

TRANSPORTATION (/TRANSPORTATION)

Rule Change Opens the Way for Better Train Technology

Commuter rail has been the poor stepchild of modern transit. That may change, thanks to changes in federal regulations.

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For decades, federal regulations have kept a popular and highly efficient form of passenger rail technology off the tracks, leaving the United States with trains that are a far cry from the type of modern transit found elsewhere. But by 2015, the Federal Railroad Administration is expected to lift its restrictions on the kind of passenger trains that are common in Europe and Asia, and it could open the door to a new era in rail travel.

The technology, which goes by the clunky term diesel multiple unit (DMU), allows each rail car to have its own propulsion system, rather than be pulled by powerful – and expensive -- locomotives. DMUs, and their electrical counterpart EMUs, have been used in Europe and Asia for decades where the technology has advanced significantly in terms of energy efficiency, braking and acceleration, not to mention improved car design, which makes the trains well suited for disabled riders. The trains are highly popular for short-run commuter service: Just one or two cars can operate during slack times, while longer trains can run during peak periods (these are not the high-speed, intercity bullet trains that run in Europe, or the popular Acela service that runs between Washington, D.C., and Boston).

The feds have kept DMUs off the tracks, insisting the trains didn't meet its stringent safety standards. Exceptions exist where cities have dedicated tracks for commuter rail, such as New York, New Jersey and Philadelphia, or where a city has obtained a special waiver to use DMUs. But lately, a more flexible attitude at the Federal Railroad Administration has resulted in the drafting of rules that would allow DMU passenger trains to run side by side with freight trains without having to meet regulations that have kept the more advanced European rail manufacturers out of the market.

Stephen Smith, a writer who covers infrastructure for [Next City](http://www.nextcity.org/) (<http://www.nextcity.org/>), said the rule change is the result of a confluence of factors, including the fact that the Obama administration's push for high-speed rail has moved things along. Bruce Nourish, a writer for [Seattle Transit Blog](http://seattletransitblog.com/2014/01/page/2/) (<http://seattletransitblog.com/2014/01/page/2/>), called the pending rule change a "very big deal, because much of the existing urban and suburban rail trackage in the U.S. has at least some freight or mainline traffic." Currently, just about every commuter rail train that pulls out of a station has a locomotive hauling a half-dozen cars or more. The rule change will allow "trains to scale down" while operating at greater frequency, according to Nourish.

While DMU rail cars are more expensive up front, they cost less to operate over the long term.

The Trinity Railway Express, which provides commuter rail service between Dallas and Fort Worth, Texas, says the cost of DMU cars runs about \$90 million, nearly \$25 million more than the older models, according to the Fort Worth *Star-Telegram*. But rail officials say the long-term cost of maintaining and fueling the new cars would be much cheaper, allowing the DMUs to pay for themselves in less than 9 years.

That's important, because commuter rail, while growing in popularity, is expensive to run. "The subsidies for commuter rail are tremendous," Michael Smart, a researcher with the Institute of Transportation Studies at the University of California, Los Angeles, told *Governing*

(<http://www.governing.com/topics/transportation-infrastructure/col-commuter-rail-ridership-declining.html>) last year. Despite the high cost, most experts argue that the best way to make commuter rail successful and grow ridership is to offer expanded schedules so that riders aren't limited to just a few trains during the morning and evening rush hours. Since DMU trains are self-propelled, they can operate both cheaply and more frequently.

In 2012, riders took 466 million trips on commuter rail, according to the American Public Transportation Association. Last year, ridership increased 2.1 percent on the 28 commuter rail systems operating around the country. Construction is expected to start on 13 new lines in 2014, according to the *Transport Politic* (<http://www.thetransportpolitic.com/>).

Boston is one of the cities that plans to offer new commuter rail service using DMUs. Massachusetts has purchased freight rail lines, some of which are unused, in and around the city and has turned them over to the Massachusetts Bay Transportation Authority, which plans to run commuter rail service on the tracks using DMU-designed trains. The short-haul commuter trains are expected to operate frequently, making them into a quasi-rapid transit service for the city.

Last year, mass transit set ridership records, according to the American Public Transportation Association. The demand for more transportation options continues to grow, especially in connecting suburbs to cities. The best way to do that is with commuter rail, but public officials remain wary of investing because of the costs. Removing the barrier to DMUs is a small but significant step in the right direction.