

Comment Letter #99

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October 18, 2022

Via email

Sarah Rees, Ph.D.
Deputy Executive Officer
Planning, Rule Development, and Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Regulatory Flexibility Group (“RFG”) Comments on South Coast Air Quality Management District (“SCAQMD”) 2022 Draft Air Quality Management Plan

Dear Dr. Rees:

Thank you for the opportunity to submit these comments on the revised 2022 draft of the South Coast Air Quality Management District’s Air Quality Management Plan (the “2022 Draft AQMP”) on behalf of the RFG, a coalition of California entities whose operations are subject to regulation under the Clean Air Act and corresponding state and regional air quality programs. RFG members include manufacturers, natural gas utilities, oil and chemical companies, and other regulated entities. We appreciate SCAQMD staff’s careful review and responses to our July comments, and the reflection of many of our comments in the 2022 Draft AQMP.

We particularly appreciate the District’s acknowledgment that subsequent rule developments arising from the 2022 AQMP will evaluate technological feasibility, cost-effectiveness, and incremental cost-effectiveness, pursuant to Health and Safety Code Section 40920.6, when establishing BARCT emission limits, and the reflection of the same in applicable control measure language.

We also appreciate your recognition of the District’s long-standing policy of technology and fuel neutrality. We encourage the District to continue this policy in support of meeting the challenges the region will face as it moves towards attainment. As we continue to move towards attainment, it is critical that policies and rules recognize the incredible efforts the regulated community has undertaken over the last 30 years to control emissions and the risk that, without appropriate policies and recognition, our region could face significant economic impacts without correspondingly meaningful advancements towards attainment.

Thank you also for the acknowledgement of the subsequent challenges regarding grid reliability and the widespread transition to zero emission technologies. As with many in the region, RFG is extremely concerned with the costs and timing for bringing the needed generation and

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associated infrastructure online, along with the potential environmental impacts associated with the same.

RFG recognizes the balance staff is seeking to achieve with the 2022 Draft AQMP, and it appreciates the extensive work and outreach that has gone into this AQMP cycle. Notwithstanding, we continue to have a few significant concerns with the revised document, summarized below.

Maintaining a Control Measure-Based Cost-Effectiveness Threshold Approach

We are extremely concerned with the District’s potential fundamental shift in the approach to the tiered analysis associated with cost-effectiveness thresholds. In 2003, the District recognized the challenges placed on the regulated community and established a \$13,000 per ton of VOC reduction to trigger “more rigorous” cost-effectiveness, incremental cost-effectiveness, and socioeconomic impact analysis. As reflected in that 2003 AQMP:

Specifically, proposed rules with an average cost-effectiveness above the threshold will trigger a *more rigorous average cost-effectiveness, incremental cost effectiveness, and socioeconomic impact analysis*. A public review and decision process will be instituted to seek lower cost alternatives. In addition, the District staff, with input from stakeholders, will attempt to develop viable control alternatives within the industry source categories that a rule is intended to regulate. If it is determined that control alternatives within the industry source category are not feasible, staff will perform an evaluation of the control measure as described in the next paragraph. Viable alternatives shall be reviewed by the District Governing Board at a public meeting no less than 90 days prior to rule adoption and direction given back to staff for further analysis. *During this review process, incremental cost effectiveness scenarios and methodology will be specified, and industry-specific affordability issues will be identified as well as possible alternative control measures*. The District Governing Board may adopt the original or an alternative that is consistent with state and federal law. In addition, staff shall include in all set hearing items a notification that proposed rules do or do not exceed the cost threshold.¹

While the cost per ton of reduction for the threshold has increased, for the last two decades the District has implemented a tiered cost-effectiveness approach based on control measure costs. And given the economic and employment risk of further burdening stationary sources, we have continuously advocated that the cost-effectiveness threshold *should function as a hard cap in rulemaking*.

While your response to our May 2022 letter declined to adopt what RFG believes to be an important safeguard for future rulemakings (again, the “hard cap” approach), we did appreciate your acknowledgement of the future evaluation of technological feasibility, cost-effectiveness, and

¹ South Coast Air Quality Management District 2003 Air Quality Management Plan at 4-59:60 (emphasis added) (adopted August 1, 2003).

