



# Understanding Air Quality in Nova Scotia

## Do your part! What changes do you pledge to make to improve our air?

I pledge to:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## What emission reduction targets are in place to protect air quality?

The Nova Scotia Energy Strategy identifies the province's commitments to reduce air pollutant emissions from the generation and consumption of energy, consistent with national standards. The Energy Strategy establishes the following emission reduction targets:

### Nova Scotia Energy Strategy Emission Reduction Targets

Pollutant	Target to be met by	Emissions Target	Reduction
Sulphur dioxide (SO <sub>2</sub> )	2005	141,750 tonnes	25% reduction from 2001 levels
Sulphur dioxide (SO <sub>2</sub> )	2010	94,500 tonnes (from 2001 sources)	50% cumulative reduction from 2001 levels (by sources existing in 2001)
Mercury (Hg) from electric power generation	2005	168 kg	30% reduction from 1995 levels
Mercury (Hg) from electric power generation	2010	65 kg	70% reduction from pre-2001 levels
Nitrogen oxides (NO <sub>x</sub> )	2009	72,000 tonnes	20% reduction from 2000 levels

### Contact us

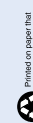
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Photo: Nova Scotia Tourism, Culture and Heritage



**A**ir contains the gases that are necessary for the survival of most living things on earth. Air pollutants diminish the quality of air and can harm us and the world around us.

### Air pollution affects our health

Pollutants in the air can cause people to wheeze, cough, and have trouble breathing. They can also aggravate existing heart and lung conditions. Children, the elderly, and those with respiratory diseases and cardiovascular problems are particularly sensitive to air pollutants.

Air pollution is also linked to long-term health problems. In some cases, air pollution can even be linked to premature death.

### Air pollution affects the environment

Air pollutants can combine to form acid precipitation, which harms soil, water bodies, aquatic life, vegetation, and buildings. Vegetation can also be harmed by pollutants such as ozone, particulate matter, and sulphur dioxide. Certain persistent pollutants, such as mercury, dioxins, and furans, can harm wildlife and plants. In turn, eating fish, game, and produce with elevated levels of these persistent chemicals can pose health risks to people.

### What causes air pollution?

Much of our air pollution is caused by the burning of fossil fuels, mainly for transportation and electricity generation. Other industrial processes such as pulp and paper, asphalt plants, iron and steel plants, cement plants, and refineries also produce air pollutants.

Much of the air pollution in Nova Scotia is blown in from sources outside our province, mostly from the eastern United States and eastern Canada. We also make our own. Local sources of air pollution include electricity generating facilities, industry, transportation, heating, and wood burning.



### What are the main air issues?

#### Smog

Smog refers to a mixture of haze-causing pollutants in the air. The main components of smog are ground-level ozone and particulate matter. Ground-level ozone is formed when nitrogen oxides and volatile organic compounds (VOCs) react in the presence of sunlight. Carbon monoxide and sulphur dioxide are two of the other components. Nitrogen dioxide is responsible for the orange haze associated with smog.

#### Acid precipitation

Sulphur dioxide (SO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) contribute to acid precipitation. They react with water in the atmosphere to form sulphuric acid and nitric acid, which fall to the earth as precipitation. Acid precipitation can harm water bodies, vegetation, aquatic life, and buildings.

#### Other air pollutants

Other pollutants found in the air include mercury, lead, persistent organic pollutants (e.g., PCBs, pesticides, dioxins, and furans) and other hazardous air pollutants (e.g., lead and cadmium). When these pollutants fall from the air, they can enter the food supply and harm human health and the environment.

### How do I know when there is poor air quality?

Check the local Air Quality Index, especially during smog season (May through September), at [www.atl.ec.gc.ca/airquality/index\\_e.html](http://www.atl.ec.gc.ca/airquality/index_e.html)

### What is the air quality like in Nova Scotia?

The air quality in Nova Scotia is generally good, but occasionally there are air quality “events” when air pollutant levels are higher than normal. Often the pollutants come from outside of Nova Scotia, but local emissions do contribute. Although there may be days when there are elevated levels of pollutants, in general the air pollutant levels in Nova Scotia meet national objectives.

Weather conditions, land forms, and emission sources are all factors that can affect local air quality. Areas that are influenced by the same factors are sometimes called “airsheds”.

### What should I do when there is poor air quality?

- Monitor possible symptoms such as difficulty breathing, coughing, or irritated eyes.
- If symptoms occur, reduce or reschedule outdoor activity.
- If you have heart or breathing conditions, consider reducing physical activity outdoors or reschedule activities to times when the air quality is good.
- Avoid exercising near areas of heavy traffic, especially during rush hour
- Follow a doctor’s advice to manage existing conditions such as heart or lung disease.

### What can I do to improve air quality?

- Turn off lights and electronics when not in use.
- Use compact fluorescent light bulbs instead of incandescent bulbs.
- Let dishes air dry in the dishwasher.
- Air dry laundry when possible.
- Choose energy efficient appliances.
- Keep heating and cooling systems in good working order.
- Seal windows, doors, and baseboards with caulking or weather-stripping.
- Maintain vehicles properly to reduce fuel consumption by up to 10 per cent.
- Do not idle your vehicle longer than 10 seconds.
- Observe speed limits—higher speeds, especially on highways, can increase fuel consumption by 20 per cent or more.
- Walk, bike, car pool, or use public transit when possible.
- If you need a vehicle, choose a fuel-efficient one.
- Use an electric or manual push lawn mower instead of a gas-powered one.
- Use wood-burning appliances certified for emission controls by CSA or EPA.
- When using a wood-burning appliance, burn only dry clean hardwood. Never burn green wood, household garbage, plastics, drift wood, treated wood (e.g. from deck or playground equipment), painted wood, glossy magazines, or any material prohibited by local by-laws.
- When using a wood-burning appliance, make small hot fires instead of large smouldering ones.

In addition to reducing air pollution, many of these actions will also help to reduce climate change, because greenhouse gases are often released from the same source as air pollutants.