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Ms. Mary Nichols, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Dear Chair Nichols:

RE: DRAFT CAP-AND-TRADE AUCTION PROCEEDS INVESTMENT PLAN: FY 2013-14 – 2015-16

Thank you for this opportunity to comment on the Air Resources Board's *Draft Cap-and-Trade Auction Proceeds Investment Plan: FY 2013-14 – 2015-16* (dated April 16, 2013).

The Sierra Nevada Conservancy (SNC) is a California state agency within the Natural Resources Agency. The SNC Region constitutes about 25 percent of California's land area, much of which is forested lands. The forests are storing approximately 420 million tons of carbon,[1] but through active forest restoration and a more efficient use of woody biomass we have the opportunity to store much larger amounts.

We were pleased that *Natural Resource & Waste Diversion* was included as one of the priority programmatic investment categories for the first 3-year plan. We encourage the Air Board to make substantial investment in the forest sector to achieve the Greenhouse Gas (GHG) emission reduction goals of the Global Warming Solutions Act of (AB 32 2005-06), while creating multiple benefits for rural economies, public health and natural resource protection. Investment in forest restoration provides the opportunity for renewable energy development through the use of forest waste, or "biomass," to produce energy. Converting forest waste to energy by burning it in a controlled biomass energy facility achieves air quality benefits on two levels: 1) it keeps that waste from being disposed of by open pile burning or decaying, and 2) the forest treatments that produce the biomass reduce the risk of large, damaging wildfires that

[1] It is estimated that the total above-ground biomass accumulation of productive forests in the Sierra Nevada is almost 840 million tons. Current estimates of forest biomass are based on the weight of above ground living tree matter (minus the half that is water) calculated by using forest inventory data. Stored carbon is then estimated by halving the amount of biomass per unit area, and is usually expressed in short tons per acre.

also emit substantial GHG. Use of biomass for energy also displaces the burning of fossil fuels, which add GHG to the atmosphere, and provides reliable power when other renewable sources, such as wind and solar, may be offline.

Excess forest biomass material removed as a byproduct of forest fuels reduction and forest restoration activities is typically piled and burned when there are no economically feasible means to use the biomass for other purposes, emitting large quantities of GHG in the process. Development of community-scale forest bioenergy projects will provide an alternative opportunity to utilize this excess forest biomass material using technologies that significantly reduce air emissions when compared to pile-and-burn disposal techniques.

It's estimated that when all 50 MW of SB 1122 community-scale forest bioenergy facilities are operational, **152,000 tons of GHG's emissions will be reduced annually.** At full build-out of 50 MW capacity, the community-based bioenergy facilities will be able to process approximately 400,000 bone dry tons (BDT) of forest biomass per year. Forest treatments (fuels reduction, thinning, etc.) produce about 13 BDT per acre. At capacity, these small bioenergy facilities will result in a market for woody biomass representing over 30,000 acres treated per year with annual benefits including a reduction in GHG emissions of about 152,000 tons CO2e. Other annual benefits include reductions in: particulate matter (2,400 metric tons), NOx (640 metric tons), NMOCs (1880 metric tons), and CO (23,200 metric tons) (Springsteen et al., 2011).

It would greatly benefit the environment, local economies and disadvantaged communities of rural California to provide funding for utilization of forest biomass generated by forest treatment activities for renewable energy production (electricity and thermal energy). This investment will directly support implementation of SB 1122 (2011-12) which includes a procurement requirement for large investor-owned utilities to buy 50 megawatts of biomass bioenergy derived from sustainable forest management practices in fire threat treatment areas.

This type of investment would also directly support implementation of the 2012 California Bioenergy Action Plan calls for the Resources Agency, Sierra Nevada Conservancy and other agencies to continue working with stakeholders to identify and promote small-scale forest biomass projects that reduce fire hazards, restore healthier, more resilient forests, provide renewable energy, and promote rural economic development (Section 1: 1.1).

The Action Plan states, in part, "Biomass energy facilities are essential to achieving forest restoration activities and rural economic development objectives in California's forested areas." The Sierra Nevada Conservancy is specifically responsible for promoting small-scale bioenergy projects that are consistent with forest restoration, economic development, and social equity objectives. This involves identifying candidate projects, seeking developers and sharing the cost of commercial and emerging community-scale bioenergy technologies. Furthermore the SNC is to identify and seek private, state (including public interest energy research and electricity production investment charge), and federal funding for feasibility

studies, pilot and demonstration projects, and research to support community-scale biomass utilization projects.

Based on the importance of this Region and other forested areas in meeting the state's GHG emission reduction goals under Assembly Bill (AB) 32, the procurement targets established by SB 1122 and the recommendations of the California Bioenergy Action Plan, we urge the Air Resources Board to consider the following additions to the first three-year investment plan for cap-and-trade auction revenue.

Recommendation #1: Add Sierra Nevada Conservancy (SNC) to the list of State Agencies to provide oversight, develop program criteria and to distribute funds through our existing Healthy Forests Grant Program grant program (in Appendix B - Forests and Ecosystem Management chart, p. B-13).

Recommendation #2: Invest approximately $10 million in funding early phase development and deployment of community-scale forest bioenergy technologies. The SNC could administer these funds through its grant program and consistent with its responsibilities under the California Bioenergy Action Plan.