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incremental cost-effectiveness, pursuant to Health and Safety Code Section 40920.6, when establishing BARCT emission limits.

However, the proposed “health benefit based threshold” for stationary sources would severely undercut the potential effectiveness and Health and Safety Code-required analytical rigor for technological feasibility, cost-effectiveness, and incremental cost-effectiveness going forward. The tiered cost-effectiveness analysis based on control measure costs has been a staple in District rulemakings since 2003, and it has helped to ensure that rulemakings comply with the Health & Safety Code requirements. It has also advanced rulemaking outcomes that have seen a significant reduction of emissions from stationary sources over the last 20 years without, for the most part, driving technologically infeasible and economically devastating outcomes.

By considering the shift to this untested and unvetted health benefit based threshold this late in the AQMP cycle, the District is placing the regulated community in the extremely difficult position of facing significant uncertainty in future rulemaking. The alternative approach will establish a screening threshold approximately **6.5 times** the screening threshold when compared to the 2016 AQMP and **25 times** the screening threshold when compared to the 2003 AQMP. In practice, ***this approach will effectively remove tiered analysis for stationary source control measures that the regulated community has relied on for the last two decades.***

Without the benefit of an AQMP-established tiered cost-effectiveness analysis at a reasonable per ton cost, ***we expect future rulemakings will impose technically infeasible and economically untenable control limits on stationary sources in violation of Health & Safety Code §§ 40406 (economic impacts should be taken into account) and 40920.6 (setting forth specific requirements for cost-effectiveness and incremental cost-effectiveness analyses).***

In particular, Health & Safety Code § 40920.6 is a critical element of the BARCT determination process. In establishing BARCT, the District must, among other things:²

- 1) Review the information developed to assess the cost-effectiveness of the potential control option. For purposes of this paragraph, “cost-effectiveness” means the cost, in dollars, of the potential control option divided by emission reduction potential, in tons, of the potential control option.
- 2) Calculate the incremental cost-effectiveness for the potential control options. To determine the incremental cost-effectiveness under this paragraph, the district shall calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.
- 3) And consider the effectiveness of the proposed control option, the cost-effectiveness of each potential control option, and the incremental cost-effectiveness between the potential control options.

² Health & Safety Code § 40920.6.

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Again, while we appreciate the District’s acknowledging it will continue to comply with § 40920.6, we are concerned that the rigor of the analysis without the tiered approach for stationary sources will fail to satisfy the critical safeguards set forth directly above.

We reiterate our request that the District adopt hard caps based on control measure costs. However, if the District is not inclined to do so, we strongly encourage the District to, at a minimum, retain the control measure-based cost-effectiveness threshold approach for stationary sources, which are already heavily controlled and where there is significant risk that, without a rigorous cost-effectiveness analysis, the rulemaking would have significant impacts on the economy and potentially run afoul of the Health & Safety Code. Looking specifically at large combustion measures, if the District will not adopt hard caps, we would encourage *all* stationary source rulemakings to include a tiered analysis. While we recognize this will place an increased burden on District resources during rulemakings, we believe it is a critical component for future rulemakings affecting highly regulated sources that have and continue to make significant investments in emission controls.

The Proposed Shift in Cost-Effectiveness Thresholds Conflict with the CEQA-Identified Project Objectives

We are also concerned that there has been no substantive assessment of the environmental impacts (under CEQA or otherwise) or socioeconomic impacts of what such a fundamental shift in tiered cost-effectiveness analysis would mean for the regulated community. We also view the potential change in approach as directly conflicting with the Draft Program Environmental Impact Report’s “Project Objectives” to:

- Continue to work closely with businesses and industry groups to identify the most cost-effective and efficient path to meeting clean air goals while being sensitive to economic concerns.
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels.
- Enhance the socioeconomic analysis and pursue the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets.³

We anticipate providing further comments on these CEQA issues in our forthcoming comments on the Draft Program Environmental Impact Report.

