Winston H. Hickox
Agency Secretary

Air Resources Board

Alan C. Lloyd, Ph.D.
Chairman
1001 I Street • P.O. Box 2815 • Sacramento, California 95812 • www.arb.ca.gov

Gray Davis
Governor

May 14, 2003

Ms. Susan P. Kennedy, Commissioner
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

Dear Commissioner Kennedy:

An area of mutual interest to the Public Utilities Commission (PUC) and the Air Resources Board (ARB) is the use of electricity by the agricultural community of the State. We are particularly concerned that current electricity rates for agricultural customers have discouraged the use of electric motors in water-pumping operations. In response to high electricity rates, particularly demand and connected load charges, most large new irrigation systems employ diesel engines, and many growers have replaced electric motors with diesel engines.

This situation is especially acute in the Central Valley, California's largest agricultural region. Unfortunately, this is also the area that, next to the Los Angeles Region, suffers most from air pollution. Over three million people in the Valley breathe unhealthy air one day out of three in the summer (ozone) and one day out of two in the winter (particulate matter).

Emissions from diesel engines are of particular concern for several reasons. The first is that these engines are major sources of the emissions that produce the severe ozone pollution problem in both the San Joaquin Valley and the Sacramento Valley Nonattainment Planning Area. Hot, summer days when ozone levels are highest are also days when water pumping is high. On such days, we estimate that the approximately 5,700 diesel pump engines in these two regions produce 33 tons per day of oxides of nitrogen, a prime cause of these regions' high ozone levels. To put these emissions in perspective, emissions from these engines are equivalent to 60 new 500-megawatt combined cycle power plants.

The second reason for concern is the high levels of toxic particulate emissions from these engines. Reducing diesel particulate matter—which accounts for 70 percent of the known cancer risk that is attributed to exposure to toxic air pollutants in California—is a high priority at the ARB. In the Central Valley, these engines account for approximately 15 percent of the total diesel particulate emissions.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website: http://www.arb.ca.gov.

California Environmental Protection Agency

Printed on Recycled Paper

The current situation is especially troubling because in virtually every aspect, except for cost, the use of electric motors for pumping water at fixed sites is superior to diesel engines. For example, electric motors are both less expensive to purchase and to maintain. We estimate that if the diesel engines currently used for irrigation purposes in the State were to be replaced with electric motors, almost 900 tons per year of diesel particulate matter would be removed from California's skies, as well as 13,000 tons per year of smog-forming oxides of nitrogen and volatile organic compounds.

We are aware that the agricultural community has expressed several concerns to the PUC over current rates, and would much prefer to use electricity to power irrigation pumps. Two primary concerns relate to the demand charges imposed on the users and for some farmers the high electricity-use charges associated with the current rate schedules. It is our understanding that demand charges often represent a significant portion of the total annual electricity bills that growers must pay, and can make the difference between owning and operating an electric motor or a diesel engine.

In light of the vastly superior environmental performance of electric pumps over the diesel-fueled alternatives, the ARB would like to offer the following thoughts for consideration by the PUC as the Commission addresses the question of electricity rates for agricultural users.

1. The PUC should consider the public benefits, in terms of improved air quality, health, and reduced impacts on global warming, that policies which promote or enable the use of electric pumps could produce.

2. The PUC should recognize that the load associated with electric pumps is not "captive," and that this load will shift to diesel engines in response to high prices. If this occurs, it will have adverse effects on other ratepayers as well as the environment.

3. The PUC should recognize the very large impact that demand charges can have on highly seasonal operations such as agricultural water pumping and, to the maximum extent feasible, structure these charges so that their adverse impact is minimized.

4. The PUC should develop special long-term contract rates that are competitive with alternative fuels for current diesel-engine users as an incentive to return to the electricity grid.

5. The PUC should develop rules that will allow current users of diesel engines to reconnect to the electric grid at minimal or no cost. Currently, the cost to reconnect to the grid varies from case to case but can be prohibitive in some cases.

We recognize that this is a complex issue and that the PUC must balance many valid, and at times competing, concerns as it sets electricity rates and apportions costs among users. However, we believe that when you consider rate change proposals related to agriculture, there are several very important environmental considerations that support keeping electricity costs affordable for agriculture. These should be factored into your rate-structuring decisions.

We look forward to continuing to work with you and others on this important issue. If you have any questions, or we can provide you with further information, please call me at (916) 445-4383.

Sincerely,

Catherine Witherspoon

Catherine Witherspoon
Executive Officer

cc: Ms. Dorene D'Adamo
Board Member

Mr. Michael H. Scheible
Deputy Executive Officer

Ms. Lynn Terry
Deputy Executive Officer