

Locomotive Emissions Regulations Consultation Paper

Background

Canada is a large and beautiful country. Its many natural resources have helped us develop a strong economy. And while Canada's size has given us space for our cities and our industries to grow, it also makes it vital to have ways to move raw resources, consumer products and people over great distances. But moving most people and goods is done with vehicles that burn fossil fuel and release emissions into the air that impact human health and the environment.

Particulate matter (PM) and nitrogen oxide (NO_x) are classified by Environment Canada as criteria air contaminants, and are two of the most harmful chemicals that are emitted from vehicle engines. They can lead to smog and acid rain. They have been linked to premature mortality, asthma, some forms of heart disease and aggravated cardiac and respiratory diseases. Groups most at risk are the elderly, children and people with problems breathing. Emitting these chemicals into the air damages the environment and lowers the quality of life of the people who live and work in that air.

The transportation sector is a substantial emitter of criteria air contaminants. Canada's transportation sector produces over 54 per cent of our NO_x emissions. Canada's rail sector is responsible for about 9 percent of these NO_x emissions.

The rail industry knows the need for cleaner locomotives, and since 1995, has entered into voluntary agreements with the Government of Canada to manage harmful emissions. These agreements have helped railway companies adopt technologies and ways of operating that have leveled or reduced emissions.

Under the first agreement (Memorandum of Understanding), the Railway Association of Canada, on behalf of many railways, committed to keep NO_x emissions below a "cap" of 115,000 tonnes per year. This agreement lasted from 1995 to 2005 and kept NO_x emissions below the cap for many of those years. Over the period, railway activity grew by 25 per cent, while NO_x emissions decreased by 3 per cent.

In 2006, the government announced its intent to regulate rail emissions starting in 2011. It signed a second Memorandum of Understanding in 2007, for the period from 2006 to 2010, as a transitional period while regulations for air emissions from railways are being developed. In the second agreement, industry committed to reducing a large group of criteria air contaminant emissions and greenhouse gas emissions.

Criteria air contaminant emissions regulations for locomotives are now under development at Transport Canada. In this preliminary consultation period, we want to gather the views of stakeholders to inform this process in its early stages.

Some Facts for Consideration

- In 2007, there were about 437 railway companies in Canada. These included:
 - two major Class 1 freight railways (Canadian National Railway and Canadian Pacific Railway);
 - about 60 short line and regional railways;
 - intercity passenger railways (of which VIA Rail is the largest and only Class 1);
 - commuter railways serving major Canadian cities;
 - many industrial railways; and
 - tourist and recreational railways.
- Most locomotives in North America use diesel engines for power. Diesel engines are more efficient and cost less to run than gasoline engines. They also produce a higher intensity of some of the emissions we need to limit.
- Besides PM and NO_x, the group of criteria air contaminants emitted from locomotive engines includes hydrocarbons (HC) and carbon monoxide (CO). Emissions of NO_x also contribute to the formation of ground-level ozone (O₃). These pollutants all have harmful effects on human health, and most have harmful effects on the environment.
- Rail systems that are built to the same standards allow for increased efficiency in cross-border movement of rail cars, which improves trade. Track throughout Canada, the U.S. and Mexico is already built to a standard gauge and most locomotives produced for sale in North America are made in the U.S. to standards designed and enforced by U.S. authorities.
- The U.S. has had regulations to limit criteria air contaminant emissions from locomotives in force since 2000. These regulations ensure that locomotives built for sale in the U.S. meet strict emissions standards. These standards require that when new locomotives are built, or when older locomotives are overhauled, they must incorporate up-to-date technology that reduces emissions and improves air quality.

Developing Canadian Regulations

The government's Clean Air regulatory policy is outlined in the *Regulatory Framework for Air Emissions*, released on April 26, 2007. This framework builds upon an October 2006 *Notice of Intent* that:

- outlined the government's intent to regulate rail sector emissions beginning in 2011; and
- stated that these regulations would be developed by the Minister of Transport under the *Railway Safety Act*. While the Act does not apply to all railway companies, as many smaller companies fall under provincial jurisdiction, it does apply to companies that conduct most rail sector activity in Canada.

The Minister of Transport will develop and implement new emissions regulations, under the *Railway Safety Act*, to take effect when its current Memorandum of Understanding with the rail industry ends.

Developing these regulations will be done in two phases:

1. Regulations aligned with those of the U.S. Environmental Protection Agency will be developed to limit the release of criteria air contaminants from the rail sector, to be implemented in 2011.
2. Regulations to limit the release of greenhouse gases will be developed in step with the U.S. Environmental Protection Agency.

Transport Canada plans to implement regulations that are based on the U.S. Environmental Protection Agency regulations, as applicable to the Canadian context. This is because:

- their strict criteria air contaminant regulations aimed at reducing air emissions that can lead to smog and acid rain apply to U.S. locomotive manufacturers, which supply Canadian railways with new locomotives; and
- these standards are set to become increasingly strict for future model years as better and more efficient technology is developed. Canadian regulations will ensure that Canadians receive the full benefits of these new technologies.

Stakeholder Consultation

During this regulatory process, the Government will offer stakeholders and the public two opportunities to participate.

The release of this consultation paper has started a 75-day period of preliminary consultations. Transport Canada has also prepared a more detailed and technical Issue Brief, entitled *Rolling Towards a Cleaner Future: The Development of Canadian Locomotive Emissions Regulations*. It is a resource for stakeholders who would like to know more about the issues raised in this paper to inform their submissions.

Once we have received all submissions, we will consider them while preparing draft regulations that will be published in the *Canada Gazette*, Part I. Once published, stakeholders will have 90 days to comment

and share their views on the regulations. Only after this can final regulations be published and made law.

Have Your Voice Heard!

Stakeholder input is vital to developing fair, balanced, and effective rail emissions regulations. The key stakeholders for these regulations include:

- railway companies and the Railway Association of Canada;
- parts manufacturers, suppliers, emissions testers, and remanufacturers;
- environmental non-governmental organizations;
- provincial and territorial governments; and
- the general public.

To participate in this process, please submit your views **in writing** to Transport Canada by February 14, 2011.

You can send them:

- **in an email** to locomotive-emissions-locomotives@tc.gc.ca in any accessible document format (such as Microsoft Word or OpenOffice Writer); or
- **by mail** to:

Director General, Environmental Policy
Transport Canada
330 Sparks Street
Place de Ville, Tower C
Ottawa, ON
K1A 0N5

This consultation paper, the Issue Brief, and more information on these regulations and this process are available online at:

www.tc.gc.ca/locomotive-emissions