



November 1, 2013

The Honorable Mary Nichols, Chairman  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Re: Comments on the AB 32 Scoping Plan Update (October 2013 Draft)**

Dear Chairman Nichols:

The Bioenergy Association of California appreciates the opportunity to comment on the AB 32 Scoping Plan Update Draft and the very open, participatory process the Air Board has provided to develop the Draft. There are several important additions to the Draft Update, which BAC supports and encourages the Air Board to expand upon in the final Scoping Plan Update. There are also several important omissions that we urge the Board to address before finalizing the Scoping Plan Update. Each of these is described more fully below.

The Bioenergy Association of California (BAC) is a diverse association of private companies, public agencies and local governments, environmental groups and others working to promote sustainable, community-scale bioenergy development in California. BAC's industry members include bioenergy developers and technology suppliers, waste management companies, investors and consultants. BAC's public members include wastewater, sanitation, solid waste, air quality and environmental protection agencies, as well as local governments from different regions of the state.

BAC offers the following comments on the Draft Scoping Plan Update.

**I. IMPROVEMENTS IN SCOPING PLAN UPDATE DRAFT**

The Draft Scoping Plan Update includes a number of new and expanded areas that are significant improvements over the 2008 Scoping Plan. BAC strongly supports the following:

**A. Increased Emphasis on the Solid Waste Sector**

BAC supports the increased focus on the solid waste sector and appreciates the technical papers that CalRecycle released about the different parts of the solid waste sector that could contribute to greenhouse gas emissions reductions. In particular, BAC supports including:

- The 75 percent diversion goal;
- Repurposing organic waste as a resource that can provide clean energy, compost and other valuable products; and
- Inclusion of anaerobic digestion as an emissions control measure and source of low carbon and carbon negative transportation fuels.

#### **B. New Focus on Short-Lived Climate Pollutants**

BAC supports the Draft Update's new focus on short-lived climate pollutants that have high global warming potential, including methane, nitrous oxide and black carbon. While a much smaller share of California's greenhouse gas emissions than carbon dioxide, the short-lived climate pollutants are much more potent. In addition, there are a number of opportunities to incentivize reduced emissions of these pollutants and provide significant co-benefits, including reduction in toxic air contaminants and environmental justice impacts, production of low carbon and carbon negative transportation fuels, and more.

#### **C. Increased Focus on Heavy Duty Vehicles**

BAC urges ARB to fully assess the potential of transportation fuels from organic waste and biomethane to meet the LCFS, particularly the Phase 2 standards for heavy-duty vehicles. Since wide-scale electrification of heavy-duty vehicles is not likely or feasible in the short to mid-term, accelerating the development of low carbon fuels for heavy duty vehicles is essential to significantly reduce emissions from this sector.

#### **D. Recognition of the Potential for Carbon Negative Transportation Fuels**

BAC strongly supports the inclusion of carbon negative transportation fuels in the Scoping Plan Update. Fuels from organic waste and biomethane can play a significant role in reducing greenhouse gas emissions from the transportation sector. We urge ARB to complete its assessment of the greenhouse gas reduction potential of organic waste diversion and conversion, and to finalize similar assessments of the carbon intensity of transportation fuels from different organic waste sources. Maximizing the production of transportation fuels from organic waste and biomethane could truly be a game changer for transportation sector emissions and California fuel production more generally.

## **II. GAPS / AREAS THAT NEED IMPROVEMENT**

While there are important additions to the Draft Scoping Plan Update, it also omits numerous issues and fails to quantify or provide specific information on critical points. We urge ARB to

add more detail and to quantify progress and targets more, including the targets from the 2008 Scoping Plan, in the final Scoping Plan Update.

