

COMMENTS ON AB 32 DRAFT SCOPING PLAN, CALIFORNIA AIR RESOURCES BOARD

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BY SIERRA CLUB CALIFORNIA

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California Air Resources Board Members and Staff:

Sierra Club California commends CARB's tireless efforts in preparing this comprehensive, far-reaching draft scoping plan.

We believe this draft plan is moving in the right direction, and recommend further strengthening before it is finalized in November. Our volunteers and staff have prepared a full set of comments, presented below.

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Generally, we recommend the following eight crucial GHG actions for CARB's plan:

- 1) **Make big polluters pay for all their emissions. Program revenues should go toward clean technologies, green jobs, and cost-cutting measures for low-income consumers. CARB also should narrowly limit offsets.**
- 2) **Consider cap-and-auction just one tool among market mechanisms. Other tools should be brought forward more robustly, including feed-in tariffs and carbon fees in the Plan's near-term action agenda.**
- 3) **Give the 33-percent renewable electricity standard by 2020 the force of law, either through legislation or regulatory action.**
- 4) **Promote and enable Community Choice Electricity Aggregation (CCA) and its potentially powerful GHG reductions.**
- 5) **Give more specificity and amplitude to the goal of electrifying transportation, especially greatly expanding ZEV numbers (plug-ins and electric cars) beyond CARB's currently too low projected levels.**
- 6) **Greatly strengthen the too-modest land use and agricultural sections of Plan.**
- 7) **Bolster requirements for zero waste and recycling, as well as Extended Producer Responsibility (EPR).**
- 8) **Ensure that actions to reduce greenhouse gases also help, whenever possible, to clean up California's unhealthy air.**

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OVERALL COMMENTS:

- We are pleased that the draft Plan seeks not only to meet the law's requirement of rolling back our greenhouse gas emissions to 1990 levels by 2020, but also sets a pace of greenhouse gas (GHG) reductions adequate to meet the scientifically established goal of an 80% reduction by 2050.

- Scientists now suggest that goal itself may be inadequate. We suggest the Plan incorporate intentional redundancies that anticipate the possibility that urgent action is more pressing than current assumptions would indicate.
- CARB's Plan may wish to make explicit that a "cap" on GHGs may not entirely be commensurate with the scale of the problem. We must first reduce the **growth** of CO2 emissions; next reduce total CO2 emissions; next reduce the growth of total CO2; and then go beyond that to reduce total CO2 in the atmosphere.
- California cannot afford delay in reducing pollution that causes global warming. The potential costs of inaction or delayed action are much greater than the cost of implementation now.
- We support the inclusion of co-benefits, such as public health improvements and better energy efficiency, from GHG reductions.

Comments by section: (page numbers refer to pages in draft Scoping Plan)

II. PRELIMINARY RECOMMENDATIONS

A. ROLE OF THE STATE: SETTING AN EXAMPLE (p. 12)

- We support efforts to get the State to lead by example, and encourage immediate implementation of all the actions listed, plus more to be identified.

B. EMISSIONS REDUCTION MEASURES

1. California Cap and Trade Program Linked to Western Climate Initiative (p. 15)

Direct Emission Reductions: We are glad that the Plan proposes that most of the required emissions in GHGs will come from performance standards that directly reduce emissions, such as California's clean-car, renewable-energy, and energy-efficiency programs, and incentive programs like the Solar Initiative, with only 21% proposed for the Cap-and-Trade Program. If possible, we would like to see that percentage made even lower.

- If California establishes a cap-and-trade program, we strongly recommend it require 100% auction in order to be fair to everyone, including consumers and producers.
- Revenues raised by fees and/or auctions should go toward clean energy technologies, public transit, environmental mitigation, green jobs, and aid for low-income consumers. We'd also like to see that funding used to provide training in renewable energy job skills for people now working in the fossil fuel industry.
- Aligning with the Western Climate Initiative (WCI) could dilute California's program and result in fewer emissions reductions and more delays, unless California can bring other states up to higher standards than WCI is currently recommending. The WCI Draft Design Recommendations on Elements of the Cap-and-Trade Program states (WCI page 15): "The WCI recommends each Partner auction a minimum percentage, between 25 percent and 75 percent, of its allowance budget." If California agrees to this, it could mean that between 25% and 75% of emissions allowances will be given away for free to the biggest polluters in the state.
- The WCI proposal creates an enormous loophole by allowing all reductions through 2016 to come from offsets, rather than direct reductions in capped sectors. CARB should require power and oil companies to invest in renewable energy and cleaner transportation rather than to pay someone else in some other jurisdiction to reduce their pollution instead. Any offsets should be limited in number and subjected to rigorous criteria (*See more discussion below in Section C-3*). We are also concerned about how WCI's recommendations for cap-and-trade and offsets relate to concerns of the environmental justice community: Will offsets be international? Will this amount to "exporting" GHG emissions overseas? We note that among WCI member states California is the only state with an official environmental justice

advisory committee for climate issues, and we are disturbed by the failure of the WCI process to attend to EJ concerns.