Currently, there is a limited amount of funding available to project proponents to conduct preliminary analysis, which includes project engineering, design, environmental analysis, and permitting. This work is required before utility company energy price negotiations can take place, which then establishes the income stream for the project. This preliminary analysis phase must therefore be completed before private financing can be obtained to implement the project. This investment is very difficult for communities that are already facing severe economic distress and commercial investment is not usually available until the preliminary steps have been taken.

The cost of completing the preliminary planning and analysis phase is an estimated $350,000 (but can be as high as $750,000). In order to achieve 50 MW from forest biomass, approximately $10 million will be needed. Once these demonstration projects are operational, this industry can function like other small-scale renewable energy operations, obtaining working capital for the preliminary analysis costs through investors who have developed confidence in the new industry.

Fiscal Year	Funds Needed (based on $350,000 per project)	Number of projects	Cumulative MW
1 (2013-14)	$2.45 million	7	16
2 (2014-15)	$2.8 million	8	20
3 (2015-16)	$4.2 million	12	14
TOTAL	**$9.45 million**	27	50

Recommendation #3: Temporarily provide a direct transportation incentive to woody biomass fuel providers who need to transport biomass outside a 20-mile circle to get to an existing bioenergy facility ($6.8 million). The SNC and/or Cal Fire could administer these funds through its grants programs.

This incentive will help balance the relatively low price that energy producers can afford to pay for forest biomass and the relatively high cost of transporting that material from the forest to the energy plant. While full implementation of SB 1122 will help to address this issue for new community scale facilities (by creating a more competitive pricing structure), there remains a significant problem given the geographic distribution of existing facilities. These funds will incentivize moving the material to a plant where it can be utilized, rather than pile burning in the forest. We request $10 per BDT for existing contracts for 680,000 BDT that are ready but have not been let due to prohibitive transportation costs. The total request for year one is $6.8 million, with the potential for reductions as new plants come on line.

Recommendation #4: Allow a portion of cap-and-trade auction revenue to be spent on public federal forest land treatments to achieve critical air quality and renewable energy benefits. The SNC could administer these funds through its grant program and consistent with its responsibilities under the California Bioenergy Action Plan.

Investment must be directed to all forest lands, regardless of jurisdiction, in order to realize the full benefit from the sector. More than 60% of the total biomass and carbon stored in Sierra forests is managed by the US Forest Service. The national forest system lands represent a huge opportunity to reduce fire risk and protect and increase carbon stores in the state, as shown in the chart below.

Above ground biomass in the Sierra Nevada, by ownership

Ownership	Biomass tons	Percent of Total Biomass	Percent of Total Acres
USFS	519,427,710	62%	60%
Private	225,744,095	27%	28%
Other public	93,341,550	11%	11%
Total	**838,513,355**		

Recommendation #5: Fund forest conservation easements through the Wildlife Conservation Board, the SNC and other state conservancies with forested lands, Cal FIRE and other entities with existing programs in place to begin achieving long-term carbon storage, emission reduction, climate change adaptation, water reliability and local economic benefits.

Conservation of forests threatened by conversion or degradation is a key action that prevents emissions associated with loss of forest stocks while also securing additional carbon sequestration into the future. Protecting and enhancing California's forest carbon banks can be achieved through either conservation easements or fee title purchase.

Conservation easements allow the state or qualified land trusts to collaborate with interested landowners to develop site-specific guidelines for enhancing forest resource values, including increased carbon storage, while keeping the property in private ownership and management. Fee title acquisition allows the state or non-profit partner to directly manage strategically important & threatened forests for the public good when such conservation cannot be achieved in a public-private partnership. Both approaches can facilitate increased public access and recreation.

Additional co-benefits of forest conservation include:

- Improved forest management for climate and habitat benefits, including site-specific conservation prescriptions and support for adaptation;
- Watershed conservation to maintain water quality and reliability at the source; and,
- Prevention of sprawling land use patterns that lead to auto-dependency, increased CO2 emissions and resource inefficiencies.

Recommendation #6: Use the Rural Community Focus Group – a diverse group of experts who understand Disadvantaged Communities (DAC) of all types being convened by the Governor's Office of Planning and Research – or some other mechanism to refine the definition of DAC so it does not exclude rural forested communities.

It is clear that the areas identified by the CalEnviroScreen tool are disadvantaged. However, the determination criteria fail to recognize any communities in the rural forested parts of the state – some of the areas hardest hit by the economic downturn. The criteria and formula should not exclude many rural communities that are disproportionately affected – the ones that are suffering from environmental pollution and socio-economic ills like declining personal income, accelerated unemployment, low educational attainment levels and growing numbers of children living in poverty.

The DAC definition, for purposes of investment of cap-and-trade auction revenue, should be further examined and amended so that vulnerable communities in the rural forested areas are also recognized and eligible for cap-and-trade funding. All Californians will bear the cost of

reaching the state's GHG emission reduction goals; therefore, the benefits that accrue from those efforts should apply more broadly.

Conclusion

Early investment of cap-and-trade auction revenue in forest sector projects, including on public lands and in disadvantaged communities in the rural forested areas, would fulfill the letter and the spirit of the AB 32 and related statutes that call for, a) reducing GHG emissions in both the short- and long-term, b) maximizing additional environmental, economic and public health benefits ("co-benefits") for California, and c) directing investment toward disadvantaged communities and households across the state.

Thank you for the opportunity to our comments on these important issues.

Jim Branham
Executive Officer