

## Comment Letter #58



July 5, 2022

Sarah Rees, Ph.D.  
Deputy Executive Officer  
South Coast Air Quality Management District  
21865 E. Copley Drive  
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Re: Comments on 2022 AQMP Draft Control Measures

Dear Dr. Rees:

As Executive Director of the Southern California Air Quality Alliance and a member of the AQMP Advisory Group, I am providing the following comments regarding the proposed SCAQMD control measures contained in Appendix IV-A of the draft 2022 AQMP.

The 2022 AQMP relies heavily on switching many technologies that rely on fuel combustion to electric power. As I stated in my December 8, 2021 comment letter, although this may be a necessary strategy there are several major "high level" concerns that must be addressed before an electrification strategy can be implemented. These issues include:

- There must be assurances that the electrical grid in California will be able to supply the electrical power needed to meet the vastly increased demand that will result from the implementation of these measure (and similar measures that will undoubtedly be imposed by CARB in the transportation sector and other air districts that also are faced with meeting the NAAQS for ozone). California currently is not able to supply sufficient electrical power during certain times of the year and there is no clear indication that this will be getting better any time soon. If new power generating facilities are to be built to meet the anticipated demand, you should be aware that siting and construction of such facilities is extremely difficult, and siting and construction of new electric transmission lines is equally, if not more, challenging.
- There needs to be a careful analysis of how and when zero emission technologies are imposed. There must be assurances that the electrical power will be available by or before the date that any control measure requiring conversion to electricity is required. Additionally, the District should fairly tailor compliance schedules and electrical or other type of technology conversion in recognition of the fact that most of the larger NOx emitting facilities in the SCAQMD are in the process of upgrading their current combustion equipment to meet BARCT standards for NOx, in many cases at huge cost. To require facilities to install add on control equipment (e.g., SCR) and the related support equipment only to be required to "junk" that equipment in favor of zero emission technology

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soon after installation of the BARCT level emission controls could result in an immensely costly and unaffordable stranding of assets at best, and closure of businesses at worst.

- Finally, there needs to be a recognition that there will continue to be a need for reliable and instantaneously available emergency power if grid or other base load power fails or is not available. Fuel cells are a very promising technology to address distributed power generation for base load situations and some back up generation scenarios (when adequate notice of an outage is given). Battery storage technology is very immature, and it is not clear that it can be scaled to meet the demand for emergency power during long duration outages or outages at large facilities. This is especially critical for essential public services such as water treatment facilities, fire pumps, and other critical health and safety applications. Natural gas, propane or diesel emergency generators may still be required in some applications. Given the limited hours of operations and current emission control technologies, the resultant NOx emissions from these applications should be low. The SCAQMD will need to carefully analyze what types of equipment will work in specific applications due to the critical need for emergency backup power.

We note that the draft Appendix IV-A includes measure MOB-15: Zero Emission Infrastructure for Mobile Sources. Implementation of this measure will at least start the process of analyzing the capacity needs and potential sources of supplying that capacity for the ambitious electrification infrastructure that will be required. However, this should not be viewed as merely a mobile source measure. The draft 2022 AQMP calls for large scale electrification of stationary, commercial and residential sources as well. There does not yet appear to be any reality-based analysis of how much additional electrical capacity will be needed, nor where or how it will be generated. Neither wind, solar nor battery storage is capable of being scaled up to a level to meet the likely demand that will be imposed on the grid, let alone provide 24 hour per day reliable service. The lead time for constructing the new generation capacity and transmission lines is such that it is unlikely that the capacity can be on-line by the necessary attainment dates.

The draft plan does include such sources as hydrogen fuel cells which can provide base load power. However, it requires significant energy to extract hydrogen, either from methane (natural gas) or water. There seems to be a push to restrict the source of hydrogen to water, yet California is currently suffering through water shortages and usage restrictions. A desalination plant was rejected by the California Coastal Commission. It is not at all clear that there will be enough energy OR water to provide the substantial amounts of hydrogen necessary to implement fuel cell technology on a widespread basis.

In summary, we are concerned that the ambitious emission reduction measures proposed not only by SCAQMD, but also by CARB, will run head on into reality and leave us well short of attainment of the ozone ambient air quality standard. An over reliance on zero emission technologies (vs. near-zero emission technologies) will likely result in little to no progress being made in

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achieving healthier air. Near-zero technologies can result in significant improvements in air quality, which is preferable to standing still while awaiting zero-emission technologies that either don't arrive on time or don't arrive at all.

We believe that the draft plan could have a lot more caveats and urgent warnings regarding the need for scalable, reliable, and affordable energy as a prerequisite for critical portions of the plan being implementable.

We look forward to continuing to work with you and SCAQMD staff on these and other issues that we will confront as you move ahead with the 2022 AQMP.

Very truly yours,



Curtis L. Coleman  
Executive Director  
Southern California Air Quality Alliance