultimately, Renewable transportation fuels will assist in achieving California’s goal of carbon neutrality by 2045, particularly in sectors that do not easily contribute to decarbonization, such as aviation, heavy industry, and maritime.

Consistent with these various federal, state, and regional goals, the Project helps to mitigate climate change by contributing to the reduction of GHG emissions within industries that are difficult to decarbonize, such as heavy industry and aviation, where use of renewable fuels will ultimately help lower the lifecycle carbon emissions of their transportation fuel. The Project provides a mechanism for compliance with California’s LCFS and Cap-and-Trade programs and the RFS, while continuing to meet regional market demand for transportation fuels. Development and deployment of renewable transportation fuels is a component of a suite of measures intended to help achieve California’s goal of carbon neutrality by 2045<sup>31</sup>.

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<sup>25</sup> CARB, Public Workshop Series to Commence Development of the 2022 Scoping Plan Update to Achieve Carbon Neutrality by 2045, June 8, 2021 (see, <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/scoping-plan-meetings-workshops>, last accessed February 8, 2022).

<sup>26</sup> Energy + Environmental Economics (E3). 2020. *Achieving Carbon Neutrality in California - PATHWAYS Scenarios Developed for the California Air Resources Board*. October 2020. Available at: [https://ww2.arb.ca.gov/sites/default/files/2020-10/e3\\_cn\\_final\\_report\\_oct2020\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-10/e3_cn_final_report_oct2020_0.pdf)

<sup>27</sup> University of California – Institute for Transportation Studies, *Driving California’s Transportation Emissions to Zero*, April 1, 2021. Available at <https://escholarship.org/content/qt3np3p2t0/qt3np3p2t0.pdf?t=qs0sle>

<sup>28</sup> Based on the CIs for soybean oil and tallow, the reductions are estimated to range from 45-75 percent.

<sup>29</sup> <https://www.contracosta.ca.gov/DocumentCenter/View/39791/Contra-Costa-County-Climate-Action-Plan?bidId=>

<sup>30</sup> <https://www.contracosta.ca.gov/DocumentCenter/View/69585/2020-CAP-Progress-Report---final?bidId=>

<sup>31</sup> Available at <https://www.arb.ca.gov/lists/com-attach/94-lcfs18-BmpQNQFmAyMHXlc0.pdf>, last accessed February 8, 2022.

## **MASTER RESPONSE NO. 7: PROJECT DESCRIPTION–PIECEMEALING**

Comments received state that the Draft EIR fails to include as part of the Rodeo Renewed Project the following activities or projects: (1) the processing of renewable feedstocks at Rodeo Refinery's Unit 250; (2) Nustar Shore Terminals (Nustar project); and (3) terminal and wharf improvements at the Port of Los Angeles. None of these activities is part of the Rodeo Renewed Project. The Draft EIR's project description is complete and correct in not including these other activities or projects, as discussed below.

### ***CEQA "Piecemealing"***

The comments state that the County improperly divided the Rodeo Renewed Project into two or more different projects, which is often referred to as "piecemealing" in CEQA parlance (or improper project segmentation). The CEQA piecemealing refers to whether the overall environmental effects are understated, minimized, or submerged by evaluating the projects separately. In case law, the California Supreme Court affirmed that a lead agency must consider the environmental effects of a future action if: "(1) [that future action] is a reasonably foreseeable consequence of the initial project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effect." *Laurel Heights Improvement Assn. of San Francisco, Inc.* (1988) 47 Cal.3d 376, 396. Courts have also held that projects with "significant independent or local utility" are not considered part of the same project.<sup>32</sup> The County followed established principles for assessing "the whole of the action," in its review of the Rodeo Renewed Project.

