



January 17th, 2017

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On behalf of our organizations, we thank you for the opportunity to comment on the *Revised Proposed Short-Lived Climate Pollutant Reduction Strategy*, released on November 28th, 2016. With the latest assessment indicating that, even after the COP21 in Paris and COP22 in Marrakech, current proposed global actions remain insufficient to avoid global warming greater than 2°C (3.6°F),¹ it remains critical that California proceed to expand its actions to reduce the emissions of all climate pollutants. Our organizations have long advocated for California's adoption of a strategy to rapidly reduce the state's emissions of short-lived climate pollutants (SLCPs; also known as super-pollutants) and have actively participated in the development of policy on SLCPs at both the legislature and CARB. The pursuit and implementation of a strategy to reduce SLCPs remains essential to providing a climate buffer until global efforts to cut emissions of long-lived climate pollutants can take effect to permanently mitigate (if not reverse) accelerating global warming.

We continue to strongly support the prioritization of actions with diverse benefits and the pursuit of systems-level solutions that can enable deep, sector-wide emission reductions. Reducing SLCP emissions offers opportunities to reduce global and local climate change impacts while improving the air quality and health in communities most impacted by local sources of air pollution especially in the South Coast and San Joaquin Valleys.

¹ See: <http://www.climateactiontracker.org/>

We applaud California’s leadership which continues to demonstrate to both the nation and the world, practical approaches to implementing a comprehensive strategy to fight accelerating global warming, while at the same time achieving immediate near-term emission reductions that will improve air quality and health in vulnerable communities.

20-year Global Warming Potentials

We continue to strongly support the consideration of GWP₂₀ for SLCPs, as the most appropriate to, “capture the importance of the SLCPs and” give “a better perspective on the speed at which SLCP emission controls will impact the atmosphere relative to CO₂ emission controls”. We appreciate the acknowledgement that reducing black carbon is the “quickest way to reduce the impacts of climate change, and would save millions of lives per year.” However, we again note that the *Proposed Revised Strategy* only includes the Intergovernmental Panel on Climate Change’s (IPCC) most up-to-date estimate of the GWP values for black carbon from the Fifth Assessment Report (AR5), but not for other SLCPs. In keeping with the principle of using the best and most current science, we encourage CARB – as soon as is practicable – to extend the use of GWP values from AR5, beyond just black carbon, to include the other SLCPs.

Sustainable Freight

Further reductions of black carbon will rely in part upon a timely and thorough clean-up of California’s goods movement system. We believe that CARB should regulate freight facilities as indirect sources in order to effectively reduce diesel emissions that include black carbon. CARB’s plan to date has been to gather data on such a measure while trying to persuade the federal government to improve regulation of the sources within its control, like locomotives and interstate trucks. The incoming administration’s expressed hostility toward regulation makes it clear that help from the federal government will not be forthcoming; therefore CARB should quickly move to a rulemaking of its own. The precedent for such a regulatory approach is well established in the Clean Air Action Plans for the San Pedro Bay Ports and in the federal Clean Air Act and California’s Health and Safety Code. Such rules could require global emission reductions or performance standards, and could also prescribe design standards or other best practices that would facilitate the adoption of zero emission technologies and reduce emissions.

Residential Woodburning

We strongly support CARB working together with the air districts in order to accelerate the reduction of residential wood burning (including the use of wood-burning fire pits) that – without additional action – could potentially become the largest source of anthropogenic black carbon in the state. We agree that – wherever possible – conversions should be made to non-wood-burning devices in order to maximize reductions. We support limiting the use of incentive monies to the use of non-wood burning devices.

Methane from Oil and Gas

As noted in the *Revised Proposed Strategy* the state has made, and is making, extensive efforts to measure and monitor methane emissions within its borders. However, the problem remains that roughly ninety percent of California’s natural gas consumption is met through imports.² This poses a challenge in ensuring that robust approaches are also applied to deal with any fugitive emissions from oil and gas industry activities and infrastructure that lie outside the state’s borders, so that there can be an accurate accounting of the life-cycle emissions of imported natural gas in order to, “ensure that the use of natural gas provides a climate benefit compared to the...” “... fuel it displaces” in all its applications within the state. Accordingly, we continue to recommend that CARB work with and encourage not only the relevant federal agencies as well as agencies in the other states and provinces to develop robust regulatory schemes under their jurisdictions that can ensure the effective minimization of methane emissions from their oil and gas industries.³

After ideally making adjustments (through 15 day changes) to tighten up the proposed regulations such as:

- 1) removing the provision in Section 95669 allowing operators to reduce the inspection frequency from a quarterly to annual basis depending on the percent or number of leaking components
- 2) clarifying that monitoring requirements apply not just to active wells but also to idle, plugged and abandoned wells

to name but a few, we support CARB’s moving forward to adopt a final oil and gas methane reduction rule early this year and quickly moving to implement and enforce it, in coordination with the air districts. The rule will reduce methane emissions from crude oil and natural gas facilities involved in production, processing and storage, including uncontrolled separators and tanks, leaking connections and equipment, underground storage facilities, compressors and pneumatic devices. More frequent and tighter inspection requirements will not only result in faster leak detection, it will reduce the potential for any superemitters.⁴

Finally, given methane’s role in creating background ozone (as acknowledged in the *Revised Propose Strategy* UNEP and WMO attribute about two-thirds of the rise in global levels of tropospheric

² CEC, AB 1257 Natural Gas Act Report: Strategies to Maximize the Benefits Obtained from Natural Gas as an Energy Source. Final Staff Report, October 30, 2015 http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-04/TN206470_20151030T160233_STAFF.pdf

³ Our recommendation made originally in our comments on the May 2015 *Concept Paper* have also since been echoed elsewhere “...the state should continue to advocate for strong national methane standards to ensure potential climate benefits from use of natural gas in the state”. cf: p102 in: CEC, AB 1257 Natural Gas Act Report. Final Staff Report, October 30, 2015. Also see relevant presentations and discussion from: CARB, CEC, and CPUC Joint Agency Symposium and Integrated Energy Policy Report Workshop: Methane Emissions from California’s Natural Gas System: Challenges and Solutions, June 6th - 7th, 2016. http://www.energy.ca.gov/2016_energypolicy/documents/index.html#0606072016.

