ELECTRO-MOTIVE

9301 West 55th Street
LaGrange, IL 60525 USA

Proposed Canadian Locomotive Emissions Regulations

STATEMENT OF ELECTRO-MOTIVE DIESEL, INC.

In December of 2010, Transport Canada published a Consultation Paper and an Issue Brief, requesting preliminary comments on the development of regulations affecting exhaust emissions from locomotives in Canada. Stakeholder meetings were held in Ottawa, Ontario on 14 December 2010 and in Vancouver, British Columbia on 11 January 2011, at which interested groups and individuals were invited to attend and participate. Written comments may be submitted until 14 February 2011; Electro-Motive Diesel, Inc. (EMD) is pleased to offer these comments under that provision.

EMD is, since August of 2010, a wholly-owned subsidiary of Progress Rail Services, which is a Caterpillar company. From 1930 until April of 2005, EMD had been the Electro-Motive Division of General Motors Corporation, which sold it to a consortium of financial investors, which in turn sold it to Progress Rail. Under all three owners, EMD has been a major manufacturer of locomotives and locomotive engines. The majority of locomotives in the North American railroad fleet were built by EMD. EMD is also a remanufacturer of locomotives and engines, and supplies the aftermarket with replacement components needed to maintain and remanufacture locomotives and locomotive engines.

From an overall perspective, EMD supports the development and implementation of feasible and cost-effective emission requirements for locomotives and locomotive engines, in order to help make rail transport more environmentally friendly than it already is. Though Transport Canada's proposed regulations will affect primarily railroad companies, in the railroad industry what affects railroads ultimately affects rail industry suppliers. Accordingly, Transport Canada's proposed regulation is of particular interest to EMD; therefore, we offer these comments. Because we generally agree with and support Transport Canada's regulatory direction, our comments will focus on extensions, clarifications, and opportunities for further synergies with what is already occurring in the United States.

Canadian Locomotive Regulations Should Harmonize With United States Regulations.

Because of the high degree of integration between United States and Canadian railroads, it makes sense for Canadian locomotive emissions regulations to mirror those already in place in the United States. We applaud and encourage Transport Canada's direction to do that. The major Canadian freight railroads, Canadian National and Canadian Pacific, have significant trackage in the United States, having acquired United States railroads

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over the years.[1] Canadian National, for instance, runs all the way to the Gulf of Mexico, through its acquisition of Illinois Central.[2] Further, major United States freight railroads, BNSF, CSX, Norfolk Southern, and Union Pacific, operate trackage in Canada and have Canadian Federal Certificates of Fitness.[3]

The EPA regulations were created in consultation with locomotive manufacturers, with railroads, and with interested members of the public, and are already in place. In the process of that consultation, manufacturers, railroads (including major Canadian ones), EPA, and the public, provided input on environmental needs and what emissions reduction measures and limits were feasible in what time frame. The result is a set of regulations that meet EPA's emissions inventory reduction goals and at the same time are feasible, while requiring technology development in a compressed time frame, by locomotive manufacturers and railroads.

We note that the language in the just-expired Memorandum of Understanding (MOU) between the Railway Association of Canada and Transport Canada, and that in the Proposed Approach and Proposed Elements presentations from the stakeholder meetings stops short of requiring EPA-certified locomotives in Canada. The language of the MOU is "meet EPA emissions standards" or a variation thereof, and that in the presentations is similar. Without recommending that Canadian railroads must purchase EPA-certified locomotives, we would point out that the best way of demonstrating that a locomotive meets EPA emissions standards is to have it certified and labeled, just as a locomotive purchased or remanufactured by a United States railroad must be. Fortunately, certifying Canadian locomotives and labeling them is simple in the vast majority of cases, because they are identical in emissions-related aspects to United States locomotives, or could be made so.[4] We are aware of several instances in which Canadian railroads subject to the MOU have met EPA emissions standards with their locomotives by purchasing EPA-certified locomotives or emissions retrofit kits.

Harmonizing Canadian Regulations With Those Of The US EPA Will Facilitate Cross-Border Operation.

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[1] Major recent acquisitions of United States railroads by Canadian National are Illinois Central, which provides CN access to the Gulf of Mexico ports; Elgin, Joliet, and Eastern (EJ&E), a recent acquisition that provides a bypass around Chicago; and Wisconsin Central. Those by the Canadian Pacific include Soo Line, which provides a gateway into Chicago; Iowa, Chicago, and Eastern; and Dakota, Minnesota, and Eastern.