- California should not allow emissions trading with any jurisdiction that does not have a hard emissions cap of AB 32-like stringency, because such trading would remove the assurance that our emissions reductions were real. The WCI proposed baseline of 2012 would create a perverse incentive to drive up emissions between now and then, which is the opposite of the action needed.
- No trading in emissions should be allowed if it causes hot spots that exacerbate air pollution at the local level, especially within communities already beset by environmental justice issues.
- Aggressive steps need to be taken to guard against leakage by measuring the carbon emission of electrical generation consumed in CA at its actual point of production.
- Every product manufactured in the world today has its own carbon footprint—the carbon emissions associated with the production of that product. To maintain a fair market for California goods, CARB should require that producers of emission-intensive products imported for consumption in California purchase the same emissions allowances that California producers must when they sell their products in the same market. Similarly, emissions associated with products produced in California but exported should be allocated to the exporting state or nation rather than California. Any other principle would sorely disadvantage California industries and act as a powerful lever for driving additional jobs offshore.

2. California Light-Duty Vehicle GHG Standards (p. 20)

- We support implementation of the Pavley “Clean Cars” standards, which continue to call for reduction of global warming pollution from personal vehicles. While the Pavley standards will help us to meet 2020 requirements for greenhouse gas reductions, California needs more improvements in vehicle technology before 2020 in order to meet our 2050 goals. The state should immediately begin a dramatic shift toward plug-in hybrid electric vehicles and battery electric vehicles to begin the ramp-up needed to meet 2050 greenhouse gas reduction goals. This should be stated specifically in the Plan to make sure it is implemented.
- The state should immediately create a Battery Electric Vehicle Partnership with industry to speed the electrification of its light-duty vehicle fleet.
- The minimum goal of 7,500 Zero Emission Vehicles (ZEVs) currently required by the Zero Emission Vehicle Program in 2012-2014 is grossly inadequate. CARB should establish a goal of hundreds of thousands of ZEVs in that timeframe, and recommend increased funding for immediate development of plug-in hybrid vehicles and infrastructure for all plug-in vehicles.
- CARB should create a program and incentives to encourage conversion of the 100,000 hybrids now in use to plug-in hybrids, and mandate all appropriate state fleet vehicles be plug-in or zero-emission vehicles.

3. Energy Efficiency (p. 21)

- We support all the energy efficiency efforts listed by CARB. In fact, we believe that even greater reductions in the pollution that causes global warming can be gained by further strengthening efficiency and conservation efforts.
- For example, the Plan’s goal of 32,000 gigawatt-hours of electric power demand reduction by 2020 falls far short of the economic potential for 60,000 gigawatt-hours of savings if all technology options are included (as described in the California Energy Commission 2007 Integrated Energy Policy Report, p. 98).
 - The mandatory Green Building Standards Code update scheduled for 2010 needs to be strengthened. CARB pressure could help.
 - Can CARB provide more detail in terms of the three measures in CR-1 (separate out the expected reductions from the three strategies outlined)?
 - By 2020, California should be able to go well beyond the SB 1470 goal of only 0.1 million tons of annual reductions from solar water heating, through encouraging public private partnerships.

- CARB should look at using independent providers and the Standard-Offer model to administer energy efficiency implementation, as opposed to utilities. The California Public Utilities Commission investigated this in 2002 and concluded that independent providers were more cost effective, particularly for residential customers.

4. Renewables Portfolio Standard (p. 24)

- We are pleased to see CARB's recommendation for a 33% Renewables Portfolio Standard for electricity providers. This forward-thinking measure should be quickly given the force of law for all utilities, either by regulatory action or by legislation.
- Community Choice Aggregation (CCA) allows city and county governments to pool the electricity-buying power of all local customers, which could help meet (or even exceed) the 33% renewable energy level. CCAs in advanced development stages, such as Marin County and San Francisco, include 51% renewable requirements in their plans. CCA is one of the most powerful GHG reduction measures available to cities and counties to comply with their responsibilities under AB 32. CARB's scoping plan should spell out CCA authority as a key tool provided under California law (AB 117, Migden) that grants local governments full power in planning for their energy supply.
- CARB should also recommend restructuring state law to allow more favorable renewable energy price structures, such as feed-in tariffs, which ensure full compensation for renewable energy costs, plus a fair rate of profit.
 - Feed-in Tariffs (FiTs) need explicit backing in CARB's scoping plan. FiTs are efficient tools for speeding adoption of renewable electricity generation and stabilizing market prices of new technologies. Already used in more than 37 countries, and under consideration in Michigan, Minnesota, Illinois and Rhode Island, FiTs establish a price for renewables — guaranteed for 20 years or more — based on the cost of producing that electricity plus a fair profit. These rates usually have a modest impact on customer bills compared to conventionally generated electricity. (In Germany, for example, the FiT cost to consumers equals the price of a loaf of bread per month.) FiTs allow manufacturers and renewable project developers to predict demand, and to invest with confidence. California should model its FiTs on those programs that have achieved significant growth of renewables. A FiT in California should be tied to meeting the state's goals for renewables.
 - As the California Energy Commission's recommended in its 2007 Integrated Energy Policy Report, any carbon trading system reduce allowances according to an appropriate evaluation of the effects of the renewable portfolio standard — in order to avoid oversupply of allowances.

