



October 27, 2015

The Honorable Richard Corey, Executive Officer
California Air Resources Board
1001 I Street
Sacramento, CA 95814

**Re: Comments on the Draft Short-Lived Climate Pollutant
Reduction Strategy**

Dear Mr. Corey:

The Bioenergy Association of California (BAC) submits these comments on the Draft Short-Lived Climate Pollutant Reduction Strategy released in September. BAC strongly supports the goal of reducing SLCP's and supports many of the elements in the Draft Strategy, particularly the goals of diverting organic waste from landfills, converting dairy waste to energy, and putting organic waste to its highest and best use. The Draft Strategy lacks some critical elements, however, that must be included to meet the requirements of SB 605 (Lara, 2014). Above all, the Strategy must include measures to reduce black carbon from wildfire, which is the single biggest source of SLCP pollution in California. In several areas, the Draft Strategy also requires more detail about the specific measures needed, how to fund those measures, identification of barriers and ways to remove them, and critical research needs.

The Draft Strategy provides an excellent summary of the science of climate change, the significant role that SLCPs play in affecting the climate, and the many co-benefits of reducing SLCPs. SB 605 (Lara, 2014) requires several other elements, though, that are missing or incomplete in the Draft Strategy:

- Identification of important research needs in each area¹
- Identification of existing and potential new control measures²
- Assessment of current control measures³

¹ Health and Safety Code § 39730(a)(2).

² Health and Safety Code § 39730(a)(3).

³ Health and Safety Code § 39730((b)(1).

- Opportunities and challenges to control emissions⁴
- Prioritization of new measures that offer co-benefits,⁵ and
- Measures to coordinate across agencies.⁶

The final SLCP Strategy must include more detail in each of these areas – especially in the section on wildfire emissions of black carbon - to meet the requirements of SB 605 and achieve to goal of reducing SLCP emissions.

The Bioenergy Association of California (BAC) represents more than 60 public agencies, private companies and local governments working to convert organic waste to energy. BAC’s public sector members include air quality, environmental, wastewater, solid waste and other public agencies and local governments. BAC’s private sector members include energy and waste companies, technology and service providers, investors, consultants and more.

BAC’s specific recommendations on the Draft Strategy are below.

1. The Strategy Must Include Specific Measures to Reduce Wildfire Emissions, Related Research Priorities and Funding Goals.

Wildfire is now the single largest source of SLCP emissions in California and causes 10 percent of California’s total climate emissions.⁷ Wildfire also jeopardizes the single largest carbon sink in California and, therefore, puts the state’s strategy for meeting AB 32 and the state’s 2030 goals at risk. Not to mention the immediate threats to public health and safety, water supply and quality, infrastructure, fish and wildlife habitat, and other benefits that healthy forests provide.

The Draft Strategy recognizes that in wildfire-prone forests, fuel reduction treatments are the best way to reduce wildfire frequency, severity, and associated emissions.⁸ The Draft Strategy also recognizes that current fuel reduction activities are insufficient to avoid catastrophic wildfire and that the state needs to accelerate fuels reduction and incentivize the productive use of forest biomass residues.⁹

Despite clearly recognizing the importance of fuels reduction and putting those fuels to productive use -- like bioenergy generation -- the Draft Strategy does not include these measures in its recommendations. In fact, the Draft Strategy does not include any specific recommendations for reducing black carbon emissions

⁴ Health and Safety Code § 39730((b)(2).

⁵ Health and Safety Code § 39730(a)(4).

⁶ Health and Safety Code § 39730(a)(5).

⁷ Based on its 20-year Global Warming Potential, black carbon causes 15% of California’s total climate change emissions and wildfire represents 66% of California’s black carbon emissions.

⁹ Id.

from wildfire, even though wildfire is the single largest source of SLCP emissions in the state.