[2] See network maps of the major Canadian freight railroads here:
Canadian National: http://cnebusiness.geomapguide.ca/?s_icid=home-feature-rght-stations-terminals-map
Canadian Pacific:
http://www8.cpr.ca/cms/NR/rdonlyres/e7pax55nnhtsf4eex2alvhopq5mhjov4alpurmt5noeu6fx5pzae3x73batkrfh527qy47nuakkpsoplgyfwi23de6e/CPsystemmap2008large.gif

[3] Issue Brief, page 30.

[4] EPA would likely not be interested in certifying Canadian locomotives that have no United States counterpart; a different method of assuring that emissions standards are met would have to be devised for them.

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EPA locomotive rules, at 40 CFR 92.804(e) and 1033.650, have provisions regarding incidental use of Canadian and Mexican locomotives in the United States. The part 92 provision, now expired, simply allowed use of a Canadian or Mexican locomotive without an EPA certificate in the United States if its use was not extensive and was incidental to its primary use in its native country. "Incidental" was not defined, but presumably if a non-certified locomotive were to enter the United States, proceed to the first rail yard, then be turned and sent back across the border again, that would be "incidental." The part 1033 rule, which is currently in force, has more stringent requirements; before a railroad brings an uncertified locomotive into the United States, it must first obtain the permission of EPA.

The EPA restrictions are, as noted, on uncertified locomotives that would otherwise, by date of original manufacture or by remanufacture date, be required to be certified in order to operate extensively in the United States. It is not sufficient for EPA to allow unrestricted operation of Canadian locomotives in the United States that a locomotive simply meet applicable EPA emissions standards; it must be certified with EPA as meeting them, and it must be so labeled. Harmonizing regulations will make it easy for Canadian railroads to operate EPA-certified locomotives for cross-border traffic.

The EPA-Required Labels On Conforming Locomotives Are Sufficient For Canadian Requirements.

The way to establish that a locomotive meets EPA standards is to have it certified as a member of an EPA engine family. That is simple in the case of Canadian locomotives because they are overwhelmingly of the same models as United States locomotives, with some non-emissions-related modifications related to Canadian, notably cold-weather, operation. Once they are certified by EPA, they are required to be labeled. EPA requires two labels, one on the locomotive, and the other on the engine. The locomotive label is affixed at first compliance with an emissions rule, either part 92 or part 1033,[5] and remains on the locomotive for its service life. The engine label is changed at each remanufacture.

The labels specify the engine family to which the locomotive belongs and the standards to which the locomotive conforms. If the locomotive conforms to Family Emissions Limits different from the otherwise applicable standards, that information is on the label too. The EPA-required labels therefore fulfill the proposed requirements of the Canadian labels; no further labeling should be necessary for EPA-certified locomotives.

Transport Canada proposes that the labels be printed in either of the Canadian official languages, English and French. As information, the labels that EMD applies to freshly manufactured locomotives are already trilingual. One customer requested that the label

[5] Part 1033 is the current rule. Its standards are more stringent than those of part 92. Locomotives that were previously compliant with part 92, either by having been originally manufactured thus or by having had a remanufacture system applied to make them conform to Tier 0 standards, are to have their locomotive labels replaced when they are brought into compliance with part 1033 at a subsequent remanufacture.

be printed in English and French, while another requested English and Spanish. To avoid parts proliferation and possible confusion in manufacturing, we put all three languages on the labels.

Canada Should Take Advantage of the In-Use Testing Already Being Carried Out in the United States.

The EPA locomotive emissions rules, at 40 CFR 92.1003 and 1033.810, require Class I freight railroads operating in the United States to subject 0.15 per cent of their fleets to in-use emissions tests, beginning 1 January 2005. Total locomotives tested per year, and those belonging to major Canadian freight railroads, are shown in the following table.[6]

Test Year	Total Locomotives Tested	CN Locomotives Tested	CP Locomotives Tested
2005	7	1	1
2006	7	1	1
2007[7]	11	1	1
2008	22	2	1
2009	23	2	1
2010	23	2	1

Besides the CN and CP locomotives, the bulk of the rest of the units tested were from BNSF, CSX, Norfolk Southern, and Union Pacific, all United States railroads with Canadian Federal Certificates of Fitness.

Rather than establishing its own in-use testing program, Transport Canada should avail itself of the results of the testing already being carried out under US EPA requirements. Doing so would have at least two advantages:

- The current testing program provides a much larger sample size, including locomotives of all Tiers of emissions regulation, than would be obtained simply by testing 0.15 per cent of the fleets of the major Canadian freight railroads.
- Because the Association of American Railroads, which arranges for the annual testing and requests locomotives from its member railroads, qualifies the testing laboratories, the quality of the results is more likely to be good than it would be if a startup laboratory without prior locomotive experience were to carry out the testing.