5. Low Carbon Fuel Standard (p. 25)

- We are looking forward to implementation of a Low Carbon Fuel Standard that accounts for all environmental impacts on a life cycle basis.
- However, we are disappointed that the draft Scoping Plan contains no explicit projections for carbon reductions from implementation of a rigorous Zero Emission Vehicle (ZEV) program. An ambitious ZEV program, plus plug-in hybrids, could achieve significant GHG savings.
- The plan should include specific requirements for automakers to sell hundreds of thousands of zero-emission vehicles annually by 2020.

7. Sustainable Forests (p. 27)

- Because forests remove carbon dioxide from the atmosphere and sequester carbon in vegetation as well as wood products, forests can make important contributions to reduction of greenhouse gasses in the atmosphere.
- In general, the Plan sets very modest targets for contribution from the forest sector. We encourage CARB to set a more aggressive goal. As indicated in appendices, the 5 MMTCO₂E target is essentially

what the forest sector is currently contributing in terms of GHG reduction. We can do better.

- Sierra Club California has serious concerns about essentially delegating the development of a plan for the forest sector to the Board of Forestry, Department of Forestry and Resources Agency. We strongly urge CARB to assert and maintain a leadership role in the forest sector. History has shown, time and again, that Board of Forestry is unlikely to take the necessary bold and visionary steps to solve this (or any other) serious problem.
- It should be remembered that three of the nine seats on Board of Forestry are reserved for the timber industry, and are currently held by employees of Sierra Pacific Industries, Timber Products Company, and Hearst Corporation. A fourth seat is designated for Range & Livestock, and is held by a former Farm Bureau lobbyist. These four members who directly represent the regulated community generally vote as a block, and stonewall any proposals that may run counter to the economic interests of their constituents.
- There is also a substantial question as to what extent the Forest Practice Act empowers Board of Forestry to address climate change issues. Indeed, Section 4513 of the Act states the intent of the California Legislature as follows:

“4513. Intent of Legislature. It is the intent of the Legislature to create and maintain an effective and comprehensive system of regulation and use of all timberlands so as to assure that:

(a) Where feasible, the productivity of timberlands is restored, enhanced, and maintained.

(b) The goal of maximum sustained production of high-quality timber products is achieved while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, regional economic vitality, employment, and aesthetic enjoyment.”

The Board of Forestry’s proclivity toward inaction and catering to the interests of the timber industry, combined with its lack of clear authority to adopt regulations addressing climate change and carbon sequestration, lead us to believe that it would be more appropriate for CARB to adopt the rules necessary to achieve appropriate contributions from the forest sector.

Comments on Specific Recommendations in the Scoping Plan Appendices

Forest Practice Rules Mechanisms:

Improvements to California’s Forest Practice Rules to address wildlife and water quality issues can also lead to additional carbon sequestration. For example, there is currently an Emergency Rule Petition pending at the Board of Forestry that would improve habitat protections for critically endangered coho salmon. Amongst other changes, the rule package would require retention of additional large trees near watercourses to provide shade, and allow large wood recruitment into streams to improve the complexity of stream structure. These rules would also lead to permanent retention of additional carbon.

CEQA Mechanism:

It is widely acknowledged that the conversion of forestland to other uses has substantial adverse impacts on habitat, water quality and carbon sequestration. Unfortunately, the current regulatory process has substantial weaknesses that prevent adequate state-level oversight. The current regulatory process needs to be strengthened to discourage conversion of forestland, and to require substantial mitigation when forests are converted to other uses. Reducing forestland conversions will have the related benefit of managing the ever-increasing fire suppression challenge in California, which is seriously exacerbated by development in and near forestland.

Implementing Strategies:

Forest Biomass:

Forest biomass for heat and power can provide positive carbon benefits compared to fossil fuels. When gathering biomass from forests, it is critical that the biomass be a byproduct of thinning the forest to create a healthier stand condition, rather than harvesting a healthy forest simply for biomass.

Afforestation/Reforestation:

Improving the stocking of depleted or poorly managed forestland, and replanting historic forestlands, are important and obvious ways to improve California's carbon sequestering capacity. However, these activities should be approached with prudent planning and analysis. A warming climate will change the distribution and composition of California's forests, and the frequency and intensity of fire is likely to increase. Tree-planting activities should take these and other factors into account, and create a distribution and density of native species that reflects an appropriate balance between carbon sequestration and resiliency to changing climate and fires.

