
Recommended Greenhouse Gas Reduction Targets for Dawson Creek

Prepared by: Matt Horne, Pembina Institute

Date: August 10, 2007

Purpose

The purpose of this briefing note is to help Dawson Creek's Council adopt targets for reducing greenhouse gas emissions in the City.

Why reduce greenhouse gas emissions?

Increasing concentrations of greenhouse gas emissions (primarily carbon dioxide) are responsible for trapping a greater proportion of the sun's heat on earth, which in turn is leading to global warming and an increasingly variable and uncertain climate. By reducing greenhouse gas emissions significantly, humans have the ability to begin stabilizing the concentrations of greenhouse gas emissions in the atmosphere and reduce the risks of significant and dangerous changes in the Earth's climate.

Why are targets important?

Short, medium, and long-term targets for reductions in greenhouse gas emissions are important because they provide a frame of reference that can help focus the City's efforts to reduce emissions. Having targets will allow Dawson Creek to:

- Assess whether or not the anticipated impact of proposed policies and actions will be sufficient.
- Evaluate whether or not existing policies and actions have been sufficient in scope and scale.
- Develop more specific targets to support the overall targets where appropriate (e.g. all new homes will produce net-zero greenhouse gas emissions by 2016).
- Communicate with local businesses, organizations and individuals, and other communities and governments about the targets that Dawson Creek has adopted.

What are reasonable targets?

The more that concentrations of greenhouse gases are allowed to rise, the greater the increase in average global temperature, and the greater the risk of severe disruptions to the Earth's climate. Although climate science continues to evolve, there is widespread support, both in the scientific community and among governments, for the goal of limiting an increase in average global temperature to no more than 2 degrees Celsius above pre-industrial levels. Ensuring this threshold is not breached would provide a reasonable likelihood of avoiding the most dangerous impacts of climate change.¹ To have a reasonable certainty of achieving this goal, global greenhouse gas emissions need to be reduced to 50% below 1990 levels by 2050.

Converting a global target to any specific community is challenging because each community is responsible for a different share of global emissions (both currently and historically) and they each have different abilities to bring about the changes necessary. A reasonable target for Dawson Creek, which recognizes the community's relatively high

¹ Chapter 3 in Pembina's "Case for Deep Reductions: Canada's Role in Preventing Dangerous Climate Change" provides additional detail on the global targets being advocated for by different countries and organizations.

per capita income and per capita emissions, would be to reduce greenhouse gas emissions by 80% below 1990 levels by 2050. This target would align Dawson Creek with other organizations and jurisdictions such as the Federation of Canadian Municipalities, Toronto, and California.

Because Dawson Creek does not have data for 1990 emissions, the same target would be roughly equivalent to reducing greenhouse gas emissions by 85% below 2006 levels.² Using a straight line to extrapolate back to 2006 emissions would result in 2020 and 2012 target of 27% and 12% below 2006 levels respectively. BC has already adopted provincial targets of 33% below 2006 levels, so the straight-line approach has been modified slightly to align with Provincial objectives. The resulting targets for 2020 and 2012 are 33% and 14% below 2006 levels respectively. Although currently presented in terms of percentage reductions, the targets will also be converted to absolute emissions reductions once a baseline is available for Dawson Creek's 2006 emissions.

Are these targets challenging?

These are challenging targets. Meeting them will require significant action from the community of Dawson Creek and from other levels of government. At the same time, these targets are achievable. Using a variety of economic models, the independent National Round Table on Environment and Economy has demonstrated that Canada's greenhouse gas emissions could be reduced by 60% from 2003 levels by deploying existing technologies and sending the right policy signals.³ If Dawson Creek is to be successful in moving towards the targets, the following types of changes will need to be pursued aggressively:

- Transitioning to energy sources that produce less greenhouse gas emissions per unit of energy (e.g. relying on wind-powered electricity instead of coal-fired or using bio-diesel instead of conventional diesel).
- Using less energy to meet the same needs (e.g. better insulated homes or more efficient appliances).
- Changing behavior to require less energy (e.g. living in a smaller home or driving less frequently).

Recommendations:

- Dawson Creek should adopt the following targets:
 - o 85% below 2006 levels by 2050
 - o 33% below 2006 levels by 2020
 - o 14% below 2006 levels by 2012
- Dawson Creek should communicate the targets with the businesses, organizations, and individuals in the community and with other communities and governments.
- Dawson Creek's climate and energy working group should work with the adopted targets when considering strategies to reduce greenhouse gas emissions.
- Dawson Creek's staff should use the same targets when looking for opportunities to reduce greenhouse gas emissions from Dawson Creek's buildings, vehicles, and infrastructure.

² The target relative to 2005 was derived using data from Canada's Greenhouse Gas Inventory and an assumption that Dawson Creek's emissions have changed at the same rate as BC's.

³ The National Round Table is currently examining scenarios with reductions of up to 80% below 2003 levels.