



## Proposed Amendments to Metro Vancouver's Boilers and Process Heaters Emission Regulation Bylaw No. 1087

Metro Vancouver's *Clean Air Plan* includes a goal for air quality to meet or be better than the ambient air quality objectives and standards at the regional, provincial, and federal levels. In 2017, the Canadian Council of Ministers of Environment adopted Canadian Ambient Air Quality Standards (CAAQS) for nitrogen dioxide (NO<sub>2</sub>) that would become more stringent in 2020 and 2025. In 2019, the MVRD Board adopted the 2020 NO<sub>2</sub> CAAQS as Metro Vancouver's ambient air quality objectives for NO<sub>2</sub>.

Metro Vancouver's Boilers and Process Heaters Emission Regulation (Bylaw 1087) regulates the discharge of harmful air contaminants, including nitrogen oxides (NO<sub>x</sub>) that lead to the formation of NO<sub>2</sub>, from boilers and process heaters with a combined capacity under 50 MW in residential, institutional, commercial, and industrial facilities. Amendments are being proposed to Bylaw 1087 to continue meeting the ambient air quality objectives for NO<sub>2</sub> as they become more stringent, thereby enabling continuous improvement in air quality and protection of public health.

Emissions of NO<sub>x</sub> can result in the formation of harmful ground-level ozone, fine particulate matter, and NO<sub>2</sub>. Exposure to ambient NO<sub>2</sub> can cause respiratory issues, even at low concentrations, and other adverse health effects. It is important to protect sensitive populations, such as children, the elderly, and people with existing health conditions, from exposure to these emissions. However, emissions from high-capacity boilers and process heaters can increase nearby concentrations of NO<sub>2</sub> above the ambient air quality objectives.

### The proposed amendments include the following:

1. Mandatory dispersion modelling for new boilers or process heaters with a facility capacity between 10 MW and 50 MW fueled by natural gas or propane.
2. Mandatory dispersion modelling for new boilers and process heaters with a facility capacity between 3 MW and 10 MW fueled by natural

gas or propane within 100 metres of sensitive receptors, such as schools, hospitals, and community care facilities.

3. Metro Vancouver's District Director may also require additional studies, such as more complex emissions modelling, ambient monitoring, and implementation of an approved exposure mitigation plan.
4. Owners of existing boilers or process heaters that cannot demonstrate achievement of ambient air quality objectives in studies required by the District Director would be required to show they are meeting the objectives when replacing the existing boiler or process heater or within ten years of receiving the study results, whichever is sooner.
5. Improvements to emission stack design, including a minimum exit velocity, which would reduce nearby impacts of emissions by improving dispersion of emissions.
6. Lower NO<sub>x</sub> emission limit for new and replacement boilers and process heaters fueled by natural gas or propane to 20 mg/m<sup>3</sup> from the current 60 mg/m<sup>3</sup>.
7. Introduce a NO<sub>x</sub> emission limit of 120 mg/m<sup>3</sup> for boilers and process heaters fueled by biomass.
8. After January 1, 2040, emissions from all boilers and process heaters would be required to meet NO<sub>x</sub> emission limits noted above.

For further details regarding the proposed changes, please refer to the [discussion paper](#).

## Related Initiatives

### Managing GHG Emissions from Large Buildings in Metro Vancouver

Metro Vancouver's Clean Air Plan includes goals and targets to reduce greenhouse gas (GHG) emissions across the region and achieve zero-emission buildings by 2050. Metro Vancouver is developing an approach to substantially reduce GHG emissions from large buildings over 25,000 ft<sup>2</sup> (2,322 m<sup>2</sup>), including residential, commercial, and office buildings.

Collectively, these buildings are an important source of GHG emissions in this region. Using zero-emission technologies for space and water heating can avoid the discharge of GHG emissions as well as health harming air contaminants such as NO<sub>x</sub> from buildings. For more information, visit [metrovancover.org](http://metrovancover.org), and search "building emissions action"



## We want to hear from you

Metro Vancouver is committed to engaging audiences who may be impacted by or have an interest in the proposed amendments. The feedback period is open until November 30, 2022. We encourage you to share your input for consideration in the proposed bylaw amendments. Below are ways to engage:

- Learn more online and [subscribe for updates](#)
- Read the detailed [discussion paper](#)
- Complete an [online feedback form](#)
- Email staff directly: [aqbylaw@metrovancover.org](mailto:aqbylaw@metrovancover.org)
- Attend a free [webinar](#)

All resources and links are available on our project webpage.

Please visit [metrovancover.org](http://metrovancover.org), and search "Boilers and Process Heaters"