Trains Deliver the Goods

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Trucks Pollute, Trains Don't

Trains carry goods 94 percent more efficiently than do trucks. California should therefore encourage firms to ship goods on trains, not trucks. Yet the California Air Resources Board (CARB), in its draft Scoping Plan, ignores the huge gains the state could enjoy if it simply used more trains.[1]

A new high-speed train will, hopefully soon, connect Northern and Southern California. The Scoping Plan does recognize that voters may agree to invest approximately $10 billion to build this modern rail line, as they indeed did in the recent election. The Scoping plan does not consider that this rail line could quickly and efficiently move goods. But wouldn't voters want these trains to do so, and thus both lower pollution and boost California's economy?

Further, the new administration in Washington is promising to do all it can to lower greenhouse gas emissions. CARB is thus holding hearings on its Proposed Scoping Plan at the right time—now. Studying how to lower greenhouse gases while boosting the economy could not be more timely, more relevant, or more important.

Vehicles are California's largest source of greenhouse gas emissions. They are among what the Scoping Plan calls "end-users," and they pollute more than industrial plants, electrical generating plants, oil and gas refiners, or any other polluter. [2] Overall, they emit 38% of California's greenhouse gases.[3] Indeed, the Plan "highlights the importance of addressing on-road transportation sources of greenhouse gas emissions."[4]

Yet the Plan makes almost no attempt to lower the number of on-road transportation sources of greenhouse gas emissions. In other words, it makes almost no attempt to get trucks off the road. But it should.

Scoping Plan: Lowering Greenhouse Gases While Growing the Economy

When Governor Schwarzenegger signed into law the bill requiring California to lower its greenhouse gas emission in 2020 to 1990 levels, he started one of the largest economic planning efforts in the history of the state. The Scoping Plan, an integral part of this effort, will guide California's efforts to lower its greenhouse gas emissions. And one very smart way to do this is to plan to ship goods on trains, not trucks.

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[1] CAL. AIR RES. BD. (CARB), CLIMATE CHANGE PROPOSED SCOPING PLAN: A FRAMEWORK FOR CHANGE (2008), *available at* http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf.

[2] *Id.* at 13–4.

[3] *Id.* at 11.

[4] *Id.*

94 Percent Savings

Trucks emit on average 53 grams of CO_2 for every metric ton of goods they carry one kilometer. Trains, by contrast, emit only 3 grams of CO_2 for every metric ton of goods they carry one kilometer. Shipping goods by trains instead of trucks therefore lowers greenhouse gas emissions by 94 percent.[5]

These savings are too great—far too great—to ignore. Any state seeking to reduce greenhouse gases simply must use any technique that lowers emissions anywhere near 94 percent. And new technology allows California to enjoy these savings right now.

Track & Correct: Use Trains and Assure Delivery

A benefit of shipping by truck is that it allows companies to instantly know where their goods are—they need only call the truck driver's cell phone. However, new technology, like the Track & Correct system allows companies to use trains and be just as informed. Instead of calling a truck driver, they need only check their computer screens.

The Track & Correct system places a tracking device, such as a radio-frequency identification (RFID) chip, typically on a pallet holding goods. If the goods are sufficiently valuable, then the tracking device can be placed on the goods themselves. The devices send their signal to a satellite, which in turn communicates with a computer. The computer shows where the goods are. And companies can access this computer, via the internet, from anywhere.

The Track & Correct system does even more—it assures delivery. When completely implemented, the system will include trucks, which will pick up and deliver any goods that are stranded on stalled trains. The system will therefore guarantee delivery—if a train is delayed, then a truck will deliver the goods. The system thus offers the benefits of trucks but almost completely eliminates the greenhouse gases trucks emit.

European Commission Funds Track & Correct

The European Commission understands how much trucks pollute and wants to get them off the road. It wants to get trucks off German roads, where they produce tremendous congestion and extensive pollution. The Commission also wants to keep trucks off the new bridge connecting Denmark and Sweden, the Øresund Bridge.

To do this, the Commission funded the "Scandinavian Shuttle" project—an integrated system of RFID, global positioning system (GPS) and other tracking technologies, which follows pallets, crates or single items. It allows shippers to know exactly where their goods are at all times.

Scoping Plan Should Incorporate Track & Correct

The Scoping Plan barely mentions intermodal transport—the idea of using one method of transport (such as trains) instead of another (such as trucks). But it does refer to the Emission Reduction Plan for Ports and Goods Movement in California (the Plan for Ports).[6] This Plan lists the very meager attempts California has made so far to have trains rather than trucks deliver goods.[7]

Yet the Plan for Ports does discuss a proposed "train shuttle service" between Oakland and the City of Shafter, near Bakersfield.[8] This service, if implemented, would eliminate 80,000 truck trips per year.[9] This service alone could therefore significantly lower greenhouse gas emissions.

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[5] MAGNUS LENNER, SWEDISH NAT'L RD. AND TRANSP. RESEARCH INST., ***ENERGIFÖRBRUKNING OCH AVGASEMISSION FÖR OLIKA TRANSPORTTYPER*** *(DIFFERENT TRANSPORT MODES' ENERGY CONSUMPTION AND EXHAUST EMISSION) VTI-MESSAGE 718* at 15 tbl. 3, *available at* http://www.vti.se/EPiBrowser/Publikationer/M718.pdf (translation by author).

[6] CAL. AIR RES. BD. (CARB), CLIMATE CHANGE PROPOSED SCOPING PLAN: A FRAMEWORK FOR CHANGE (2008), at 52.

[7] CAL.AIR RES. BD. (CARB), PROPOSED EMISSION REDUCTION PLAN FOR PORTS AND GOODS MOVEMENT IN CAL. *at* 107-9 (2006), *available at* http://www.arb.ca.gov/planning/gmerp/march21plan/march22_plan.pdf.

[8] *Id.* at 108.

[9] *Id.*

Trucks can carry up to 80,000 lbs, or 36.29 metric tons, of goods per trip.[10] If there are now 80,000 truck trips per year, and each truck carries 36.29 metric tons of goods, this implies that trucks now carry 2,903,200 metric tons of goods per year between Oakland and Bakersfield.

According to the Lenner data, trucks carrying these goods would emit 62,932,666.40 kilograms of CO_2 but trains carrying the same goods would emit only 3, 562,226.40 kilograms of CO_2.[11] Trains would therefore lower carbon dioxide emissions by 59,370,440.00 kilograms.

California could enjoy these saving every year—just by creating the Oakland–Bakersfield route. And it could enjoy these savings right now. What is the state waiting for? The polar ice cap is already melting.

Conclusion: Trains Lower Pollution

The Scoping Plan should encourage Californians to ship goods by train, not truck. It should plan to use either the new high-speed rail service between Northern and Southern California, the proposed train shuttle service between Oakland and Bakersfield, or a combination of the two. Doing so would ease road congestion and lower greenhouse gas emissions very significantly.

CARB should plan to incorporate the Track & Correct system into California's transport system. The European Commission funded the Scandinavian Shuttle so it could get trucks off the roads of Germany, Denmark and Sweden (among others) and lower greenhouse gas emissions; it will accomplish both of these goals in Europe. Track & Correct will work just as well in California, and CARB should use this system and plan for the "California Shuttle".

[10] FEDERAL HIGHWAY ADMINISTRATION, COMPREHENSIVE TRUCK SIZE AND WEIGHT STUDY 43 (1995), *available at* http://ntl.bts.gov/DOCS/cts.html.
[11] *Id.*