SB 605 requires the Air Board to adopt a comprehensive strategy to reduce SLCPs by January 1. The SLCP Strategy cannot be comprehensive without specific recommendations to reduce black carbon emissions from wildfire. The commitment to develop recommendations next year as part of a forest climate plan is not sufficient to meet the requirements of SB 605. The SLCP Strategy itself must include goals to reduce wildfire emissions, specific measures to achieve those goals, research needs, identification of barriers, and recommended funding levels. BAC urges the Air Board to adopt specific goals for wildfire emissions that are at least commensurate with the goals and funding recommendations proposed for the solid waste and dairy sectors, including:

- a. A goal to reduce wildfire emissions by a specific percentage over the next ten to fifteen years,
- b. Forest fuel removal on at least 500,000 acres per year,
- c. Development of 50 to 75 new community scale forest biomass to energy facilities in high wildfire hazard zones,
- d. Recommendations to facilitate transmission and use of bioenergy produced from forest fuels,
- e. Recommendations for ratepayer (water, electric and gas utility) funding to support forest fuel treatment and conversion to energy, and
- f. \$100 million per year in funding for forest fuel removal and the development of new facilities to convert that fuel to energy.

Many helpful studies and plans exist that provide sufficient data and recommendations to support and expand on these recommendations, including:

- The Governor's Executive Order, B-30-15, which establishes the goals for emissions reduction by 2030.¹⁰
- U.S. Forest Service Study on Biomass to Energy prepared for the California Energy Commission.¹¹
- Sierra Nevada Conservancy Report on the State of the Sierra Nevada, including recommendations to reduce wildfire, number of acres that need to be treated, and co-benefits for water supply and quality, infrastructure, communities, jobs, and wildlife.¹²
- The California Public Utilities Commission's wildfire safety proceeding and the utilities' wildfire cost accounts.
- Studies by the Placer County Air Pollution Control District documenting

¹⁰ Governor's Executive Order B-30-15 (adopted April 29, 2015), available at: <https://www.gov.ca.gov/news.php?id=18938>.

¹¹ California Energy Commission, "*Biomass to Energy: Forest Management for Wildfire Reduction, Energy Production, and Other Benefits*," Prepared by the USDA Forest Service, January 2010, at page 3. CEC-500-2009-080.

¹² Sierra Nevada Conservancy, *The State of the Sierra Nevada's Forests*, September 2014.

the air pollution and greenhouse gas reductions from forest biomass to energy projects.

- Presentations by the USFS and Sierra Nevada Conservancy at the August 5 workshop on carbon sequestration in working and natural lands.
- The *2012 Bioenergy Action Plan*.

Given that wildfire emissions are the single largest – and a quickly growing – source of SLCPs in California, a comprehensive SLCP Strategy must include strategies to reduce wildfire. The co-benefits of those strategies will be enormous and immediate, including protecting public health and safety, water, healthy forest ecosystems and communities, and more.

2. BAC Strongly Supports the Organics Diversion Goal, But Meeting It Will Require Significant Funding, Research and Regulatory Changes.

BAC strongly supports the goal of diverting organic waste from landfills and putting it to beneficial use. Doing so can reduce climate emissions from the solid waste sector and provide low carbon fuels, renewable power and organic soil amendments, all of which will help to reduce emissions from fossil fuels. Using diverted organic material, including the byproducts of bioenergy production, to restore healthy soils will also increase carbon sequestration and conserve water.

The benefits of organic waste diversion are enormous, but diverting virtually all organic waste by 2025 is only possible with a far greater level of resources than the Draft Strategy suggests. Building the required number of facilities to put the diverted organic waste to its highest and best use will require:

- Billions of dollars of public, private and ratepayer investment – much more than the \$100 million per year suggested by the Draft Strategy.
- Significant research and development to assess what the highest and best uses of organic waste are, how to maximize methane and other greenhouse gas reductions, the capacity at wastewater treatment facilities to take diverted waste, how to maximize benefits in disadvantaged communities and other co-benefits, etc.
- Addressing significant regulatory barriers, such as interconnection barriers, that are slowing or preventing the development of new facilities to take the diverted organic waste.

BAC strongly supports the goal of organics diversion, but these components of the strategy are critical to achieve the goal.

3. The Dairy Sector Strategy Must Be Clarified to Ensure that Offsets and Other Incentives Promote Rapid, Sustainable Growth in the Sector.

