



City of Leduc's 2015 Greenhouse Gas Inventory

Corporate and Community

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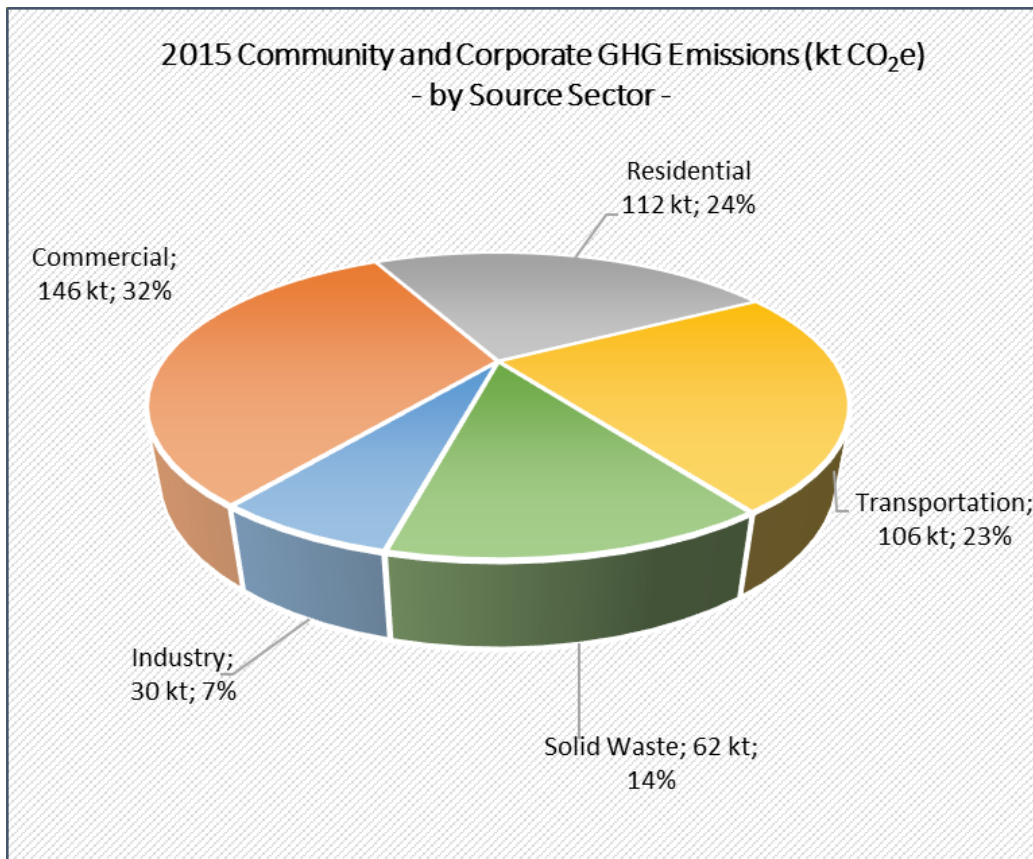
Executive Summary

The City of Leduc meets the first step in its commitment to the Federation of Canadian Municipalities Partners for Climate Protection Program Milestone 1 through this corporate and community GHG inventory and forecast.

1.1 Community and Corporate GHG Emissions

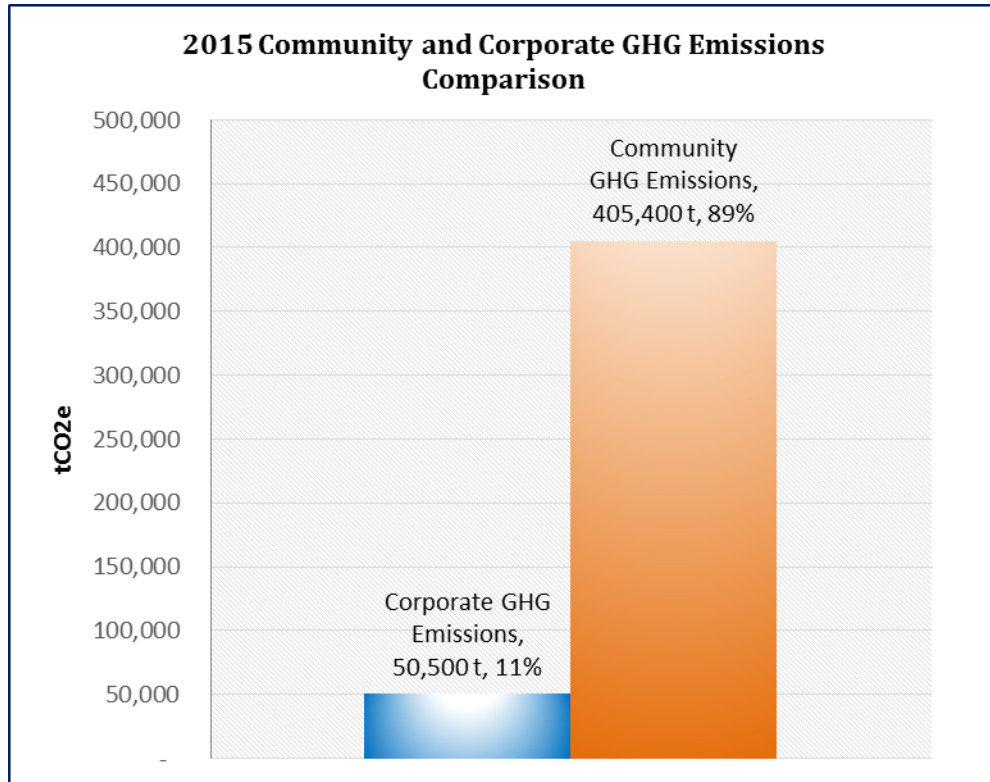
The City of Leduc emitted approximately **0.46 megatonnes (Mt)** of GHG emissions in 2015. Corporate GHG emissions represent 11 per cent of the total, whereas community GHG emissions constitute 89 per cent (see Exhibit 7). The majority of GHG emissions are from the commercial and institutional sector (32 per cent), followed by: residential (24 per cent), transportation (23 per cent), solid waste (14 per cent), and industrial (seven per cent).¹

