

Michael Barr
09-8-5

THE CALIFORNIA RAILROAD INDUSTRY

September 25, 2009

California Air Resources Board
c/o Mary Nichols
Chair
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

RE: Railroad Comments on ARB's "Recommendations to Implement Further Locomotive and Railyard Emission Reductions" (Agenda Item #09-8-5)

Dear Ms. Nichols and the members of the ARB Board:

The BNSF Railway, the Union Pacific Railroad Company, and the Association of American Railroads (the "Railroads") appreciate the opportunity to comment on the Report entitled "Recommendations to Implement Further Locomotive and Railyard Emission Reductions," (the "Recommendations Document") released by the ARB staff (the "Staff") in September 2009. In general, the Recommendations Document is a useful guide for readers to begin to understand the potential and the limitations of new technologies and techniques for possible additional locomotive and railyard emissions reductions. However, the Railroads do believe that in some respects, the recommendations are misguided.

Rail Investment Incentive Program

1. Overall Approach.

The Railroads agree ARB's preferred approach should be an incentive program to maximize the efficiency benefits of rail transportation in California. Transporting goods by rail reduces criteria emissions, greenhouse gasses ("GHGs"), and freeway congestion—all important benefits for public health and the environment in California.

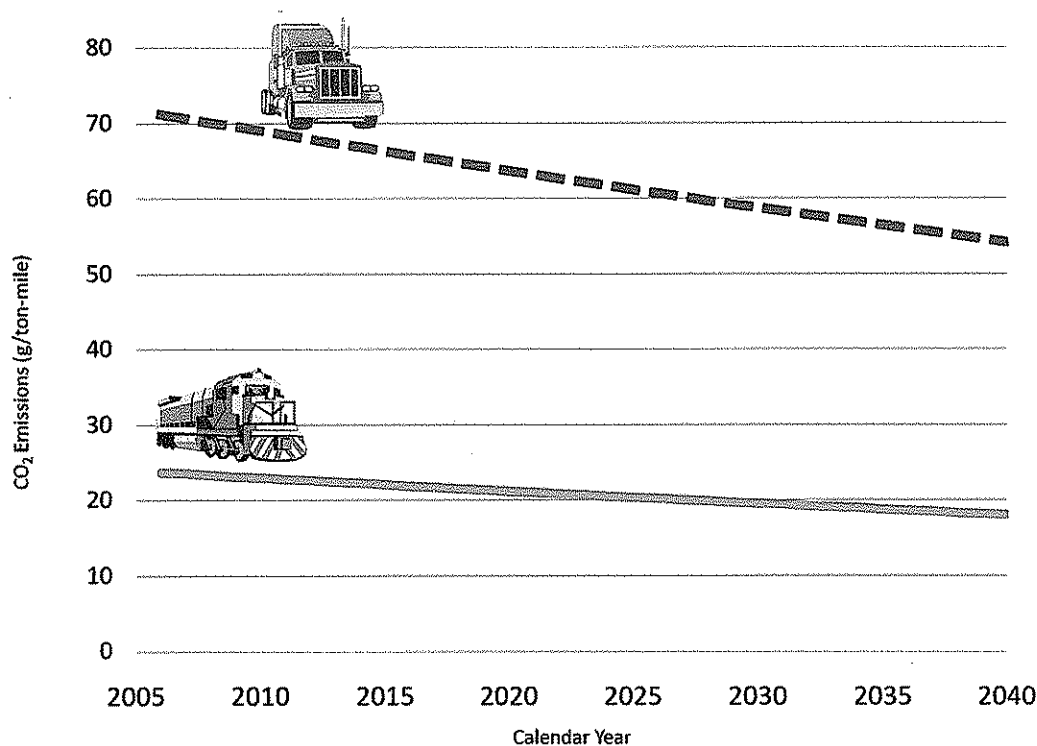
For instance, in January 2009 the Natural Resource Defense Council's Executive Director, Peter Lehrer, joined with other rail advocates to announce the formation of the One Rail Coalition. At that announcement he stated:

"Rail should be a key element of any federal response to climate concerns...Improving surface transportation offers both immediate and long-term benefits by decreasing traffic congestion, helping to mitigate rising energy costs"

and reducing emissions related to global warming. We hope Congress will move quickly on these critical issues."

