

# THE CALIFORNIA RAILROAD INDUSTRY

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November 27, 2007

Steve Church  
Research Division  
California Air Resources Board  
1001 I Street, PO Box 2815  
Sacramento, CA 95812

**Re: Freight Railroad Comments on November 15, 2007 Discussion Draft Economic and Technology Advancement Advisory Committee (ETAAC) Report**

Dear Mr. Church:

The Association of American Railroads and the Class I freight railroads operating in California (the Railroads) appreciate the opportunity to comment on the Discussion Draft ETAAC Report (Discussion Draft) released on November 15, 2007. This letter briefly highlights some of the high level issues regarding the proposal on page 3-21 to electrify freight rail in Southern California; additional comments may be submitted at a later date.

Page 3-21 of the Discussion Draft identifies electrification of passenger and freight rail as a possible measure to reduce greenhouse gasses. In terms of freight rail, the document states: "ETAAC is exploring further recommendations like those below, and will coordinate with the California High Speed Rail Authority and with electrification efforts being evaluated in the South Coast Air Basin." And, "Creating new tracks that allow the separation of passenger and freight operations would be a first step toward improving both transport delivery systems." Lastly, under *Co-benefits / Mitigation Requirements* the Discussion Draft states, "A strategy for rail improvements ideally would be launched near ports and the routes into and out of the ports, where serious Environmental Justice problems result from the concentration of air emissions from diesel ships, trains and trucks. Public health would obviously benefit from a shift in transportation priorities toward electrified rail."

The Railroads agree with the ETAAC goal of reducing greenhouse gasses from the transportation sector. Rail is the most environmentally friendly mode of transport over land for containerized cargo; rail is approximately three times more fuel efficient than trucks per ton mile. Therefore, maximizing the efficiency and use of California's freight rail infrastructure can play an important part to help combat global warming.

Transforming the existing clean-diesel based rail system over to an electric system is a complex undertaking. Any consideration of this option should recognize that if electrification of freight lines were chosen, the costs would be astronomical in relation to the benefits, as electrification will require a complete “re-do” of the current system. This would include purchasing a fleet of hundreds of new locomotives (about \$5-6 million each), major new land requirements in yards to switch power, and expensive adjustments to infrastructure – bridges, overpasses, and in some case tunnels – to allow for proper clearances between the trains and the catenary wire.

To create an electrified system that approaches the efficiencies contained in the current system, one would need to electrify the freight lines from, at a minimum, the Ports of Los Angeles and Long Beach all the way to Barstow (for BNSF Railway) and Yuma Arizona (for Union Pacific Railroad), as well as perhaps the lines to San Luis Obispo, Yermo, and Bakersfield. Electrification of this magnitude would require extensive analysis, but it is safe to say it would cost many billions of dollars.

Any proposal to electrify freight lines in Southern California cannot be limited to the South Coast Air Basin and needs to be comprehensive in scope to reduce disruptions to operations and attempt to maintain current efficiency levels. The Railroads’ change crews, service trains, maintain locomotives, etc. at key “hubs” within their multi-state systems. Electrification would require trains to “change out” power at specified locations before coming into southern California – remove diesel locomotives and change to electric locomotives. Changing out locomotives from diesel to electric at Yuma and Barstow could create a choke point/bottleneck, as trains that would have normally proceeded through are now brought onto what would need to be very long service tracks where they would wait for one set of locomotives to be removed and another set to be added.<sup>1</sup> Capacity on the existing lines could be reduced if delays cause trains to back up during the change out.

Given the billions of dollars that would be required to electrify the freight rail system in California, the relatively modest CO<sub>2</sub> reductions, and the potential for unintended consequence of the chosen system reducing the efficiency and/or capacity of California’s existing freight rail system (which ironically is the very attribute the Committee wants to increase, not decrease), we hope the ETAAC committee will be careful and thoughtful in its consideration of this option..

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<sup>1</sup> Increasingly in the South Coast Air Basin, many trains have distributed power locomotive consists. This means that locomotive power is located in the front, rear and sometimes the middle of the train, thus making any power changes from diesel to electric and visa versa even more complex.

Thank you for the opportunity to provide comments. If you have any questions or concerns, please call me at 415-215-4213, extension 12 or Peter Okurowski at 925-339-3500.

Sincerely,

A handwritten signature in black ink that reads "Kirk Marckwald". The signature is written in a cursive, slightly slanted style.

Kirk Marckwald  
Principal, California Environmental Associates  
On behalf of the California Railroad Industry