BAC strongly supports the need for more incentives to expand the dairy waste to energy sector, but recommends important changes to ensure that the sector can

grow quickly and sustainably.

a. Support Funding Levels with Initial Ramp-Up Period

The dairy waste to energy sector needs significant incentives including grants to reach the methane reductions called for in the Draft Strategy. The sector is, however, very small at this point, with only a few developers that have successfully built dairy waste to energy projects in California. To build a strong, sustainable dairy waste to energy sector – that can deliver methane reductions and other benefits for the long run – BAC urges the state to allocate \$500 million over five years to dairy waste to energy project incentives, but to ramp up to the full amount over the first few years to give the industry time to attract additional market participants and build experience. Ramping up the funding over a few years will help the dairy waste to energy industry grow successfully and sustainably and avoid a boom and bust cycle.

b. Need to Clarify Treatment of Carbon Offset Credits

Carbon offset credits are a critical source of funding for dairy digesters, accounting for 20 to 40 percent of projected dairy digesters' revenue. The Draft Strategy proposes to require manure management best practices for new and expanded dairies, which would mean that offsets for projects on new and expanded dairies would no longer provide additional methane reductions and, therefore, no longer be eligible for carbon offset credits. The Draft Strategy implies, however, that carbon offset credits will no longer be issued for new dairy digester projects, even if they are on existing dairies that are not new or expanded and not, therefore, subject to the proposed regulation.¹³ Footnote 102 on page 45 needs to be clarified so that offsets would only be removed for projects on new and expanded dairies that are subject to the manure management regulations. Just as the *adoption* of offset credits needs to be carefully considered and crafted, the *elimination* of offset credits should only be done to the extent to which they are no longer additional. Sector wide elimination is unlikely to be appropriate.

BAC urges the Air Board not to eliminate offset credits at all when a dairy expansion is the result of existing dairies being consolidated and there is no net increase in the amount of livestock. Expansions on dairies often take place when other dairies decrease herd size or close (and transfer an existing permit), reflecting industry consolidation, and thus do not represent a net increase in the state's dairy emissions. Removing offset credits when there is not a net increase in dairy livestock could inadvertently hurt project economics, slowing the development of projects that can convert dairy methane to energy, fuels and organic soil amendments.

If the Air Board does narrow or eliminate the availability of offset credits for the dairy sector, then other revenue sources will be necessary to make up the lost

¹³ Draft Strategy, footnote 102 on page 45.

revenue and the Air Board and CDFA should identify how to make up for the lost revenue. This is particularly important for dairy digester projects that intend to produce transportation fuel since the loss of carbon offset credits will also mean a loss in the LCFS value associated with the project. Ensuring alternative revenue sources will be critical to continue to stimulate new projects.

c. Other Regulatory Changes Needed

In addition to grant funding, dairy projects also need energy off-take agreements, like provided by the BioMAT under SB 1122 (Rubio, 2012) and long-term contracts and market certainty under the Low Carbon Fuel Standard. On the electricity side, the good news is that the BioMAT will be starting in early 2016. If implemented successfully, with the price rising to a level high enough to support widespread development, an initial mechanism will be available. Fuel projects need to be developed as an alternative path. To achieve this, long-term fuel off-take structures will need to be established and Low Carbon Fuel Standard credits need to be available. This is an essential revenue stream to convert dairy waste to transportation fuels.

d. Dairy Waste to Energy Incentives Need to Be Technology Neutral

As BAC commented on organics diversion above, state grant programs and other incentives should be performance based and technology neutral. While anaerobic digestion may be the most commonly used technology in the dairy waste sector, other technologies are being developed and deployed, including gasification. CDFA should set performance criteria for dairy waste to energy incentives, but not limit incentive based programs to a single technology.

4. The Strategy Must Identify Important Research Needs for Each SLCP.

Meeting California's climate goals requires clear understanding and quantification of the emissions, reductions, co-benefits and other impacts of different strategies and technologies. Accurate quantification is critical to ensure that the strategies are achieving their expected reductions and other benefits and to make course corrections where strategies are not performing as expected or better strategies and technologies are developed.