### ***Unit 250 Operations***

Comments state that existing renewable feedstock processing at the Rodeo Refinery's Unit 250 is functionally part of the Rodeo Renewed Project. That is not the case. Unit 250 is a diesel hydrotreater that has been operational for approximately 15 years. In April 2021, Phillips 66 began processing pretreated renewable feedstocks in the unit, whereas previously the unit solely processed petroleum feedstocks. Unit 250 has the flexibility to run either feedstock and, notwithstanding the Rodeo Renewed Project, will continue to process either pretreated renewable feedstocks or petroleum feedstocks depending on future market considerations such as transportation, logistics, economic, supply, and possibly other factors. Further, absent the Rodeo Renewed Project, Unit 250 renewable feedstock processing will continue to supplement the Refinery's current, primary operation of refining crude oil and other petroleum feedstocks, but on a small scale (i.e., less than 10 percent of the throughput capacity). As described in the following paragraphs, the processing of renewable feedstocks at Unit 250 involves typical operational activities using existing equipment, whereas the Rodeo Renewed Project will transform the entire Rodeo Refinery by introducing new equipment and a new mode of operations.

The Project will transform the existing Rodeo Refinery into a facility that no longer refines crude oil. The Project will permanently shut down Refinery equipment for crude oil refining. It also will include the shutdown of the Santa Maria Refinery, as well as removing the Pipeline Sites from service. The renewable feedstocks delivered to the Rodeo Refinery as part of the Project will first undergo pre-treatment (in the proposed PTU) prior to being manufactured into renewable transportation fuels onsite. This is not the case for renewable feedstock processing in Unit 250. There, renewable feedstocks received at the Refinery are already pretreated offsite prior to being processed in Unit 250 using the same equipment that was (and still can be) used for refining petroleum feedstocks until the Rodeo Renewed Project is operational.

Importantly, Unit 250 can process pretreated renewable feedstocks without the Rodeo Renewed Project, and has done so for almost a year. It will continue to do so whether the Rodeo Renewed Project becomes operational or not. The processing of renewable feedstocks has independent utility from the

<sup>32</sup> See *Planning and Conservation League v. Castaic Lake Water Agency* (2009) 180 Cal.App.4th 210, 237 [rejecting allegations of piecemealed review for projects that had "significant independent or local utility"]; see also *Banning Ranch Conservancy* (2012) 211 Cal.App.4th 1209, 1223-26 [rejecting allegations of piecemealed review for a park that would be built regardless of other proposed development].

Rodeo Renewed Project. The converse is true as well: the Rodeo Renewed Project has independent utility from renewable feedstock processing at Unit 250. If Unit 250 was dismantled tomorrow, the Rodeo Renewed Project would still occur as currently proposed.

Comments also state that the Rodeo Renewed Project "would depend on Unit 250 to maximize onsite refining of the pretreated feed output [of the proposed PTU]; and in turn, Unit 250 would be dependent on the Project for economical access to pretreated feed, feedstock acquisition, and Unit 250 product distribution." While it is true that, from time to time, treated renewable feedstocks from the proposed PTU may be used as an alternative source of feedstock for Unit 250 (in addition to offsite-treated renewable feedstock), the Rodeo Renewed Project does not depend on Unit 250 to maximize onsite processing of the PTU output.

Depending on market conditions and feedstock supply, pretreated feedstock that is received at the Rodeo Site and processed through the Rodeo Renewed PTU and that cannot be processed onsite will be sold to third parties for processing elsewhere. Operational and market flexibility is the purpose underlying construction and operation of the third PTU processing train – not maximization of onsite processing using Unit 250 solely for the processing of treated feedstocks. The use of Unit 250 for processing pretreated feedstocks that are outputs from the yet-to-be-constructed PTU does not make Unit 250 "functionally part" of or an "interdependent component" of the Project.

Comments note that changes were made to Unit 250. However, the work on Unit 250 has been consistent with typical operational, maintenance, and turnaround activities for equipment used at the Rodeo Refinery. Industrial facilities regularly implement changes to equipment or facilities for maintenance or upgrades, and these activities generally do not require a permit from a regulatory agency. The County determined that none of the Unit 250 work needed a discretionary permit, and thus, CEQA review was not required for the work performed on Unit 250, per Contra Costa County Ordinance Code Section 84-63 (i.e. hazardous materials land use ordinance).