Urban Forestry:

Planting trees in urban environments offers myriad co-benefits: aesthetics and increased property values, reduced energy consumption due to increased shade, cleaner air, and increased carbon sequestration. Although the amount of carbon directly sequestered may not be as large or as cost-effective as afforestation efforts in rural parts of the state, an aggressive urban tree planting program should be a priority forest sector action.

Fuels Management:

California is a fire-adapted landscape, and fire is an inevitable and necessary part of California's ecology. The appropriate focus for fire policy in California is how we can co-exist with fire, minimizing risk of injury and loss of property while respecting ecological realities.

Sierra Club supports the thinning of excessive surface and ladder fuels near homes and communities to protect lives and property from wildfires. Fire science indicates that reduction of understory fuels is the most important factor in preventing a stand-replacing crown fire, and we have supported a number of statutory and regulatory changes in recent years to streamline the reduction of these types of fuels from priority areas.

California's sheer size, the relatively low value of wood products in the current market, and the extremely high price of diesel fuel all contribute to the need to prioritize areas meriting fuels reduction activities. Scattered fuel reduction projects across the landscape are generally going to be less effective than targeting areas of highest risk. These also tend to be the communities where firefighters must use direct attacks to control a fire to protect property.

There have been a number of estimates of the carbon benefits from fuels reduction activities and the resultant reduction in fire severity. Some, including those from CalFire, vastly overestimate the benefits of fuels reduction activities. Given the extremely speculative nature of this "benefit," and the fact that fire is a natural and necessary part of California's environment, we encourage the state to focus fuels reduction efforts (and other proactive fire planning activities) on protecting communities. There may be climate co-benefits to fire planning and suppression, but trying to quantify them is difficult, highly questionable and should be omitted from any accounting.

Finally, CARB must include the effects of increasingly large emissions from forest fires in its projections for forest emissions/reductions.

8. Water (p. 28)

- We support a public goods charge for funding investments in water efficiency that will lead to reductions in greenhouse gases.
- We are pleased that CARB staff calls for a 20% reduction in water use but disappointed that agricultural water use is not included among the efficiency targets. Agricultural water use accounts for more than three quarters of the state's total water use.

9. Vehicle Efficiency Measures (p. 29)

- We are supportive of vehicle efficiency measures, such as fuel-efficient tire standards.

10. Goods Movement (p. 29)

- We support the ship electrification in ports approved by CARB in 2007.
- Requiring on-dock electric rail and electric drayage would eliminate all diesel emissions inside the port.
- We want to know more details of the Plan's proposed "Goods Movement Efficiency Measures - System-Wide Efficiency Improvements," which CARB has predicted will yield savings of 3.5 tons.
- CARB should work with state transportation agencies to plan commercially viable electric rail systems that would replace diesel trucks and trains. That move would also reduce congestion along California's highways, potentially lowering total vehicle emissions.

11. Heavy/Medium-Duty Vehicles (p. 30)

- We support all three proposals for aerodynamic efficiency, hybridization, and engine efficiency.
- We request that ARB consider requiring electrification of medium-duty delivery trucks, as well as other means to reduce emissions in this sector.

12. Million Solar Roofs Program (p. 30)

- We support the Million Solar Roofs Program and its goal of 3,000 megawatts of solar energy for homes and businesses throughout the state by 2017. We note, however, that some reforms in program structure and funding may be necessary to achieve the goal.

13. Local Government Actions and Regional Targets (p. 31)

- The Plan should do more than just "encourage" local city and county climate action plans. This planning should be "required" (the Attorney General has already sued San Bernardino to underline this requirement's urgency).
- This should not be an unfunded mandate: most cities lack funding and expertise to craft adequate climate plans. CARB should take the lead in devising incentives – carrots and sticks – and means of financially assisting or persuading cities to comply.
- The Plan should include stronger measures to reform land use planning in ways that reduce vehicle miles traveled (VMT). (See Newman and Kenworthy paper on how one passenger-mile of transit use can reduce 3–7 passenger-miles in a car.) Expand Regional Blueprints already underway.

