November 13, 2015

Honorable Mary Nichols, Chair

California Air Resources Board

1001 I Street

Sacramento, CA 95814

Dear Chairwoman Nichols:

Thank you for the opportunity to comment on the draft Cap and Trade Auction Proceeds Second Investment Plan: Fiscal Years 2016-17 through 2018-19.

Sustainable Conservation has worked for many years to find ways to reduce GHG emissions from dairies, including, but not limited to, the use of anaerobic digesters to capture methane for beneficial uses. We recently completed a report, *Greenhouse Gas Mitigation Strategies for California Dairies*, which we presented to CARB to assist in the creation of a comprehensive strategy for short-lived climate pollutants (SLCPs): <http://suscon.org/news/pdfs/GHG_Mitigation_for_Dairies_Final_July2015.pdf>. We will refer to elements of that study in these comments.

Our first comments have to do with the integration needed between the Second Investment Plan and the targets established by the Comprehensive SLCP Strategy. The draft SLCP Strategy released on September 30, 2015 sets forth an overall goal of reducing the state’s methane emissions from all sources to 40% below 2013 levels by 2030. Table 6 on page 43 of the SLCP Strategy shows that almost half of those reductions are expected to come from the management of dairy manure alone. In order to achieve this the Strategy proposes that dairies reduce their emissions from manure by 20% by 2020, 50% by 2025, and 75% by 2030. Several strategies are proposed as means to achieve these targets. It is clear that achieving these extremely ambitious targets is going to require substantial investment by the state for many years. The draft Strategy cites CDFA’s estimate of a $500 million investment in anaerobic digesters for dairy manure ($100 million a year for five years). We believe investment on this scale is going to be necessary to adequately incentivize the level and degree of investment and ramp-up needed to get to the 2020 goal of 20% reduction. In other words, it’s a start – significant continued investment will be needed to get to the 2025 and 2030 targets. It also needs to be noted that this estimate is for digesters only. It is equally important for the state to invest in intensive research over the next several years to develop adequate data on other emission reduction strategies that will then need to be incentivized as well. We believe that ARB needs to be much more specific, either in the Investment Plan or in the revised SLCP Strategy, about what it sees as the type and level of investment by the state needed to achieve the goals it is setting with the SLCP Strategy. The specificity of the targets ARB is setting needs to be matched with an equal degree of specificity about the state’s commitment to invest in achieving them. We direct you to our comments on the September 30 draft SLCP Strategy for further discussion of these issues.

Our second general comment pertains to the potential impact of GHG-reducing strategies on disadvantaged communities. SB 535 specifies that 25% of the Greenhouse Gas Reduction Fund (GGRF) is to be allocated to projects that provide benefits to disadvantaged communities, and 10% is allocated to projects located in areas of disadvantaged communities. It is important to note that methane reduction strategies, particularly digesters, are not necessarily beneficial to disadvantaged communities simply because they are sited near those communities. For example, without proper consideration for disadvantaged community needs and concerns, the construction and operation of a digester near a disadvantaged community could actually create negative impacts for that community – such as increased traffic, increased emissions from traffic and generators, odors and/or particulate emissions from digestate storage, etc. Alternative methods of reducing emissions (e.g. flush-to-scrape) could have negative effects on air quality or other environmental impacts. In analyzing emission reduction strategies for purposes of state investment, it is essential that they be looked at not only in terms of potential co-benefits they could provide, but also in terms of potential unintended consequences they could have on neighboring communities.

Finally, we applaud the identification of the need for efficient financing mechanisms to maximize investment. As we found in our report, it is difficult to obtain financing for digester projects, and almost impossible to obtain financing for projects to develop dairy biomethane for vehicle fuel or pipeline injection. If these technologies are to play the role envisioned for them in the Investment Plan, then state commitment to “loans, credit enhancements, and other innovative mechanisms” will be essential.

The remainder of our comments are organized to address specific draft investment concepts in the three categories of transportation & sustainable communities; clean energy and energy efficiency; and natural resources & waste diversion.

