# HOTTER THAN WE SHOULD BE: GREENHOUSE GASES AND OUR CHANGING CLIMATE

#### WHAT IS THE GREENHOUSE EFFECT? Carbon dioxide, methane, nitrous oxide and water vapour are "greenhouse gases" SOLAR RADIATION (GHGs). What does that mean? Greenhouse gases trap radiation in the Earth's atmosphere They allow solar radiation to pass through the atmosphere atmosphere, but INFRARED prevent heat from RADIATION HEAT) escaping into space. Human activities like the burning of fossil fuels are enhancing the greenhouse effect, Greenhouse gases in the atmosphere increasing average regulate the temperature of the Earth. Higher levels of greenhouse gases global temperatures and will increase the average global temperature and change our climate changing climate systems.

#### **GREENHOUSE GASES AND...**

#### YOUR HEALTH

Greenhouse gas emissions can cause climate change, which can impact health by:

- Aggravating heart and lung conditions during more frequent smog events
- Increasing the number of heat- and smog-related deaths
- Increasing populations of diseasecarrying insects
- Increasing the risk of forest fires

Visit the Canadian Public Health Association for more information on climate change and your health.

IF WE DO

NOTHING

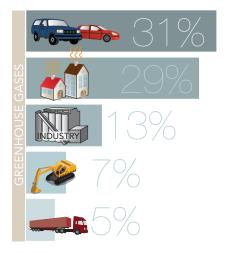
#### THE ENVIRONMENT

Climate change and more extreme weather can affect our environment and our economy in many ways, such as:

- Increasing the frequency of extreme weather events like flooding and storm surges
- Invasive species of insects (like the Pine Beetle) and plants affecting our forest industry
- Reducing our available freshwater
- · Shortening our ski season

### WHERE DO GREENHOUSE GASES COME FROM?

The biggest sources of greenhouse gases in Metro Vancouver and the Fraser Valley Regional District are:



Greenhouse gas emissions are projected to increase considerably over the next few decades because of population growth, transportation and economic activity.

Click here for more information about emissions in our region.



Watch this video to learn about climate change from Bill Nye the Science Guy

### WHAT WILL OUR CLIMATE BE LIKE IN THE FUTURE? DOING ABO GAS EMISSION

IF WE TAKE ACTION NOW

Many scientists predict that at current emissions levels, our average global temperature will be 2 to 3 degrees warmer by 2050. But this doesn't mean it will be nicer outside. We will likely experience more extreme weather events, more frequent flooding in low lying areas as the sea level rises, and more smog during hot summer days. It's also likely that as glaciers melt, the ocean level will rise 0.4 to 1.3 metres over the next century. This rise will cause dramatic and costly changes to our coastal cities and natural environment. But the worst impacts can be avoided if we act now to reduce greenhouse gas emissions.

For more air quality information visit:

Caring for the Air | Environment Canada | US Environmental Protection Agency | Intergovernmental Panel on Climate Change

## WHAT IS METRO VANCOUVER DOING ABOUT GREENHOUSE GAS EMISSIONS?

Metro Vancouver is taking action by installing electric vehicle charging stations in our parks and assisting businesses to reduce their greenhouse gas emissions. Check out our *Integrated Air Quality and Greenhouse Gas Management Plan* to learn about other actions that will reduce greenhouse gas emissions in our region.

#### **HOW CAN YOU HELP?**

Visit Metro Vancouver's air quality and climate change web pages at www.metrovancouver.org/air for tips!