Finally, with regard to testing, it should be noted that there are railroads in Canada that

[6] 0.15 per cent of the locomotives on the United States Class I railroads would be approximately 30 locomotives. The testing is carried out under the auspices of the Association of American railroads, which has negotiated the number to be tested each year with EPA.

[7] The same seven locomotives were tested in 2005, 2006, and 2007. For 2007, four additional Tier 2 locomotives were added. In 2008 and subsequent years, locomotives that had not been previously tested were selected.

are landlocked and do not connect to any other railroads. For example, the Quebec North Shore & Labrador (QNS&L),[8] which has a Certificate of Fitness and is an EMD customer, is one such railroad. To require such a railroad to carry out a locomotive emissions test would impose a tremendous hardship. To move a QNS&L locomotive to a testing site would require placing it on a barge and conveying it up the St. Lawrence River to a port with nationwide rail access. Delivering new EMD locomotives to the QNS&L, which must be done by barging them down the river, entails a shipping charge of approximately 30,000 United States dollars per locomotive.

Railroads That Do Not Connect to Other Railroads and Operate in Remote Areas Should Not Be Subjected to US EPA Emissions Standards.

As noted above, some Canadian railroads are landlocked and operate in remote areas. Because their trackage does not connect to that of any other railroad, locomotives owned and operated by such railroads are not interchanged with other railroads and do not operate country-wide. Because of their remote-area operation, the emissions from locomotives of those railroads do not affect any urban or other thickly populated areas. It does not make sense to require such railroads to meet the same stringent emissions standards that the locomotives of other railroads will have to meet.

There is precedent for this in EPA practice. For instance, EPA regularly grants exemptions to and extensions of the compliance dates for its fuel sulfur content requirements in Alaska.[9]

In the unlikely event that a locomotive belonging to such a railroad were to be sold, leased, or otherwise transferred to a railroad connected to the North American railroad system, it could be treated in the same way that EPA treats imported locomotives. EPA defines an imported locomotive as "new,"[10] and requires that if it would have had to be compliant with EPA emissions rules had it been a United States locomotive since it was originally manufactured, it be brought into compliance with standards appropriate to its model year (which may not be its year of manufacture or remanufacture)[11] and certified prior to being placed in service in the United States. Such a bringing into compliance could require a remanufacture before the locomotive could be placed into service on the Canadian railway system.[12]

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[8] For a map of the QNS&L and other landlocked railroads of eastern Canada, see http://www.proximityissues.ca/Maps/RAC-2004-QC_sub.pdf

[9] See particularly 40 CFR 69 for EPA's exemptions from its requirements for Pacific islands and other remote areas.

[10] 40 CFR 1033.901, definition of "new."

[11] 40 CFR 1068.360.

[12] For the requirements that EPA places on imported locomotives, see 40 CFR 1033.15(b) and subpart D of 40 CFR 1068. The model year requirements are discussed in 40 CFR 1068.360.

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Major Conclusions and Recommendations.

EMD provides the following list of major conclusions and recommendations.

- Canadian locomotive regulations should harmonize with US EPA regulations. That will facilitate procurement of locomotives by Canadian railroads, will result in significant emissions reductions from rail operations, and will facilitate cross-border operation of Canadian locomotives.

- The EPA-required labels on locomotives with EPA certificates of conformity should be sufficient to meet Canadian requirements.

- Rather than conducting its own testing program, Transport Canada should avail itself of the testing program carried out in the United States, which includes some locomotives from Canadian railroads, since 2005.

- Canada has several railroads that operate in remote areas and do not connect to the rest of the North American railroad system. Transport Canada should consider standards flexibility for those railroads, as their emissions generally do not affect populated areas.

- Finally, we would request that when the regulation proposal is published in the Canada Gazette, notice of that publication be sent by e-mail to the stakeholders that have been receiving prior mailings. In the United States, it is commonplace for EPA to post on its Web site a pre-publication version as soon as the EPA Administrator signs it, and to notify stakeholders, in order to give interested parties time to evaluate the rule proposal, its impacts, and to prepare comments. This also acts to shorten the comment period that EPA must allow. A similar favor for the Canadian regulations would help to expedite the process.

Respectfully submitted,

David E. Brann
Manager, Emissions Compliance
Electro-Motive Diesel, Inc.

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