- These should include transit-oriented development, walkable, bikeable communities, mixed land uses, requiring Regional Transportation Plans to have strong requirements for reduction of vehicle miles traveled (VMT), and more.
- We are concerned with how this section of the Plan deals with land use measures. The Plan's land use goals are not ambitious enough. Targets are too modest. Tools identified to cope with the problem are inadequate. And serious reflection of public health, social and economic co-benefits of forceful action is lacking.
- The Plan only counts reducing 2 million metric tons (MMT) of carbon equivalent per annum by 2020 from actions in this sector. This is only about 1% of the total reductions. By comparison, the Sacramento Area Council of Governments (SACOG) blueprint could reduce carbon emissions by roughly 1 MMT by 2020, even though SACOG currently contains no more than 1/15th of California's population.
- It is unclear why CARB acquiesced to only 2 MMT for the Plan, which virtually equals business as usual. An April 2007 Cal/EPA report, "Climate Action Team Proposed Early Actions to Mitigate Climate Change in California, Draft for Public Review," allotted 18 MMT by 2020 to "regional transportation/smart growth land use measures."
- More compact neighborhoods and less driving are the essence of the EIR for SACOG's Blueprint scenario. SACOG plans to devote much less land devoted to urban uses and to cut carbon emissions while saving farmland – providing public health and economic savings for households and businesses where less driving is required.
- Although the Plan mentions "Community Energy" and "municipal utility operations," there is no mention of Community Choice Aggregation (CCA), a specific authority under California law (AB 117, Migden). CCA offers large potential for local governments to move aggressively toward meeting or exceeding the state's mandated Renewable Portfolio Standards (RPS). Over 40 cities and counties in the state have performed feasibility studies financed by the California Energy Commission and the US Department of Energy, with over two dozen jurisdictions in advanced stages of planning for actual implementation. Marin County, Oakland, Berkeley and Emeryville, as well as San Francisco have either established or are considering a target of 50% or more renewables for all customers within their service region by 2017. When achieved, such targets represent the single easiest way for municipalities to comply locally with whatever AB 32 stipulations may be imposed.
- Adopt and require the use of greenhouse performance standards, goals and metrics for transportation planning and projects. Hold state, regional and local agencies accountable for meeting these metrics.
- We recommend fast-tracking regional mass transit infrastructure, including Bus Rapid Transit programs (especially on existing freeway HOV lanes).

14. High Speed Rail (p. 34)

- Sierra Club has long endorsed the Altamont Pass route into the Bay Area.
- CARB is aware of the ongoing controversy over Altamont and Pacheco Pass routes. We urge CARB to advise the High Speed Rail Authority on the relative carbon footprints of competing routes into the Bay Area, and to assess the relative degrees of cost-effectiveness in reducing carbon when constructed. To the extent that CARB can bring to bear climate considerations and data on this choice, the public will be well served.

15. Recycling and Waste (p. 34)

- CARB's scoping plan should highlight more aggressively the powerful carbon reduction potential of zero waste: first, reducing waste by design in manufacturing process, then reusing, recycling or composting products.
- ETAAC submitted to CARB an excellent set of recommendations for the waste sector but only several were included in the Plan. We strongly urge CARB to include ALL the ETAAC recommendations for the waste sector.

- We commend to you the new report "**Stop Trashing the Climate,**" released June 5, 2008 to mark World Environment Day. See <http://www.stoptrashingthecclimate.org/> The report, by GAIA with the Institute for Self Reliance and Eco-Cycle, brings together information about recycling, plus source reduction, reuse and composting. Further, it describes how scaling up recycling, reusing materials and products, and shrinking the size of a community's waste stream can greatly reduce greenhouse gas generation and related climate damage:

"Incinerators and landfills are relics of an unsustainable past that have no place in our green economy. The report, "Stop Trashing the Climate" shows that zero waste -- that is, preventing waste and strengthening recycling and composting -- is one of the fastest, cheapest and most effective strategies for confronting global warming."

- Carl Pope, Executive Director, Sierra Club

- CARB should implement "lifecycle tracking" of manufactured products, giving priority to reusables and locally manufactured items.
- Landfill waste disposal should be phased out by requiring recycling and making manufacturers responsible for the end-of-life disposition of their products. Wastes should be separated, particularly organic wastes, for effective composting. CARB should work with the California Integrated Waste Management Board to end the practice of dumping green waste into landfills.
- Alternative Daily Cover (ADC) that uses green waste or wood waste should not be given recycling credits or counted as recycling. This actually de-incentivizes diversion of green waste into composting and contained methane energy capture.
- CARB's suggestion to capture and utilize landfill methane gas should not be construed as support for continued dumping of green waste into landfills. Landfill capture of methane is far less efficient than what is possible with green waste separation. This is especially crucial given that methane is a far more potent greenhouse gas than carbon dioxide.
- Burning garbage arguably uses more energy than recycling, and carbon reduction requires better options.
- We propose statewide installation of "Resource Recovery Parks" to include facilities for reusing, recycling, composting, and minimizing the discarding of materials. They can also incorporate facilities for repair services, retail sales of reclaimed products and landscaping supplies, organically composted gardens, educational tours, and public amenities. Such a model park currently operates in the city of Marina in Monterey County.
- We believe there are many more tons of carbon reductions possible from aggressive Zero-Waste and recycling programs. For example, the plan should include specific measures to increase recycling of organics and other materials, and those measures should have emission reduction numbers and deadlines attached to them.
- Extended Producer Responsibility (EPR), now CIWMB policy, needs explicit CARB backing as a potent greenhouse gas reduction measure.
- CARB should explicitly reject carbon credits for landfill carbon sequestration.
- Successful Zero Waste initiatives require effective outreach and educational programs so that others are advised of and can come to appreciate the benefits. CARB should utilize the legions of young people who are not only enthusiastic and care about waste reduction, recycling and global warming but are also willing to go out and do something about it. CARB should have these individuals help us educate our communities about the issue. Recycling ambassador programs throughout state and local government agencies should be instituted so that students and other volunteers can go door to door educating residents about the need for and the benefits of recycling. In addition, new home owners, apartment dwellers and other residents should receive information after moving to a new residence that explains to them the recycling policies in their neighborhood and encourages them to do so. People are willing to do what it takes to pitch in but if they have no idea how to do it, they won't even begin. This type of outreach should be a critical aspect of the CARB plan.

