

ISSUES AROUND RESIDENTIAL WOOD HEATING IN CANADA

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Wood is viewed by many Canadians as an attractive and economical alternative to fossil fuels.

However, emissions from residential fuel wood combustion contribute significantly to PM₁₀, PM_{2.5}, and VOC emissions in Canada. According to the revised 1995 Air Contaminants Emissions Inventory residential wood combustion is:

- The fourth highest source of PM_{2.5} emissions in Canada (behind forest fires, dust from unpaved roads, and dust from paved roads);
- The sixth highest source of VOC emissions (behind forest fires, upstream oil and gas industry, light duty gasoline vehicles, general solvent use, and light duty gasoline trucks). Much of the VOCs emitted probably very quickly condense to PM as well. A study, conducted in Montreal established a significant impact in air quality as a result of intensive use of wood as a heating fuel in a suburban setting. The results showed a significant deterioration of the air quality in the study area, as compared to ambient air measures at a downtown Montreal area. In particular
 - A 45% increase in polycyclic aromatic hydrocarbons (PAHs);
 - Up to 200% increase in some VOCs;
 - From 40 to 100% increase in PM_{2.5}.

The Canadian Ministers of the Environment have adopted the Canada-wide Standards (CWS) for Fine Particulates (PM) and Ozone. In addition to establishing numerical air quality standards for PM and ozone, the CWS agreement lists a set of joint actions to help the different government levels in Canada attain the air quality objectives. Four of these joint actions address residential wood heating.