### **A. Overall Suggestions**

BAC urges ARB to include the following in the final Scoping Plan Update:

1. Specific numeric targets for each sector and measure, as the 2008 Scoping Plan provides,<sup>1</sup> explicitly carrying forward the 2008 targets and including numeric targets for new measures not included in the 2008 Scoping Plan.
2. Quantification of progress to date by specific measures. The Draft Scoping Plan Update provides very little quantification of progress to date and what is provided is generalized for entire sectors, which does not provide a helpful assessment of how successful or how cost-effective different measures are.
3. Increased measures to achieve the 2020 goals.
  - The Draft Scoping Plan Update focuses mostly on 2050 goals with few additions to the 2020 measures already included in the 2008 Scoping Plan.
  - Without additional measures geared to 2020, it is not clear that California will meet the requirements of AB 32 since many of the reductions to date are attributable to the recession.
  - Too many recommendations are postponed until 2018 Update, despite being feasible and necessary now (ie, needed incentives for dairy digesters or waste conversion to transportation fuels)
4. A detailed explanation of how cap and trade revenues will be used to advance the measures contained in the Scoping Plan Update, how the two plans will be coordinated, and what other funding and incentives will be developed to achieve the measures in the Update.
5. The Scoping Plan Update should include an update on carbon offset protocols, which ones have been adopted, which ones are under consideration and how much they are driving emissions reductions.
6. The 2012 Bioenergy Action Plan should be included in the list of state plans that will help meet AB 32 goals.<sup>2</sup>

### **B. Transportation Sector**

The sections on the transportation sector provide some helpful context, but with insufficient detail or quantification of progress to date attributable to specific programs and measures, or specific measures needed to meet the 2020 goals and beyond.<sup>3</sup> We urge ARB to quantify the emissions reductions attributable to different programs and requirements and the reductions

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<sup>1</sup> *Climate Change Proposed Scoping Plan*, October 2008, Table 2 at page 17.

<sup>2</sup> Scoping Plan Update, p. 68.

<sup>3</sup> See, eg, Table 5, pp 24-25.

expected from each of these going forward. In particular, we urge ARB to provide more detail and quantification of the following:

1. The basis for the Draft's assumption that the LCFS is enough to incentivize methane capture from landfills and digesters for use as a transportation fuel (p. 17)
2. Details about how the LCFS is currently working, whether it is on track to reach 2020 target of 10% lower carbon intensity for transportation fuels, and specific proposals to increase production of low carbon fuels.
3. Quantification of progress/reductions attributable to specific transportation programs such as AB 118.

### **C. Energy Sector**

While the energy sector has been the most successful sector at reducing emissions, largely due to the RPS and energy efficiency standards, it omits important opportunities to further reduce emissions and provide other co-benefits, such as energy independence, reduced pollution, increased grid stability and reliability, etc. In particular, the energy sector should include:

1. Discussion of the role of bioenergy to reduce emissions generally and in the sections on distributed generation and combined heat and power in particular.
2. The role of bioenergy to provide baseload power and energy storage as California increases its percentage of intermittent renewables and moves beyond the 33 percent RPS.

### **D. Water Sector**

The water sector discussion almost completely ignores the potential for the wastewater sector to reduce greenhouse gas emissions. At a minimum, it should provide:

1. Quantification of greenhouse gas emissions from the entire wastewater sector, not just unregulated methane emissions from septic tanks, sewers and other unregulated sources.<sup>4</sup>
2. Potential to reduce emissions from the wastewater sector by producing carbon negative or very low carbon transportation fuels, electricity, energy storage and important soil and agricultural amendments such as the digestate used to produce compost and increase agricultural water efficiency.

### **E. Waste Sector**

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<sup>4</sup> See Figure 3 on page 16, which does not include wastewater treatment facility emissions that are currently flared.