16. Agriculture (p. 35)

- We are extremely disappointed with the low expectations for agriculture. CARB's Plan only mentions 1 potential MMT of GHG reduction from methane capture at large dairies.
- Many studies by California scientists and others throughout the world have shown how organically grown crops have significantly lowered GHG emissions, from non-use of nitrate fertilizers and other means.
- Studies have shown significant methane emissions from bovine digestion, which raises the question of whether a carbon tax should be applied to dairy products, such as beef and milk.
- Support for urban agriculture should be considered, especially community gardens.
- In Department of Conservation's study of greenhouse gas emissions associated with conversion of agricultural land to urban uses, both direct and indirect emissions should be considered. Promoting more compact, efficient, transit-oriented urban development will not only reduce greenhouse gas emissions from vehicle travel but also conserve agricultural land by minimizing conversion to urban use.
- The Plan should reference and encourage CDFG's development of a strategic plan for agriculture. Efforts to minimize conversion of prime farmland will be helped if agricultural enterprises now on the land maintain profitability and sustainability.
- The Plan should emphasize that linking good land use with local food systems can reduce transportation-related emissions, provide a premium for farmers selling locally, and even improve access to healthier foods.
- State and local governments could increase access to local foods, for example, by direct investments, incentives and public-private partnerships to develop needed local foods system infrastructure.
- Joint action by the Department of Food & Agriculture and CARB could significantly increase the amount of locally produced food consumed in the state – thus reducing more emissions from transportation. CDFG and CARB could work together to track and measure “food miles traveled” and seek ways to cut distances from food to producer. Cutting down on transport of agricultural products from agriculture areas to other parts of the state would lessen GHG.
- Support for urban agriculture should be considered, especially community gardens.
- The Plan should address urban agricultural issues, such as:
 - a) What funding can the state supply to assist municipalities in supporting urban agriculture?
 - b) What focus can CARB bring on removing barriers to urban agriculture? CARB and CDFG could work together to: find useable land for community gardens, inventories of such land; test for toxicity; reach out to potential urban gardeners; recast city regulations in favor of urban orchards, edible landscaping, local composting, and rooftop gardens; and provide more UC Master Gardener training and technical assistance?
 - c) Could CARB facilitate funding of local offices in each municipality to inventory potentially available state-owned lands and mobilize local community gardeners and organizers?
- The Plan needs to highlight the greenhouse gas reduction benefits of organic agriculture. The California Energy Commission Climate Change Research Conference Sacramento, September 10-13, 2007 has five presentations: http://www.climatechange.ca.gov/events/2007_conference/presentations/index.html
- Data from The Rodale Institute's long-running comparison of organic and conventional cropping systems confirms that organic methods are far more effective at removing the greenhouse gas, carbon dioxide, from the atmosphere and fixing it as beneficial organic matter in the soil. See Laura Sayre, 2003 http://www.newfarm.org/depts/NFfield_trials/1003/carbonsequest.shtml
-- Another study shows confirmed ecological virtues of organic farming
www.pnas.org/cgi/reprint/103/12/4522.pdf
<http://news-service.stanford.edu/pr/2006/pr-organics-030806.html>

17. Energy Efficiency and Co-Benefits Audits for Large Industrial Sources (p. 36)

- We support CARB's plan to require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce GHG emissions and provide other pollution reduction co-benefits.
- However, we are disappointed that no specific measures, including performance standards, efficiency programs, or direct regulations are proposed for industry, which is projected to emit 101 MMTCO₂E in 2020.
- California's industries (and CARB) could learn from Japan. "According to the International Energy Agency, based in Paris, Japan consumed half as much energy per dollar worth of economic activity as the European Union or the United States, and one-eighth as much as China and India in 2005." (NY Times, July 4, 2008)
 - High efficiency co-generation needs to be required for all appropriate new energy installations.