The same advantages can be seen in California. Transportation of freight by rail is widely recognized as about three times more efficient than moving it by truck, thereby creating a substantial environmental advantage as can be seen in Figure 1 below. Even with the significant incentive programs offered to trucks, and their much shorter lifespan, rail will be the most efficient means of transportation for the foreseeable future.

Figure 1: CO₂ Emissions per Ton Mile of Freight California Statewide



The Railroads look forward to working together with ARB and other stakeholders to implement an expanded incentive program.

2. Number of Locomotives in the Potential Pool.

The number of locomotives operating in California changes on any given day. The snapshot of 2007 data included in both the Technical Options Document and the Recommendations document does not reflect the locomotive fleet in operation in 2009. The Staff recognize that locomotive activity in California is probably 20% lower than it was in 2006, with many of these locomotives out of service. Also, with the implementation of the ARB's South Coast Locomotive Fleet Average Emissions Program in three short months, the composition of the fleet will again change, not only in the South Coast Air Quality Basin, but in the San Joaquin and Mojave Districts as well.

Before any incentive program can be coherently designed, the Railroads and ARB staff need to align their views of the prospective pool of locomotives that may be available for various retrofit options.

3. Magnitude and Timing of Railroad Matching Funds.

Both Railroads have broadly participated in incentive programs requiring matching funds (e.g., Carl Moyer funds in California, TERP funds in Texas, etc.). Also, within weeks, the Railroads will be committing additional matching funds as they complete the application process for the \$8.8 million of federal Diesel Emissions Reduction Act funding awarded to ARB by the US EPA for locomotive repowers or replacements in California. The match provided by the Railroads in these various programs has ranged from 25% to 50%.

However, the magnitude of future financial participation by the Railroads will be driven by the status of the currently bleak economic outlook. The economic realities facing the Railroads today includes about 18% (2700) of their locomotives being mothballed and about 11% of their workforce being furloughed or retirees who are not being replaced.

Also, General Electric, one of the two principal builders of locomotives, announced on September 2, 2009, that it expects to sell 44 % fewer locomotives in 2009 than 2008 and expects another 50 % reduction of locomotives sales in 2010 –meaning production will be slashed from 860 in 2008 to 240 in 2010.¹ Also, a recent, unpublished study by the Port of Long Beach and Port of Los Angeles (which some reviewers believed was overly optimistic), forecast container activity would not rebound to 2006 levels until at least 2013.² As a result of the recession, the railroad industry's need for new locomotives will be diminished for years to come.

On page 12 of the Recommendations Document, Staff estimates rail operations would not return to 2006 levels until sometime between 2015 and 2020, if ever, depending upon the rate of growth

¹ *GE Transport Chief: No Quick Turn To Poor Locomotive Market Source*, Wall Street Journal, September 2, 2009.

² *Grim Forecast for L.A. and Long Beach Ports*, LA Times, August 17, 2009.

achieved as the depths of the recession are overcome. While that is good news from an emissions perspective, such reduced demand for rail services directly impacts the amount of railroad funds available for capital investments and increased operation and maintenance costs for the next decade, especially those funds earmarked for locomotive purchases in that approximately 20% of their locomotive fleet is mothballed.

Finally, in addition to determining the amount of incentive funds potentially available, it is essential that ARB work to remove the current barriers to Railroad participation in both the Proposition 1B and Carl Moyer programs. Until these obstacles are removed, the potential of state funded programs cannot be optimized.

In summary, the following will be important milestones to achieve over the next year:

- Developing an appropriate matching funding formula;
- Developing an appropriate program mechanism to disperse funds;
- Setting realistic expectations regarding timing and magnitude of the overall program; and
- Removing obstacles to Railroad participation in current and future incentive funding programs.

Other ARB Recommendations

1. Seek Changes in Federal Laws to Eliminate Federal Preemption in California

The Railroads do not believe the proposed change in regulatory authority makes programmatic sense or good policy. State and local regulation of locomotives would lead to a patchwork of regulations that could potentially greatly increase the costs of moving goods while yielding only limited environmental benefits where they are needed most – in and around all populated areas.

ARB's Goods Movement Emissions Reduction Plan established a goal of an 85% reduction in risk throughout the goods movement system in California by 2020. Staff has concluded that were the locomotive investment incentive program to be fully implemented in California over the next 15 years, an 85% reduction in risk from the rail operations and facilities would be achieved in California (page S-2). Thus, the policy basis for seeking regulatory authority is not apparent.

