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August 26, 2008

Mary D. Nichols, Chairman  
California Air Resources Board  
Headquarters Building  
1001 "I" Street  
P.O. Box 2815  
Sacramento, CA 95812

Dear Ms. Nichols:

Western United Dairymen is a statewide dairy farming organization representing our members on issues of importance in all relevant venues. Our 1,100 member families produce 60% of the California milk supply. Our farms are located throughout the length and breadth of the state, and cover a wide range of geography, size, and other characteristics. We appreciate the chance to comment on the Climate Change Draft Scoping Plan.

We believe that the capture of greenhouse gas (specifically methane from manure) and its conversion to renewable energy presents an opportunity for our members, and we wish to facilitate their participation. However, any dairy methane capture program must be implemented in an appropriate and cost-effective manner. Please consider the following comments on the Climate Change Draft Scoping Plan.

**General:**

The total greenhouse gas (GHC) emissions of California are presented in sectors and sub-sectors. Graphs and other analyses are presented without reference back to the total state inventory. We understand the reasons for this approach, but as presented, the information can be easily misinterpreted or misquoted. We suggest that when a sub-sector graph or analysis is presented, information as to its contribution to the sector and to the state inventory be prominently included.

**Climate Change Draft Scoping Plan, II. Preliminary Recommendation 16.**

**Agriculture:**

- (1) Investment in manure digesters is encouraged by the Scoping Plan. At a recent international dairy summit on climate change it was recognized that bio-digesters are one of the main measures that dairy farmers can take to reduce methane emissions. We agree. However, there was universal agreement that manure digesters cannot be a part of any climate action plan without a significant contribution from the public sector for financial and technical assistance, and there will need to be considerable regulatory recognition and facilitation. We agree with this conclusion, and do so from our experience administering the California Dairy Power Production Program (CDPPP). This fact is important to include in the Scoping Plan—it is not only a California situation, but familiar around the world. Implementing a significant dairy digester program in California, like everywhere else in the world, will require substantial public investment.

- (2) Western United Dairymen is unequivocally opposed to any consideration, at any time and in any manner, to a mandate to install methane digesters on dairy farms. If digesters are a requirement of law, any opportunity to acquire carbon credits and participate in the carbon marketplace will be lost to dairy producers. We anticipate that the potential revenues generated from sales of dairy digester carbon credits will be an important part of improving the financial feasibility of digester installations. Our experience so far, as related above through our administration of the CDPPP, has shown that digester installations have a very difficult time returning competitive financial performance. Any action to worsen this situation should be rigorously avoided. Mention of future consideration of a mandate to install digesters should not appear in the Scoping Report. We request that it be removed.
- (3) Reference is made to the need for further research regarding enteric methane emissions. We concur, but this does not show up in the research section of the Agricultural Appendix.

**Appendix C, Chapter 11, Agriculture, Preliminary Recommendations (A-1):**

- (1) The title of this section reads “Methane Capture at Large Dairies.” Opportunities are not limited to large dairies. We suggest simply dropping the term “large.”
- (2) Paragraph 1 of (A-1) leads with the statement that the “The primary driver behind the projected increase in agricultural GHG emissions is growth in dairy livestock.” While this statement may be technically correct, i.e. dairy contributes to overall growth in combined agricultural emissions, as it is currently presented it tends to lead to the conclusion that the primary source of agricultural GHG is dairy manure, which we do not understand to be true. Our understanding specifically is that while dairy is the primary source for methane from manure in California, it is not true for total GHGs. Our understanding is that the major manure contribution is in the form of N<sub>2</sub>O from pastoral sources, and that pastoral enteric methane is also significant. While we agree that there is little growth in pastoral emissions from all classes of livestock, clarification in this section is necessary so that it is not misleading. Limiting dairy manure methane will not eliminate livestock GHG emissions, nor will it be sufficient to offset emissions from other agricultural sources.
- (3) Paragraph 2 of (A-1) identifies that biogas can be flared, burned in a turbine, or cleaned for natural gas use. No mention of utilization in an internal combustion engine is made. This should be corrected, since as new IC engines are developed, their use is likely to remain valid for biogas. This will be in a stationary situation such as generator sets and water pumping, or as you mention in the case of landfill gas, as a vehicle fuel. Furthermore, other technologies for the efficient and cost effective uses of dairy digester gas have so far proven to be unsustainable. Fuel cells and microturbines appear to have potential in dairy biogas applications but much work is necessary to adapt these technologies for reliable operation. Pipeline injection is receiving a lot of attention and has certain advantages; however, it is not only a very expensive alternative, but is limited to those dairy facilities located near a utility pipeline. Additionally, reliable and sustainable performance for gas cleanup and compression has yet to be demonstrated in a dairy environment. Acceptable gas standards must be met before injection will be allowed. These issues are valid considerations that must be addressed if the carbon reductions expressed in the Scoping Plan are to be realized. As we mention below, barriers—be they technical, regulatory, financial, or physical—that might be expected

to impede implementation of dairy digester technology should be a prominent part of the Scoping Plan discussion.

- (4) Paragraph 3 of (A-1) states "...dairies will provide early voluntary emissions reductions...." No mention of the unresolved regulatory barriers that currently exist and that are impeding the continued development of this opportunity are presented until later in Paragraph 4, and even then it is somewhat buried in the text. In order to be complete, any report or scoping document must emphasize the kinds of difficulties encountered regarding potential adoption and utilization of any technology, including digester gas technologies. To fail to prominently display the roadblocks simultaneously with the presentation of potential opportunities will give a faulty assessment of the relevance of the technology and an inaccurate picture of the reductions available, and it may lead to misdirection of future courses of action.

**Appendix C, Chapter 11, Agriculture, Areas of Research/Opportunities for Future GHG Emission Reductions, Efficiency Improvements:**

- (1) We appreciate and concur with the presentation of efficiency of agricultural operations as a sound strategy to accomplish GHG reductions. This is especially true for the dairy industry. Our forthcoming discussions should focus on emissions per unit of milk production, not on a per cow basis.
- (2) We were surprised to note that efficiency in milk production was not identified as a research need. We believe that additional work needs to be supported in this area to quantify and inventory reductions from California-specific dairy efficiencies, especially in the areas of enteric emissions and reproduction. California dairy farms have already accomplished per unit production efficiencies far beyond what we find in other countries and other states. This contribution should be recognized in the Scoping Plan. Comparative information of dairy farming internationally is available from the International Farm Comparison Network, located in Germany. The contact is Torsten Hemme at [torsten.hemme@ifcndairy.org](mailto:torsten.hemme@ifcndairy.org).

Western United Dairymen thanks you for the opportunity to comment on the Climate Change Draft Scoping Plan. We know that our suggestions will be seriously considered. Please feel free to contact us if you wish further discussion.

Very truly yours,



Michael L. H. Marsh, CPA  
Chief Executive Officer

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cc: Paul Martin