C. OTHER MEASURES UNDER EVALUATION (p. 37)

1. Other Sector-Based Measures (p. 37)

- We are supportive of all the measures listed as "under evaluation."
- We suggest that mandatory employer parking cashout, like that implemented by the city of Santa Monica, be added as an additional measure to evaluate. Employer parking cashout rewards employees that opt for transit, carpooling, and other smart transit choices.
- Many other ways to reduce workplace vehicle-miles-traveled (VMT), such as parking fee increases, telecommuting, etc. that need further study.
- We are pleased with the mention of public education in regard to transportation.
- We suggest that increasing public transit services (both bus and rail) be included among the sector-based methods.
- We urge CARB to insure that electric power generators be held to an increasingly stringent carbon standard, and that the carbon standard be applied to all generators, whether under contract or utility owned, and to all types of retail sellers of electricity within the state.
 - We think CARB's target of reducing coal generation 40%, or 13,000 gigawatt-hours, by 2020 is an achievable goal, provided that utility companies are held to the renewable energy and efficiency targets.
 - Industrial boilers, oil refineries and glass manufacturing represent excellent opportunities to recover waste heat for electric generation and other purposes.
 - –CARB staff might consider a recent study by Jason E. Bordoff and Pascal J. Noel, "Pay-As-You-Drive Auto Insurance: A Simple Way to Reduce Driving Related Harms and Increase Equity" (www.brookings.edu/~media/Files/rc/papers/2008/0417_payd_bordoff/0417_payd_bordoff.pdf). Applied to California, the analysis indicates *much larger* benefits than estimated in the Plan (<http://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>). This emission-reduction estimate is about ten times larger than the Plan states, and the Plan overlooks co-benefits such as congestion reductions, crash reductions and consumer benefits.
 - Here are a few of the study's key findings. (The full paper will be posted on the Bookings Institution website shortly):
 - An 8 percent driving reduction for light-duty vehicles
 - VMT decrease by 24 billion miles;
 - Less fuel consumption by 1.2 billion gallons, based on 2006 levels.
 - Direct annual CO₂ reductions of 10.5 million metric tons
 - Lower premiums for drivers; two-thirds of households would save money.
- CARB should consider and address the full life cycle of emissions whenever possible. Unfortunately, the CPUC's interpretation of SB 1368 would allow about five million tons of GHG per year per Liquid

Natural Gas terminal to go into the atmosphere without being “counted” as part of the state’s carbon emissions, if these terminals are constructed. That’s a loophole that should be closed: five million tons of GHG per year is roughly equivalent to the emissions of one million cars.

2. Carbon Fees (p. 41)

- We are pleased that CARB has provided a positive discussion of carbon fees. We think that the range recommended in the draft Plan of \$10 and \$50/ton would be reasonable; this fee could start low and gradually increase over time as needed.
- A \$30-per-ton fee on all greenhouse gases would provide revenue of approximately \$12 billion per year, which is less than 1/100th of the California economy. This money could be immediately restored to the state economy, encouraging local investment in clean technologies and green jobs, activities with a bright prospect in a carbon-constrained world. Revenues could also provide rebates for low-income consumers.
- We believe that it should be possible to quantify some of the benefits from the expenditure of the funds on projects that provide considerable GHG emission reductions. For example, transit operators know increased frequency of service and lower fares can increase ridership. Recovering waste heat, either to generate electricity or from generating electricity, has specific value to commercial and residential utility customers.
- On carbon pricing, emissions fees should be analyzed along with a cap-and-auction system, as the Plan proposes. We need the income to fund CO2 reductions.
 - Polluters always should have to pay for cleaning up the damage they cause. Therefore, if a carbon market is established, all emission allowances should be auctioned. The Plan states (page 16), “These allowances could be freely distributed to capped firms or auctioned in the trading market.” We are opposed to free distributions, since they don’t encourage accountability and provide much less motivation to reduce GHG emissions.
 - Major emitters should pay for the cost of administering this program.
 - Sierra Club has supported the existing criteria pollutant Indirect Source Rule (ISR) for the San Joaquin Valley. CARB should now consider a statewide ISR that includes greenhouse gases. In order for ISR to be effective in reducing VMT, it should discourage developers from building far from existing services and jobs, and it should encourage close-in development. To this end, the amount of the fee should be proportional to the VMT, and the computer model used to compute a project’s emissions should accurately account for the individual project’s VMT. As a means of encouraging green building, reducing energy use, and promoting good community design measures such as mixed use and walkability, such an ISR should follow the precedent set by the existing ISR to incorporate fee reductions for onsite GHG reduction measures. Remaining fees should be used for projects that reduce GHG as well as criteria pollutants and achieve other environmental co-benefits.
 - Lawrence Frank’s new study, *Reducing Global Warming and Air Pollution: The Role of Green Development in California* (July 1, 2008, prepared for Environmental Defense Fund), is very supportive of ISR. CARB’s AB 32 Scoping Plan lists ISR as “under evaluation.”
 - ISR is tested and effective and should be listed in part B of the Plan as an emission reduction measure.

3. Offsets (p. 43)

- Any offsets should be limited in number and subjected to rigorous criteria. The draft CARB Scoping Plan suggests limiting offsets to 10 percent of a firm's "compliance obligation." CARB must clarify that this means that no more than 10 percent of the emitter’s required reductions may come from offsets, not 10 percent of its total emissions.
 - We are opposed to any system that would relieve any domestic emitter of carbon from paying for their fair share of the costs of the carbon they emit in exchange for “offsets,” either for internationally produced CO2 emissions or domestically for activities designed to enhance carbon sinks, like tree planting.

