

TLU – 15, Intermodal Freight Initiatives

Policy Description

New Mexico currently has 2,151 miles of railroad in operation (AAR, 2005). In many cases, particularly for long distance freight, freight can be carried by rail more economically and at lower GHG emission levels than over the existing roadway system. This policy is designed to transfer a portion of the freight carried over the roadway system to rail wherever possible.

Policy Design

The CCAG recommends that New Mexico should implement policies and programs that result in the shifting of the transport of freight goods from the roadway system to rail. This should include evaluating the feasibility of restoring abandoned rail lines to increase the attractiveness of using rail for local shipments.

Carrying freight by rail rather than truck can significantly reduce emissions and fuel consumption, while at the same time reducing congestion on major roadways. A number of small abandoned rail lines already exist in New Mexico. A primary goal of this measure is to restore those lines, which will allow freight to be carried by rail directly to a number of warehouses and industrial sites in existing developed areas. This would also provide an incentive to reduce sprawl from these businesses. Electrifying rail should also be considered.

- **Goals Levels and Timing:** Reduce VMT from heavy-duty freight trucks by 5% in 2012 and by 15% in 2020 through the transfer of freight from the highways to rail.
- **Coverage of parties:** New Mexico Transit and Rail Bureau, New Mexico Department of Transportation, railway companies, shipping companies

Implementation Mechanisms

Information and education: Provide information to fleet carriers, shippers, retailers, and others involved in the diesel fleet industry indicating the economic benefits, as well as the environmental benefits, of shifting their loads from roadways to rail wherever possible. Emphasize the fuel savings benefits, reductions in toxic emissions, and reduced engine wear associated with reducing idling. Coordinate with EPA's SmartWay Transport program to highlight practical opportunities where rail can be better utilized and to encourage more efficient rail operations and technical innovation.

Technical assistance: Find funding sources and other resources needed to restore the currently-abandoned rail lines in New Mexico, where doing so would provide the ability to reduce additional truck VMT.

Funding mechanisms and or incentives: Investigate the feasibility of implementing a distance-based road fee for road freight to make rail a more attractive option.

Voluntary and or negotiated agreements: Encourage participation in EPA’s SmartWay Transport Partnership (or similar programs).

Pilots and demos: Develop pilot program to show the benefits and feasibility of electrifying rail. NMDOT should develop a pilot program to examine the feasibility of consolidated distribution points outside of major cities.

Related Policies/Programs in Place

The New Mexico 2025 Statewide Multimodal Transportation Plan lists several proposed/planned projects in the 2013 through 2025 timeframe that could make rail transport more feasible or attractive in New Mexico. This includes the construction of a rail/freight hub in the Las Cruces area, an intermodal rail/truck freight center in the Bernalillo/Belen area, and several other projects.

Types(s) of GHG Reductions

This measure would primarily reduce CO2 emissions through reduced heavy-truck VMT and fuel consumption; black carbon, N2O, and CH4 from the vehicle exhaust would also be reduced.

Estimated GHG Savings and Costs per MTCO2e

The table below shows the GHG emission reductions that New Mexico could achieve by shifting 5% of Class 8 truck VMT loads to rail by 2012, increasing to 15% by 2020.

	<u>2012</u>	<u>2020</u>	<u>Units</u>
GHG Emission Savings	0.11	0.45	MMtCO2e
Net Present Value (2006-2020)		Not estimated	\$million
Cumulative Emissions Reductions (2006-2020)		2.6	MMtCO2e
Cost-Effectiveness		Not estimated	\$/tCO2e

- **Data Sources:**

“Freight Railroads Operating in New Mexico: 2004,” Association of American Railroads, December 2005.

“Railroad Service in New Mexico: 2004,” Association of American Railroads, December 2005.

“Industry Options for Improving Ground Freight Fuel Efficiency—Technical Report,” prepared for USEPA by ICF Consulting, 2002.

“New Mexico 2025 Statewide Multimodal Transportation Plan,” New Mexico Department of Transportation.

“Revised Results on Quantification of New and Additional Strategies,” technical memorandum by ICF Consulting, March 11, 2003.

- **Quantification Methods:** For this analysis, it was assumed that the specified percentage of Class 8 diesel VMT would be eliminated and the loads from these vehicles would be shifted to rail. Reduction percentages for the years from 2008 through 2020 were interpolated linearly from the goals of 5% VMT reduction in 2012, 15% VMT reduction in 2020, starting with 0% VMT reduction in 2007. The CO₂ emissions corresponding to these VMT reductions were then multiplied by the CO₂ emission reduction of 56% (ICF, 2003). This emission reduction percentage is based on the replacement of truck trips of about 400 miles with rail.
- **Key Assumptions:** This analysis assumes that the truck trips being shifted to rail are on average about 400 miles. This gives an estimated benefit of a 56% reduction in GHG emissions. Trips of significantly shorter mileage would give a much smaller GHG reduction (e.g., 35% for 200 mile trips) while replacing trips of much longer mileage would provide a relatively small increase in GHG reduction percentage (up to a maximum of about 65% reduction for longer trips).

Key Uncertainties

The ability of the existing railways in New Mexico to handle the additional loads specified by this measure is unknown.

Contributing Issues

This measure will also lead to a reduction in diesel fuel consumption.

Feasibility Issues

None identified.

Status of Group Approval

Pending

Level of Group Support

Pending

Barriers to Consensus

Pending