The Health & Safety Code and CEQA Require Additional Assessment of the Cost-Effectiveness and Technological Feasibility of Select Control Measures

Health & Safety Code § 40922 requires the AQMP to include an “assessment of the cost-effectiveness of available and proposed control measures” and to consider factors such as technological feasibility when developing an implementation schedule for specific control

³ See Draft Program Environmental Impact Report for Proposed 2022 Air Quality Management Plan at 2-12 (September 2022).

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measures. While we have appreciated the District's efforts, it has not yet conducted an appropriately rigorous and legally supportable analysis of the cost-effectiveness and technological feasibility of proposed Control Measure L-CMB-07 and L-CMB-03, L-CMB-04, and L-CMB-05.

- *L-CMB-07 (Emission Reductions from Petroleum Refineries [NOx])*

L-CMB-07 contemplates development of a rule “requiring a lower NOx concentration of 2 ppm” for large refinery heaters and boilers and identifies three approaches: ultra-low NOx burners, advanced SCR, and transition to zero emission technology.⁴ The 2022 Draft AQMP identifies certain next-generation ultra-low NOx burners (“ULNB”), indicating they can potentially “alleviate some of the challenges of conventional ULNBs and achieve a NOx concentration of 9 ppmv or less using refinery fuel gas.”⁵ The 2022 Draft AQMP does not, however, adequately analyze the cost-effectiveness or technical feasibility of these next-generation ULNBs.⁶ As you know, safe and effective operation of ULNBs for refinery heaters requires very careful design considerations. These design considerations (such as flame impingement and boiler geometry) will drive cost-effectiveness challenges, and this has not been meaningfully analyzed in the 2022 Draft AQMP.

Further, the next-generation ULNBs identified in the 2022 Draft AQMP have not been widely deployed, and we believe District has not appropriately analyzed the technical feasibility of such deployment for equipment rated at greater than or equal to 40 MMBtu/hr in the document. Passing references to “projects in the works”⁷ does not satisfy the District's obligations under Health & Safety Code § 40922. We note that during the consideration of Rule 1109.1 (Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations), the District identified a single “demonstration project” implementing one of the next-generation ULNBs referenced in the 2022 Draft AQMP.⁸ At that time, the unit was reported to achieve “around 29.3 ppmv” on a less than 40 MMBtu/hr process heater.⁹ Less than a year later, and without meaningful additional technical analysis, the 2022 Draft AQMP now concludes that this technology “may be feasible for a wide range of process heaters at petroleum refineries in the future,” including for boilers and process heaters greater than or equal to 40 MMBtu/hr.¹⁰

Importantly, the District adopted Rule 1109.1 for petroleum refineries and related equipment in November 2021, with approximate industry costs of \$2.3-2.9 billion and

⁴ 2022 Draft AQMP at 4:-21:22.

⁵ *Id.* at IV-A-118.

⁶ While our comments focus on next generation ULNBs, RFG also has concerns with the sufficiency of the cost-effectiveness and technical feasibility analysis of advanced SCR and transition to zero emission technology contained in the 2022 Draft AQMP. As opposed to moving forward with this control measure, as described herein, we encourage the District to allow for the implementation of the Rule 1109.1 (Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations).

⁷ See Comments and Responses to Comments on the 2022 AQMP at 388 (September 2022).

⁸ See Proposed Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations and Proposed Rescinded Rule 1109 – Emissions of Oxides of Nitrogen from Boilers and Process Heaters in Petroleum Refineries, Final Staff Report (referred to herein as the “PR 1109.1 Final Staff Report”) at 2-13.

⁹ *Id.*

¹⁰ See 2022 Draft AQMP at IV-A-118.