In several important areas, the Draft Strategy fails to identify important research gaps and needs that are critical to effectively reduce emissions in that sector and to maximize co-benefits. The Strategy must identify important research needs in each area. Those needs include, but are not limited to:

- As assessment of the highest and best use of organic waste in each sector – this is especially critical given the public investment proposed for organic waste diversion and dairy digesters, but is important under any circumstances. The assessment should compare different end uses of organic waste of different types and in different locations, to determine

how to maximize the SLCP/GHG reductions and other co-benefits. The State of Oregon, Department of Environmental Quality, prepared a report comparing the climate, energy and soil benefits of different uses of food waste that provides a good model.¹⁴

- A reassessment of the current carbon sequestration in California's forests given recent wildfires and projections for future sequestration under different forest fuel treatment scenarios.
- Quantification of the sequestration impacts and emissions reductions from forest fuel treatments and different end uses of the forest fuel that is removed.
- Quantification of the sequestration value and avoided emissions associated with organic soil amendments, including compost (with and without bioenergy production), biochar, biosolids and digestate.

5. The Strategy Must Identify Existing and Potential Control Measures and Assess the Effectiveness of Those Measures.

SB 605 requires the Strategy to assess existing and potential control measures and assess the effectiveness of those measures. The Draft Strategy largely omits any discussion of control measures for wildfire emissions and fails to assess the effectiveness of most of the proposed measures in other areas. Providing these assessments is critical to ensure that the measures collectively can achieve the emissions reductions called for and to ensure that the state is prioritizing funding and other resources based on the effectiveness of the strategies. If a measure's effectiveness cannot be assessed or quantified, then it should be identified as an important area for research and demonstration so that its benefits can be better quantified in the near future and the Strategy narrows the range of uncertainty overall in California's climate strategy.

6. The Strategy Must Identify Challenges to Reducing SLCP's and Recommend Ways to Address those Challenges.

This requirement is closely related to the one above – if strategies are not effective or cannot be achieved, it is critical to identify and address the reasons and the barriers to achieving those strategies. The Draft Strategy identifies some of the barriers in a few areas, such as landfill gas and diverted organic waste, but it does not provide many recommendations to remove those barriers and does not identify the barriers to reducing wildfire related emissions at all. The Strategy should include proposals to address at least the following challenges to reducing SLCPs:

- Barriers to pipeline and transmission line access for biogas and biopower,

¹⁴ *Evaluation of Climate, Energy, and Soils Impacts of Selected Food Discards Management Systems*, prepared for the State of Oregon Department of Environmental Quality, October 2014. Available at: <http://www.oregon.gov/deq/LQ/Pages/SW/foodwaste.aspx>.

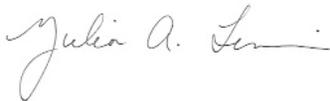
- such as rate-basing interconnection costs, identifying additional funding sources, etc;
- Need for greater long-term certainty under the Low Carbon Fuel Standard, such as a requirement for long-term contracts, a Green Credit Reserve or other state purchasing program, etc;
 - Need to increase market demand for biogas and biopower, including additional procurement requirements, a renewable gas or low carbon gas requirement, etc;
 - Need to increase market demand for organic soil amendments, including funding and other incentives;
 - Need to address legitimate environmental concerns about forest fuel treatments and forest biomass to energy projects, and dispel myths about nonscientific concerns.

7. The Strategy Must Recommend Ways to Increase Coordination Across Agencies.

BAC urges the state to identify the lead agencies for each measure in the SLCP Strategy and to identify clearly when measures will require inter-agency coordination. Many of the most promising measures with the greatest co-benefits will require inter-agency coordination, but the Draft Strategy does not identify which agencies must participate in different actions, help to remove critical barriers, coordinate funding or provide other inter-agency coordination. The *2012 Bioenergy Action Plan* provides a good model for identifying a lead agency and cooperating agencies so that each agency knows clearly what its responsibilities are for accomplishing different measures. Including this clear guidance in the SLCP Strategy will not only meet the requirement of SB 605 to increase inter-agency coordination, but will make implementation of the Strategy more effective.

BAC appreciates the opportunity to comment on the Draft Strategy and looks forward to working with the state to add the sections described above to meet the requirements of SB 605 and to ensure that the SLCP Strategy is as effective and beneficial as possible.

Sincerely,



Julia A. Levin
Executive Director