Comments also state that Phillips 66 began processing renewable feedstocks in Unit 250 without a BAAQMD permit, which is not the case. The Rodeo Refinery has a facility air permit from BAAQMD that includes Unit 250 operations (BAAQMD 2018). The air permit covering Unit 250 operations applies whether petroleum feedstocks or renewable feedstocks are processed in the unit.<sup>33</sup> The comments also conclude that the BAAQMD permitting issue "underscores the need for the Draft EIR to determine whether Unit 250 is functionally part of the [Rodeo Renewed] Project and if so – evaluate it as such." This statement does not render the Draft EIR deficient, nor does it transform Unit 250 operations from a standalone, separate project into part of the Rodeo Renewed Project.

The comments also make related technical claims (Karras, Attachment C, page 13) that "the deoxygenated output of HEFA hydrotreating is too waxy to meet fuel specifications and must be isomerized in a separate processing step before it can be sold as transportation fuel...Unit 250 depends on the project isomerization component to make its output saleable..." This is not accurate as renewable fuels production from Unit 250 meets all of CARB's diesel specifications without a separate processing step. Also refer to Master Response No. 5, Renewable Fuels Processing.

CEQA prohibits piecemeal review, which is separating a large project into smaller pieces to avoid CEQA significance thresholds by dividing environmental effects among two or more projects. As indicated in the forgoing discussion, this is not the case with the Rodeo Renewed Project and existing renewable feedstock processing in Unit 250.

To summarize, the operational capacity of the Rodeo Refinery did not change when it began processing renewable feedstocks in Unit 250; Phillips 66 is still utilizing existing equipment, without modification, to process pretreated renewable feedstocks, which is not the case with the Rodeo Renewed Project; and

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<sup>33</sup> On July 31, 2013, the California Air Resources Board and the State Water Resources Control Board issued a joint statement stating that renewable diesel should be treated the same as conventional CARB diesel for all purposes.

the Rodeo Renewed Project is undergoing full environmental review under CEQA. As such, the "piecemealing to avoid environmental review" argument does not apply here.

### ***Nustar Project***

Comments state that "[t]here is basis to conclude that the Nustar project is an undisclosed component of the [Rodeo Renewed] Project." The comments point to pipelines transporting treated soybean feedstock unloaded at Nustar rail facilities and transported via pipeline to the Rodeo Refinery to "almost certainly be used in connection with the [Rodeo Renewed] Project."

The soybean oil unloaded at the Nustar rail facilities and transported via pipeline to the Rodeo Refinery is used as feedstock at the Refinery's Unit 250, which as explained above is not part of the Rodeo Renewed Project. The manufacturing inputs to the Rodeo Refinery have historically been variable (e.g., the crude slates processed at the Refinery change frequently). The Refinery's current operating configuration allows for processing pretreated renewable feedstocks - the soybean oil coming from Nustar is just another part of the variable feedstocks processed by the Refinery. See *Communities for a Better Environment v. City of Richmond*, 184 Cal.App.4<sup>th</sup> 70 (2010). This case determined that a project to replace and upgrade manufacturing facilities at an existing refinery need not include pipeline in the project, as the facility upgrade activities and the pipeline activities were not "interdependent." Each had different purposes and were proposed by different applicants, and the facility upgrade did not depend on the pipeline.

The Nustar project is not needed for the Rodeo Renewed Project, nor vice versa. The NuStar project is not a foreseeable consequence of the Rodeo Renewed Project, nor is the Rodeo Renewed Project a foreseeable consequence of the NuStar project. Further, neither project will change the scope or nature of the other project or the environmental effects.

Lastly, there were comments faulting the Draft EIR for not expressly making any disclaimer regarding the Nustar project, when in fact the Draft EIR explained the status of Unit 250 in Section 3.7, Project Operation.

### ***Los Angeles Refinery Marine Terminal Project***

Comments state the Los Angeles Refinery Marine Terminal Project is a third project that is part of the Rodeo Renewed Project and therefore "merits discussion in the DEIR and further investigation by the County." (NRDC Comment Letter, pages 6-8.) This is not correct.