⁴ eg. See: Brandt et. al., 2014. Methane leaks from North American natural gas systems. *Science*: 343(6172): 733-735, DOI: 10.1126/science.1247045. Also see discussion regarding inspection frequency and superemitters in the AB 1257 Final Staff Report: CEC, AB 1257 Natural Gas Act Report. October 30, 2015.

background ozone to methane pollution), and the co-benefits of lowering methane emissions⁵ we recommended that CARB and federal agencies consider regulating methane as an important air pollutant.

Dairy Methane

With dairies accounting for nearly half of the California’s methane emissions it is critical that the state successfully reduce emissions from this agricultural sector as soon as possible. However, the provisions included in SB 1383 risk missing the target for reducing methane from dairies by 2030. CARB should bring methane emissions from dairies under regulation as soon as the law otherwise allows, and should explore the most robust and sustainable methods for reducing those emissions.

Renewable Methane

The economics of biogas collection and clean-up to biomethane recommend that biogas captured as part of methane reduction efforts should be used primarily as a transportation fuel. As the market for fuel cell electric vehicles continues to develop the demand for feedstocks to make renewable hydrogen consistent with the requirements of SB 1505 (Lowenthal, Chapter 877, Statutes of 2006) will become critical. Alternatively, while the market for ZEV technologies continues to develop in the medium and heavy duty sectors, the use of renewable methane in trucks equipped with low-NOx natural gas engines could provide a viable near-zero-emissions alternative to petroleum diesel for the truck sector, which currently lacks a zero-emission option in some applications.

Reducing Methane Emissions from Landfills

We are strongly supportive of the organic waste diversion goals outlined in the proposed SLCP Strategy, specifically the commitment to adopt the regulations necessary to meet the 75% organic waste diversion rate by 2025 set by SB 1383.

We especially appreciate the recognition of existing and potential barriers to building the infrastructure that is needed to process this organic waste. While the 75% organic waste diversion mandate will directly spur the expansion of this infrastructure by allowing facilities to make investments based on guaranteed feedstocks, the state must also play a greater role in the development of these facilities. We ask that CARB work with its sister agencies, as well as local regulators to overcome these barriers to the construction and expansion of organics facilities.

⁵ United Nations Environment Programme & World Meteorological Organization June 14, 2011. Integrated Assessment of Black Carbon and Tropospheric Ozone. 303pp. Also See: World Health Organization, October 22, 2015. Reducing Global Health Risks Through Mitigation of Short-Lived Climate Pollutants. Scoping Report For Policy-makers. 148pp.

While SB 1383 moves some of the regulatory responsibility to CalRecycle, we ask for CARB’s active engagement and leadership in developing this infrastructure and in identifying sustainable funding sources for the recycling of this material. We suspect that this will be the deciding factor in determining whether we achieve our ambitious goals on time.

As CalRecycle and the Air Resources Board begin crafting regulations we also encourage staff and Board members to take the time to visit and learn from communities with existing organic waste diversion programs. Many communities across the state, especially those in the Bay Area, have implemented comprehensive organics programs over the past two decades. While it is clear that a mandatory, universal, enforceable program will be necessary to meet the 2025 targets, it is important to learn what has worked well and what could have been improved from these local efforts. It will also keep the state from having to “reinvent the wheel” when rolling out a statewide program, especially in regards to which forms of education and outreach are most effective.

We are also strongly supportive of the inclusion of a goal to recover (for human consumption) 20% of edible food that is currently disposed. This will be no easy feat, and it will take significant effort and resources to accomplish. To that effect, we recommend that CARB and CalRecycle develop a multi-year regulatory approach to achieving this goal. Through the use of adaptive management strategies, the state can implement additional policies over time in response to the progress that is made towards the goal. This will be especially important given the inherent uncertainties that will accompany many of these food recovery efforts.

Incentive Funds

Many of the SLCP-reduction measures, including organics diversion and quicker turnover of vehicle fleets to cleaner technologies, require major investments of funds. CARB should identify feasible, stable and predictable funding sources that are sufficient to meet the needs of the program, and should not rely upon funds that are unpredictable or unlikely to actually be available.

No Trading of SLCPs

We support CARB adopting measures that reduce SLCPs through direct regulations and complementary incentives. We also agree that extending the cap-and-trade program to include the SLCPs: black carbon and HFCs, would not be appropriate not least because some of these pollutants are hazardous to public health.⁶

⁶ Also see: What Role for Short-Lived Climate Pollutants in Mitigation Policy? Shoemaker, Schrag, Molina, and Ramanathan, Dec 13, 2013. Science, v342, pp1323-1324.

We commend CARB staff for their excellent work in preparing a comprehensive and thoughtful *Revised Proposed Strategy* and thank CARB staff for the opportunity to again comment on the *Proposed Strategy*. We encourage the California Air Resources Board to move as quickly as possible to adopt and implement the SLCP Reduction Strategy to cut the emissions of super pollutants that endanger California's climate and the health of its communities. We look forward to working with CARB and supporting agencies to implement the SLCP Reduction Strategy.

Sincerely,



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