INTRODUCTION

Canada has ratified the Kyoto Protocol on greenhouse gases (GHG). CO$_2$ is the greatest contributor to total emissions. Canada’s equivalent CO$_2$ emissions are estimated at 692 Mt yr$^{-1}$.

Reduction of CO$_2$ emissions can be achieved by use of more efficient technology, use of energy fuels with reduced or no CO$_2$ emissions, such as wind, solar, geothermal and nuclear sources, or switching to fuels with lower CO$_2$ emissions. It is unlikely that the reduction of CO$_2$ emissions, required to meet the Kyoto agreement, could be reached by these measures alone. CO$_2$ sequestration will likely be an important component.

BC’s CO$_2$ emissions total ~65.9 Mt yr$^{-1}$, of which 82.4% result from the combustion of fuels for energy generation.

CO$_2$ sequestration involves the capture and transportation of CO$_2$ from industrial streams, transportation of CO$_2$, and its disposal in an appropriate sink. There are several methods for sequestering CO$_2$ that are potential options for BC (Voormeij and Simandl, 2003):

- In Oil and Gas Reservoirs
- In Deep Saline Aquifers
- In Deep Oceans
- In Mineral Carbonation

Transportation in the major sources of CO$_2$ emissions in British Columbia. Nearly all emissions growth is attributed to cars and trucks (Environment Canada, 2002). Based on current technology, sequestration of CO$_2$ from coal-fired power plants is not economically viable (economy of scale).