The Railroads request the Board to direct Staff to engage in detailed policy and technical discussions with the Railroads and other stakeholders to determine if there would be a net positive environmental benefit from seeking congressional action to change its regulatory authority before this recommendation is implemented by the Board. The Railroads believe this recommendation could retard emissions reductions in California, rather than advance them.

There are also serious policy and legal issues to be assessed, including:

- The capital cost, operational costs, and service implications of a dedicated fleet or fleets³;
- A requirement for a dedicated fleet in a state, states, region, county, or city, is inconsistent with the interstate function of railroad operations; and
- State and local regulation would conflict with the regulation of interstate commerce as a constitutional matter.

The Railroads also request the Board to direct Staff to engage in detailed legal discussions with the Railroads and other stakeholders to assess these matters.⁴

2. Continue to Investigate Specific Railyard Reductions

As they have in the past, BNSF and UP are willing to continue to work together with ARB and other stakeholders to explore additional emission reduction opportunities at railyards in California. In fact, the Railroads believe the ARB Board should encourage Staff, concerned citizens, community groups, and the Railroads to continue the discussions begun in community meetings throughout the state last year regarding additional ideas to improve these operations even more.

The Railroads' principal criteria for evaluating such ideas are that:

- They must not impact safety at the yard;
- They must comply with federal regulations;
- They must have a demonstrated environmental/risk reduction benefit;
- They must have demonstrated technical feasibility;
- They do not impact the operational efficiency of the yard; and
- They are cost-effective.

It is also important to recognize positive changes that have already been initiated due to ongoing stakeholder consultations resulting from the implementation of the 2005 MOU and development and discussion of the required health risk assessments. A few examples of the benefits include:

- At BNSF's San Bernardino Yard:
 - An "auto-gate" which speeds truck in and out of the facility and reduces idling truck time by over 35%.
 - In addition, BNSF voluntarily installed Idling Control Devices on more than 10 Rubber Tire Gantry cranes (RTGs) operating at the site.

³ In the Railroad's review of the assumed inventories over reductions at the certain railyards and we have identified some number of discrepancies in tons of emissions.

⁴ It is beyond the scope of these policy comments to provide a full legal analysis, but each of the signatories of this letter reserves its right to make such comments once the Air Resource Board members instruct the staff on how to proceed.

- BNSF surveyed actual trucks using the facility and found that among other things, the average age of the drayage trucks was much newer than that assumed in the HRA study, and thus facility emissions are about 15% lower than ARB HRA estimates.
- At UP's Mira Loma Yard:
 - Locomotive emissions at Mira Loma have been reduced by about 50% since 2005 as a result of replacing older switchers with Ultra Low Emitting Locomotives (ULEL's - either Green Goats or Gensets).
 - In addition, trucks previously maintained offsite are now stored and serviced onsite to eliminate truck traffic around the high school, and some truck parking has been moved further away from the high school.

3. Participate in the Update of the San Pedro Bay Ports Clean Air Action Plan

ARB is, and has been, an active participant in the Ports' process. However, the Railroads believe it is inappropriate for ARB to specify a timeline, the percentage reductions and what locomotive technologies should be used. First, the use of Tier 4 locomotives will need to be determined by availability and purchase decisions. Second, if a "standard" for using the Ports is set inappropriately high, the Railroads will have an incentive not to bring discretionary trains to the Ports. This in turn could raise emissions from additional truck moves and increase congestion on the freeways. For instance, the current level of trains to the Ports takes approximately 2.5 million trucks trips off the region's freeways each year. Third, by requiring a concentration of Tier 4 units at the Ports, other parts of the state such as the San Joaquin Valley will lose out. Fourth, there are dramatic cost and service implications of requiring Tier 4 units at the very time these San Pedro Ports have already experienced traffic diversions.

Finally, ARB should let the Ports and the Railroads fashion a mutually acceptable implementation timetable on their own. Business discussions to address this issue are currently ongoing between the Ports and the Railroads.

4. Seek Changes in Federal Regulations for Line Haul Locomotives

The Railroads, manufacturers, and the public have long partnered with US EPA to investigate the appropriate stringency for new locomotive standards. US EPA's most recent 2008 standards are a result of extensive investigation and participation by all stakeholders, are the most stringent set of standards achievable, and are technology forcing.