**1. Transportation & Sustainable Communities.** Sustainable Conservation supports investment in advanced vehicle technologies and alternative fuels. While waste-to-fuel is specifically referred to as part of the Natural Resources & Waste Diversion category, we feel that it should be a significant part of this category as well. The biogas captured via anaerobic digestion of dairy manure can be refined into biomethane and compressed for use as vehicle fuel in natural gas vehicles. Investment in development of CNG truck engines and conversion of diesel trucks, refinement of dairy biogas into CNG, and fueling infrastructure for fleets in regions of the state with high concentrations of dairies will spur innovative technologies. As stated previously, our report identifies the need and opportunity for a commitment by the state to innovative financing mechanisms in order to overcome obstacles to obtaining private sector funding for dairy-derived vehicle fuel projects. Prioritizing anaerobic digestion as a source of vehicle fuel and the associated conversion of heavy-duty vehicles from diesel to biomethane CNG will reduce methane and black carbon emissions, thereby furthering the state’s SLCP reduction goals. It will also yield significant environmental co-benefits by reducing emissions of criteria air pollutants in regions with very poor air quality.

Finally, development of dairy waste-to-vehicle fuel refining and distribution can provide economic and environmental benefits to the rural areas that are home to the state’s dairies.

**2. Clean Energy & Energy Efficiency.** We heartily concur with the following statement in the Investment Plan: “While there are many renewable energy incentives in California, bio-energy systems in California lag and need additional financial support to advance the market.” As is the case with waste-to-fuel, we feel that bioenergy from dairies should be an intrinsic part of a clean energy/energy efficiency strategy as well as one for natural resources and waste diversion. We recommend that the state consider both economic and regulatory initiatives to allow for reliable and affordable interconnection of rural distributed generation facilities, such as dairy digesters, to the grid in order to ensure that the benefits of achieving the 2020 target of 12,000 MW of new distributed generation align with the Investment Plan’s overarching goal of providing opportunities to rural California.

**3. Natural Resources and Waste Diversion.** We believe that the analysis and recommendations found in our report on GHG mitigation strategies provide a great deal of information that could assist in the development of this category of investment concepts, and we urge you to refer to it. We have already commented on the need for the Investment Plan to support and advance the achievement of the targets set by the SLCP Strategy, and are strongly supportive of the Investment Plan’s explicit reference to creating and using dairy biomethane as vehicle fuel.

While we applaud the attention paid to livestock manure, and the recommendation to support dairy digester development, we believe that more research is necessary before making a large-scale investment in conversion of dairies from flush to scrape manure management systems. We refer you to the sections of our report on flush-to-scrape for more detail. While this form of manure management can result in significant reductions of methane emissions, there are many unanswered questions about the costs and impacts of converting to scrape in California. Getting high levels of methane emission reduction depends as much or more on how the manure is handled after scraping as it is on the method by which it is removed. Conversion to scrape also does not necessarily result in water savings. We recommend that the Investment Plan direct funding to a robust flush-to-scrape conversion pilot program in order to provide clear and reliable answers to questions concerning costs, practicality, and what sort of additional manure management and other practices are needed in order to ensure maximum GHG emission reductions and other environmental co-benefits.

Dairies in California exist in a wide range of geographies and configurations, as was recognized in the draft SLCP Strategy. As we recommend in our report, the state will receive the best results for methane reduction by providing for a suite of practices and technologies from which dairies can choose those that best suit their particular circumstances. It is important to note that these practices and technologies will be much more effective if presented as incentives rather than mandates. We think it particularly important to be sure to provide mechanisms for smaller, pasture-based dairies to benefit from the state’s investments through community digesters, distributed electricity generation, and other practices.

We strongly support the focus on compost as a worthwhile source of investment. We do note that compost appears to be discussed primarily in the context of municipal solid waste and wastewater. We urge you to include compost from dairies as an integral part of this strategy. Whether the feedstock is solid manure collected by a scrape system, digestate from a dairy digester, or the result of solid separation, compost from dairies has a key role to play in the furtherance of the goals of soil health and carbon sequestration established by the Investment Plan, the SLCP Strategy, and the Healthy Soils Initiative.

One element that is perhaps outside the scope of the Investment Plan, but which will be necessary in order for these investments to truly succeed, is a thorough examination of the potential regulatory and permitting roadblocks that could impede the implementation of these strategies. Based on our own experience, we believe this to be of particular importance for the composting of dairy manure in the San Joaquin Valley, but it extends to many other aspects of the investment strategies put forth in the Concept Paper. We believe that this could cripple worthwhile projects if not addressed in a systematic and cross-jurisdictional way. It is a natural companion to the overarching theme of efficient financing mechanisms. Along with providing loan guarantees, credit enhancements, and clean energy finance centers, the state will need to be able to assure private investors that, while all environmental and public health requirements will need to be met, they will be able to do so in an efficient and affordable way. Interagency coordination will be crucial.

Once again, thank you for the opportunity to comment. We look forward to continuing to actively participate in the process of developing the Second Investment Plan.

Sincerely,



J. Stacey Sullivan

Policy Director