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implementation timelines that extend to 2036.¹¹ The Rule is estimated to deliver 7.7-7.9 tons per day in NO_x reductions once fully implemented.¹² ULNB technologies described in L-CMB-07 were found to not be technically feasible or cost-effective for refinery installations in the Rule 1109.1 BARCT analysis and supported in findings by third-party consultants Norton Engineering and Fossil Energy Research Corporation (FERCo), largely due to commercial availability and refinery physical space constraints.¹³

Vendors of UNLB technology presented on its development during the Rule 1109.1 rulemaking; however, there was a limited number of projects that were able to achieve emission limits below 7 ppm NO_x, with no projects using refinery fuel gas or being demonstrated outside of a test facility.¹⁴ If staff intends to commence rulemaking for L-CMB-07 in the next several years, the maturity of ULNB technologies in terms of commercial availability and technical feasibility will likely not have a significant change from the analysis of Rule 1109.1, due to no existence of projects being commercially implemented at a refinery.

Further, the Draft Program Environmental Impact Report does not sufficiently analyze the potential environmental impacts of the deployment of the identified technologies in L-CMB-07. These impacts could not only come in the form of stranded assets (given the adoption of Rule 1109.1 in 2021 and the ongoing implementation of the same), but also in the potential impacts associated with SCR performance (and associated uncertainty of the same), the ability for refiners to retrofit the broad universe of process heaters and the physical implications of the same, etc.¹⁵

Ultimately, the 2022 Draft AQMP's analysis in support of L-CMB-07 does not meet Health & Safety Code requirements and leaves the AQMP lacking as an appropriately vetted planning document. Given this, we strongly encourage the District to remove proposed L-CMB-07 from the AQMP and instead acknowledge the significant anticipated emission reductions associated with the implementation of Rule 1109.1. RFG believes it represents the most comprehensive and stringent air quality regulation in the nation. It calls for billions of dollars of investment for southern California refineries and will result in dramatic reductions in NO_x emissions. Implementation will require a monumental effort to engineer, permit, procure, and construct new emission control equipment, and this monumental effort should not be derailed by new rulemakings driven by L-CMB-07.

¹¹ See Final Socioeconomic Impact Assessment For Proposed Rule 1109.1 – Emissions of Oxides of Nitrogen from Petroleum Refineries and Related Operations *et al.* at ES-5 (November 2021).

¹² See PR 1109.1 Final Staff Report at 4-4.

¹³ See generally, PR 1109.1 Final Staff Report, BARCT Assessment at 2-1 *et seq.*

¹⁴ See SCAQMD Proposed Rule 1109.1 WGM #17, ClearSign Technologies Presentation (available at: <http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1109.1/clearsign-update-for-scaqmd---pr-1109-1.pdf?sfvrsn=6>).

¹⁵ Again, we anticipate providing further comments on these CEQA issues in our forthcoming comments on the Draft Program Environmental Impact Report.

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- *L-CMB-03 (NOx Emission Reductions from Permitted Non-Emergency Internal Combustion Engines [NOx]), L-CMB-04 (Emission Reductions from Emergency Standby Engines (Permitted) [NOx, VOCs]), and L-CMB-05 (NOx Emission Reductions from Large Turbines [NOx])*

We are also concerned with sufficiency of the analysis of cost-effectiveness and technological feasibility of Control Measures L-CMB-03, L-CMB-04, and L-CMB-05. As currently analyzed, the AQMP does not appropriately take into consideration the considerable stranded asset costs associated with the Control Measures and the potential reduction in reliability of energy delivery, which, of course, could have significant safety and economic impacts. The Draft Program Environmental Impact Report also does not sufficiently analyze the potential environmental impacts of these rules. Additional analysis of the potential impacts associated with the potential inability to reliably deliver energy in times of PSPS events and wildfire risks is needed to understand the full effects of these Control Measures.¹⁶

Conclusion

Again, thank you for all of the dialogue to date, and thank for considering and implementing a number of the RFG comments to date. We also thank you for the opportunity to submit these comments, and we look forward to further discussions with the SCAQMD staff and other stakeholders in advance of the Governing Board's consideration of the final AQMP.

Sincerely,

s/ Michael J. Carroll

Michael J. Carroll
of LATHAM & WATKINS LLP

¹⁶ Again, we anticipate providing further comments on these CEQA issues in our forthcoming comments on the Draft Program Environmental Impact Report.