Mandatory rebuilds at standard intervals simply based on time alone ignores the variety of ways in which locomotives are used. Furthermore, there is no technological basis for concluding that the Tier 3 NOx standard should be reduced by 50%.

The Board should refrain from adopting this recommendation and instead direct Staff to convene technical discussions with the Railroads, locomotive builders, the US EPA, and other interested parties.

5. Continue to Develop the Goods Movement Efficiency Measure

The Railroads support this initiative. US EPA published an ANPRM on regulating GHGs on July 30, 2008. A key point made by the US EPA in the ANPRM must not be overlooked: one method of controlling GHG is to increase the use of railroad transportation. In the ANPRM, US EPA observes:

*"[Rail] transportation has already been the focus of substantial efforts to reduce its energy use, resulting in generally favorable GHG emissions per ton-mile or per passenger-mile. The Association of American Railroads calculates that railroads move a ton of freight 423 miles on one gallon of diesel fuel. Reasons for the advantage provided by rail include the use of medium-speed diesel engines, lower steel-on-steel rolling resistance, and relatively gradual roadway grades."*⁵

Diversion of traffic from trucks to railroads would lead to an overall decrease in GHG emissions even though total railroad GHG emissions would increase. This is due both to the railroads' fuel efficiency advantage and because diversion of traffic from the highways reduces highway congestion. As US EPA recognizes in the ANPRM, mode shifting is a legitimate GHG strategy that should be supported by ARB in the Scoping Plan.⁶

As the Railroads testified when T-6 was proposed by Staff, the overall GHG emissions for the freight sector will go down as more rail is used to transport goods in California. Accordingly, to the extent railroads are used to transport freight instead of trucks, rail emissions will be more than offset by lower truck emissions, for a net positive GHG impact.

Consistently with AB 32 and ARB's adopted Scoping Plan, systems approach to GHG emission reductions from the freight sector must be the cornerstone of the ARB approach and analysis. Requiring source by source emission reductions will not yield the desired results and may have unintended negative GHG emission consequences.

6. Evaluate Electrification of Rail as a Long Term Measure

⁵ See n. 1. While EPA states that railroads move a ton of freight 423 miles on one gallon of diesel fuel, 2008 data show that the railroads move a ton of freight 457 miles on one gallon of fuel.

⁶ 73 Fed. Reg. 44464. EPA's SmartWay program gives credit to shippers using railroad intermodal service. See Fleet Performance Model at <http://www.epa.gov/smartway/transport/index.htm>.

The Railroads are willing to participate in an analysis and/or discussion of the pros and cons of freight rail electrification. The Railroads have had ongoing discussions with agencies in California on this issue for the past 15 years.

The Railroads do not believe much of the core information has changed or will change over time: a completely electrified freight system would cost many tens of billions of dollars. A partial diesel system will be expensive and will still have substantial non-main line, non line-haul locomotive emissions. Repeated study and evaluation over the past 15 years has shown while this strategy would be extremely expensive, it would result in only modest air quality benefits. Since in the coming years Railroad fleet emissions in Southern California will be dramatically reduced due to the 1998 Fleet Average agreement and the implementation of the US EPA's emissions standards, the cost-effectiveness per ton of emissions reduced is astronomical.

7. Develop Improved Emission Inventories for Locomotives and Railyards

The Railroads agree with Staff's proposal to improve the California locomotive emission inventory. The Railroads and Staff have been working since 2007 on a new approach to develop a more accurate inventory. The completion of the inventory and the determination of how many tons of emissions need to be reduced will be cornerstone of a successful incentive program.

8. Support Advanced Locomotive Research Programs

The Railroads and ARB have a long history of working cooperatively to evaluate and advance new technologies (e.g., DPF filters for switchers and Gensets, developing Genset switchers and fuel cell locomotives, repowering for intermediate line haul locomotives, etc.). The Railroads look forward to continuing this productive relationship to evaluate promising technologies.

Conclusion

We appreciate the effort that the ARB Staff has expended to create the Recommendations Document and the opportunity to provide these comments. We do reserve our right to supplement these written comments, depending upon what actions the Board might direct the ARB staff to take on September 25th.

Please call me at 415-421-4213 x12 if you have any questions or comments about this letter.

Sincerely,



Kirk Marckwald

On behalf of the Association of American Railroads, the Union Pacific Railroad, and the BNSF Railway

cc: James Goldstene
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