The technical papers released by CalRecycle in September provided extensive information about the waste sector and its potential to contribute greenhouse gas reductions. We urge ARB to provide a more complete summary of the findings and recommendations in those technical papers and to include the complete papers as an appendix to the Scoping Plan Update. In the Scoping Plan Update itself, we also urge ARB to include:

1. Details about how to increase anaerobic digestion of diverted organic waste, including the regulations, incentives and technology development needed to significantly increase anaerobic digestion of organic waste.
2. An assessment of the lifecycle greenhouse gas benefits of energy production from organic waste – both electricity and transportation or heating fuels – including methane capture, fossil fuel displacement, production of compost as a byproduct, etc. and an assessment of whether carbon offset protocols would be appropriate for the waste sector or bioenergy from diverted organic waste or wastewater treatment.
3. Details about how to increase the beneficial use of landfill methane, particularly how to incentivize its conversion to low carbon transportation fuels.

#### **F. Forest Sector**

The overview of the forest sector is, like most of the sector descriptions, unnecessarily vague. While it recognizes that forests “have the ability to remove CO<sub>2</sub> from the atmosphere and store or sequester it long-term,” it does not state that the 2008 Scoping Plan attributes 5 million metric tons of greenhouse gas reductions to increased sequestration by California’s forests. Where specific numbers have already been adopted, it would strengthen the Scoping Plan Update significantly to include those numbers and to be much more specific about how to achieve the reductions/increased sequestration. In addition, the forest sector fails to mention wildfire as a source of greenhouse gas emissions or a threat to carbon sequestration, and it fails to mention forest biomass as a means to reduce wildfire’s impacts.

The forest sector description should include at least the following critical additions:

1. Specific mention of the 5 MMT of increased carbon sequestration attributed to California forests in the 2008 Scoping Plan and progress toward achieving that increased sequestration.
2. The amount of greenhouse gas emissions from large wildfires, including more than 30 MMT of CO<sub>2</sub> emissions from the recent Rim Fire.
3. The significance of wildfire in reducing forest carbon sequestration.
4. The role of forest biomass in reducing wildfire threats and impacts, and measures to increase development of sustainable, community-scale forest biomass facilities to reduce wildfire.

#### **G. High Global Warming Potential Gases**

Although BAC strongly supports the inclusion of high global warming potential gases in the Scoping Plan Update, the discussion is very narrow and not sufficient to spur new actions to address these climate pollutants. The Draft focuses almost entirely on refrigerants and provides no specific recommendations about how to address other high global warming potential gases going forward. At a minimum, the Update should quantify and suggest incentives to address the following:

1. Opportunities for biomethane capture and conversion from organic waste and wastewater treatment facilities.
2. Nitrous oxide emissions from the agriculture and wastewater sectors and opportunities to reduce those emissions through the use of organic soil amendments produced from organic waste and bioenergy byproducts.

## **H. Agriculture**

The agriculture sector discussion also fails to provide quantification of emissions reductions attributed to it in the 2008 Scoping Plan, such as methane reduction from dairy waste, or specific measures to further reduce emissions by 2020. And while the Draft recognizes that “there is a need for enhanced efforts to secure additional methane reductions from agricultural operations,” it suggests waiting until the 2018 Update to provide much-needed incentives.<sup>5</sup>

We urge ARB to include the following in the Scoping Plan Update for the agriculture sector:

1. Quantification of progress to date by measures included in the 2008 Scoping Plan, such as methane capture from large dairies.
2. Quantification of the potential greenhouse gas reductions from bioenergy from dairy and agricultural waste.
3. Quantification of the greenhouse gas reductions attributable to organic soil amendments (biochar, digestate, greenwaste) and compost.
4. Additional incentives needed to capture and beneficially use agricultural waste to produce energy and other products.

## **I. Public Health Benefits of Mitigation Measures**

The Draft Scoping Plan Update does not mention the impact of wildfires, a major source of greenhouse gas emissions, on public health and safety. This should be included in the discussion of public health benefits of mitigation measures as bioenergy and other measures to maintain or increase forest carbon sequestration will also help to protect public health and safety by reducing catastrophic wildfires that contribute enormous amounts of soot and other air and water pollutants.

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<sup>55</sup> Draft Scoping Plan Update at p. 47.