This "third project" identified in the comments is a project undertaken by the Port of Los Angeles and Phillips 66. The primary purpose of the project is to perform construction upgrades at Berths 148-151 in the Port of Los Angeles. Phillips 66 leases those berths from the Port of Los Angeles and the construction upgrades are necessary to comply with California's Marine Oil Terminal Engineering and Maintenance Standards (MOTEMs). Portions of this property were first identified as in need of MOTEMs upgrades in 2009 and both the Port of Los Angeles and Phillips 66 have been evaluating and subsequently preparing for the MOTEMs upgrades since that time. The Port of Los Angeles issued a Draft Initial Study and Mitigated Negative Declaration (IS/MND) for the MOTEMs project in November 2021.<sup>34</sup>

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<sup>34</sup> Berths 148-151 [Phillips 66] Marine Oil Terminal and Wharf Improvement Project, Draft Initial Study/Mitigated Negative Declaration, Port of Los Angeles, November 2021. The IS/MND also includes as part of the project being evaluated a renewal of the Phillips 66 lease from the Port of Los Angeles for Berths 148-151. The lease expired in the mid-1990s and operators of the Los Angeles Refinery Marine Terminal, including, now Phillips 66, have been operating under a month-to-month holdover tenancy since that time.

The comments also speculate that the Los Angeles Refinery Marine Terminal project "may have a purpose, in part, of advancing the Rodeo Renewed Project." (NRDC, page 7.). This is speculated for two reasons. First, comments note that the IS/MND contains the following sentence:

The Phillips 66 MOT loads and unloads oil commodities products such as gas oil, residual fuel, dark oils, lube oil stocks, naphthas, gasoline/gasoline blend stocks, diesel and jet fuels, and distillate blend stocks, as well as renewables and renewable feedstocks, recovered oil, and water, to and from tanker vessels, both oceangoing vessels (OGVs) and barges.

Comments state that the listing of "renewables and renewable feedstocks" among the eleven other commodities loaded or unloaded at the Los Angeles Refinery Marine Terminal is evidence that the Los Angeles Refinery Marine Terminal project is part of the Rodeo Renewed Project. Phillips 66 has been unloading renewable diesel at the Los Angeles Marine Terminal since 2012, primarily for use as blendstocks in transportation fuels produced at the Los Angeles Refinery. Phillips 66 does not have any plan to unload renewable diesel or renewable feedstocks at the Los Angeles Refinery and then transport those materials to the Rodeo Refinery for subsequent processing there.

The comment also suggests information presented in a document that Phillips 66 submitted to CARB as part of its application to certify a Low Carbon Fuel Standard pathway. That document, which is entitled "CARB LCFS Fuel Pathway Report, Renewable Diesel" (cited in footnote 11 of the NRDC comments), supports an application to certify an LCFS pathway for canola oil processed at the Rodeo Refinery Unit 250. The canola oil was transported by rail from a crushing plant in the U.S. Midwest to the Port of Vancouver, where it was then loaded on a ship for unloading at the Rodeo Refinery. Because the ship's itinerary required it to first travel to unload materials in Southern California before then transiting to Rodeo to unload the canola oil, the LCFS pathway needs to account for the full transport distance (i.e., the LCFS carbon intensity is based on a lifecycle analysis that includes transportation). The canola oil "comes through" the Port of Los Angeles, which suggests offloading at the Los Angeles Refinery, thereby creating "a potential connection" between the Rodeo Renewed Project and the Los Angeles MOTEMs project. The projects, however, are not related because the canola oil being processed at the Rodeo Refinery had traveled on a ship that first offloaded materials in Southern California prior to offloading in the Bay Area.

## **MASTER RESPONSE NO. 8: NON-CEQA TOPICS AND PROJECT MERITS**

CEQA does not require lead agencies to respond to comments that do not raise significant environmental issues on the content of the EIR or the impacts of the Project on the environment (see CEQA Guidelines Section 15088). Where a comment does not identify any specific deficiencies related to the analysis presented in the Draft EIR, no further response is warranted and the “comment is noted”. In addition, this Master Response is included to provide consideration of these comments by decision makers as part of the Project approval process. Moreover, because the comments were submitted during the public review period on the Draft EIR, they nonetheless constitute part of the public record that will be available to decision makers as part of this Final EIR.

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