While government and private support of improved soil carbon content and reforestation are highly desirable, it is impossible to retain the integrity and effectiveness of a program to reduce domestic CO₂ emissions if it is combined with a trading mechanism for efforts to preserve and enhance carbon sinks.

- We oppose trading between sources of carbon pollution and sinks, like forests, that store carbon. The ability of forests to store carbon should not become a justification for maintaining higher emissions of air pollution. We need both 80% reductions in domestic CO₂ emissions and strong programs to enhance carbon sinks; we should not “trade” them off against each other. This separation of carbon control systems is especially important given the increasing vulnerability of California’s forests and other flora owing to fire, drought and potential effects of climate change.

4. Use of Possible Revenues (p. 45)

- We are supportive of most of the uses listed, particularly those related to environmental justice, such as “achieving environmental co-benefits.”
- Criteria and toxic air pollutants create health risks, and some communities bear a disproportionate burden from air pollution. We support ideas that benefit these unfairly impacted communities.
- Revenues should be prioritized for projects that reduce both GHG emissions and also provide reductions in air and other pollutants that affect public health.

III. ANALYSIS: Costs and Benefits (p. 49) While more detailed comments will be developed later in our comments on the Appendices, specific economic benefits of energy efficiency and clean energy measures can be evaluated based upon the sum of:

- 1) projected and avoided costs for these energy supplies,
- 2) in-state jobs and manufacturing due to green economic activity,
- 3) federal tax credits benefits and in-state tax revenues,
- 4) export revenues, and
- 5) environmental and public health benefits.

- CARB’s analysis of public health benefits of transportation efficiency measures focuses only on respiratory medicine and economic benefits of reducing respiratory disease. While this analysis provides powerful support for the Plan’s vehicle and fuel improvements, the Plan overlooks large public health benefits to other transportation efficiency measures not in the Plan.
- Public health perils such as obesity, diabetes and heart disease can be reduced by strategies the Plan should embrace more aggressively. Auto-dependent neighborhoods make these diseases more common; smart growth and reduced vehicle miles traveled can help combat them.
- CARB’s public health analysis needs to address the issue of food security and “food deserts.” Lacking healthy food choices, residents must travel long distances to obtain more healthy fare or rely on expensive, locally available junk food. Although emissions benefits of better access to healthy food may be modest, public health benefits can be significant and climate change policy offers a chance for low-income “food deserts” to get attention.
- Gaps in the public health analysis in the Plan may stem from lack of participation by California Department of Public Health in the CAT process. We hope CDPH and the larger public health community are brought into the process of revising the Plan’s first draft.

IV. IMPLEMENTATION: Putting the Plan into Action (p. 65)

A. Personal Action (p. 65)

- We are pleased with the inclusion of Personal Action items.
- We believe the plan needs to include specific personal actions (coordinated with Public Outreach and Education campaigns, described below).

B. Public Outreach and Education (p. 67)

- All four strategies are excellent.
- Funding is needed for training teachers in the climate change curriculum.
- The Plan should include detailed public awareness campaigns, with budgets (funded by carbon fees), that will be used to involve the public in all aspects of the Plan.
- Successful implementation of California's historic global warming law will require a program that is open and transparent to the public, including performance and compliance tracking information of all components accessible via the Internet.

C. Tracking Progress (p. 68)

- We are supportive of the measures proposed for tracking progress.

D. Enforcement (p. 70)

- We agree that enforcement is a critical component of AB 32 implementation. CARB will need to significantly bulk up its enforcement resources to meet this challenge. In addition, the scoping plan should explain the route for enforcing emission reduction measures taken by other agencies outside CARB to hold those agencies accountable for assuring the realization of emission reduction measures assigned to them.
- We support the measures proposed for enforcement, especially including engaging local Air Quality Districts in tracking emissions from local facilities.
- We would support some program funding to these Air Quality Districts to support their increased duties under AB 32.

E. State and Local Permitting Considerations (p. 70)

- We support including state and local permitting considerations in the AB 32 implementation strategies.
- We would support some program funding to the entities involved to support their increased duties under AB 32.

F. Program Funding (p. 71)

- We support the measures proposed for program funding.

V. A VISION FOR THE FUTURE (p. 73)

- We support collaboration with key partners, as long as it doesn't dilute the effectiveness and speed of implementation. California needs to stand up for a high standard of GHG reductions, not sink to the "lowest common denominator."
- We applaud the planned expansion of research by California's universities to develop innovative solutions to all aspects of the plan, but we cannot wait for the "perfect technologies."

(For further detail on Sierra Club California's positions, see:
<http://www.sierraclubcalifornia.org/globalwarming.html>.)