### III. BEYOND 2020

Establishing long-term goals and an implementation plan beyond 2020 is critical to provide market certainty and to secure project financing for bioenergy infrastructure investments, which require long-term payback periods. We urge ARB to be more specific and more inclusive about the measures needed to provide market certainty, assuage concerns about regulatory uncertainty and risks, and to continue to attract investment in California's low carbon future. In particular, we urge ARB to include more detailed long-term plans for the following:

- **Financing Measures, Including Use of Cap & Trade Revenues**

As noted above, the Scoping Plan Update should be much more specific about the availability of funding for greenhouse gas reduction measures, how cap & trade revenues will be used to further the measures in the plan (and which measures) and options for securing additional funding for greenhouse gas reduction. There is no real discussion of the costs, or cost-effectiveness, of different measures and how those costs will be funded.

- **Energy Sector Measures**

BAC agrees that California needs an overarching energy plan to ensure that long-term climate goals can be achieved. The plan should include renewable natural gas (biomethane) under "Natural Gas-Fueled Generation" to generate electricity, heating and combined heat and power.<sup>6</sup> The plan should also assess the potential of bioenergy to provide baseload renewable electricity and energy storage, reducing the need for fossil fuel generation to firm and shape intermittent renewables.

The Scoping Plan Update should not treat bioenergy differently than other forms of renewable energy. All forms of energy must meet air quality and other environmental laws, yet the Draft Scoping Plan Update only qualifies bioenergy production, and in numerous places. For instance, on page 85, the Draft refers to "bioenergy generation projects, where siting does not interfere with air quality goals." There is no comparable caveat for solar or wind power, such as "where siting does not interfere with wildlife protection goals." All renewables should meet environmental quality laws, which should be stated explicitly for all forms of renewable energy or no forms, but should not be mentioned repeatedly only in regard to bioenergy production.

- **Transportation Sector Measures**

BAC agrees that incentives must be increased to achieve California's low carbon fuel standard. In addition, BAC recommends:

- A coordinated plan to maximize use of methane emissions for transportation fuels;

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<sup>6</sup> Draft Scoping Plan Update, pp 86 and 88.

- Pipeline standards and costs that are nondiscriminatory and enable pipeline biomethane injection.

#### **E. Agriculture Sector Measures**

Proposed voluntary measures in the agriculture sector should:

- Include organic fertilizers and byproducts of anaerobic digestion, gasification, etc. (digestate, biochar, etc.);
- Increase incentives for bioenergy development from both livestock and agriculture waste;
- Pilot technologies that will meet air quality standards in the South Coast and San Joaquin Valley Air Districts.

#### **F. Water Sector Measures**

The water sector measures should include:

- Maximizing beneficial use of wastewater biogas for onsite demand and transportation fuels;
- Propose funding sources for new infrastructure investments.

#### **G. Waste Sector Measures**

BAC strongly supports the recommendation to explore funding mechanisms to increase bioenergy production from organic waste, including anaerobic digestion facilities, electricity generation from organic waste, biogas cleaning for transportation fuels and pipeline injection, and pipeline access.

#### **H. Natural and Working Lands Measures**

The Scoping Plan Update should include specific recommendations on strategies to reduce catastrophic wildfire, particularly development of community-scale, strategically placed bioenergy facilities.

### **IV. CONCLUSION**

The Draft Scoping Plan Update provides a helpful framework to review progress to date and emissions reduction goals going forward, but it does not provide the quantification or details necessary to constitute an effective or enforceable Plan, as is required by AB 32. We urge ARB and other agencies to provide far more details about the effectiveness of specific measures in place now, plans to extend those measures or adopt new measures, and plans to finance

investments in greenhouse gas reductions to ensure we meet the goals of AB 32 and other state policies.

Sincerely,

A handwritten signature in cursive script that reads "Julia A. Levin".

Julia A. Levin  
Executive Director