Exhibit 1 Community and Corporate GHG Emissions, by Source Sector



¹ For the purposes of this figure, streetlight and water & wastewater GHGs were divided into the residential and commercial sectors according to their relative contributions in the community inventory. Corporate buildings GHG emissions were added to the commercial sector.

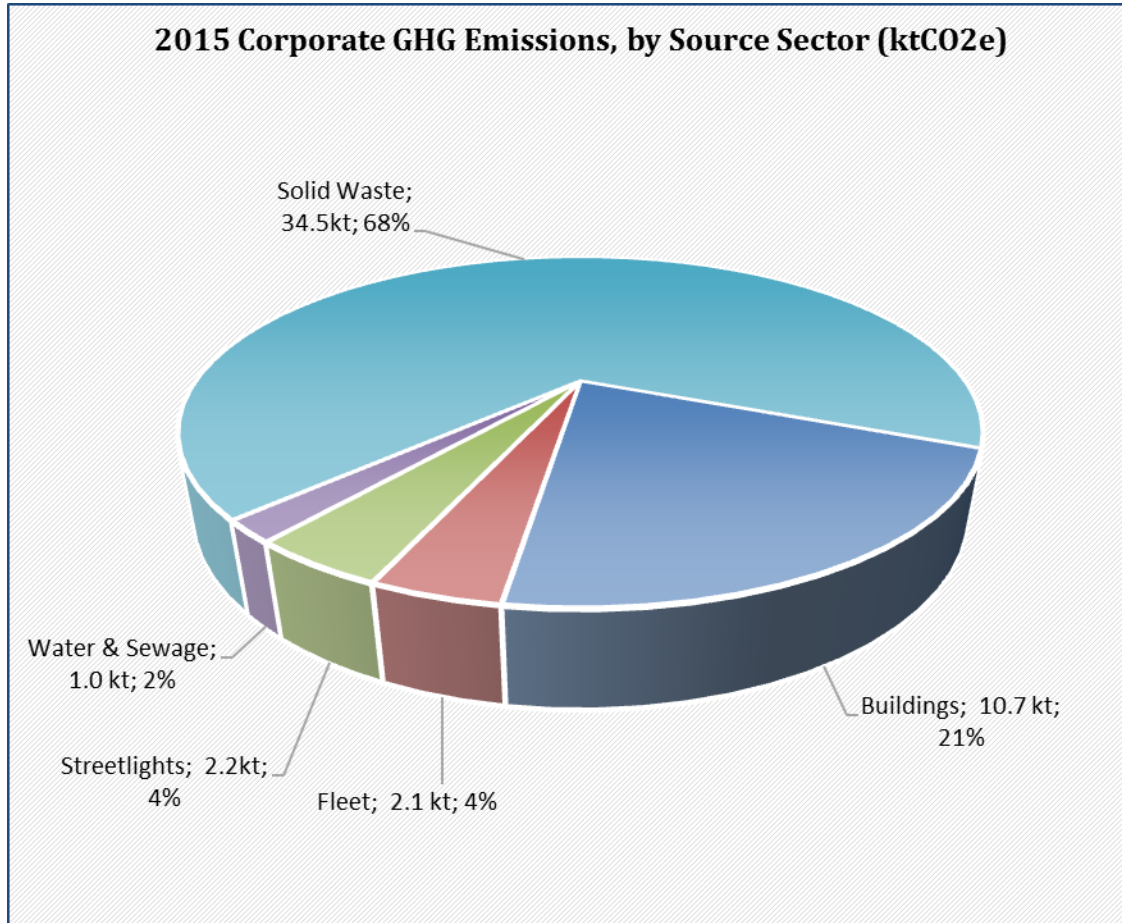
Exhibit 2 2015 Community and Corporate GHG Emissions Comparison



1.2 Corporate GHG Emissions

Total corporate GHG emissions for the City of Leduc’s corporate inventory were **50,500 t CO₂e**. The majority of GHG emissions, 68 per cent, are generated by solid waste. Buildings contribute a significant amount, 21 per cent, to the total corporate GHG emissions. Streetlights and fleet each contributed 4 per cent to the total corporate GHG emissions. Finally, water and sewage represented only two per cent of Leduc’s corporate GHG emissions.

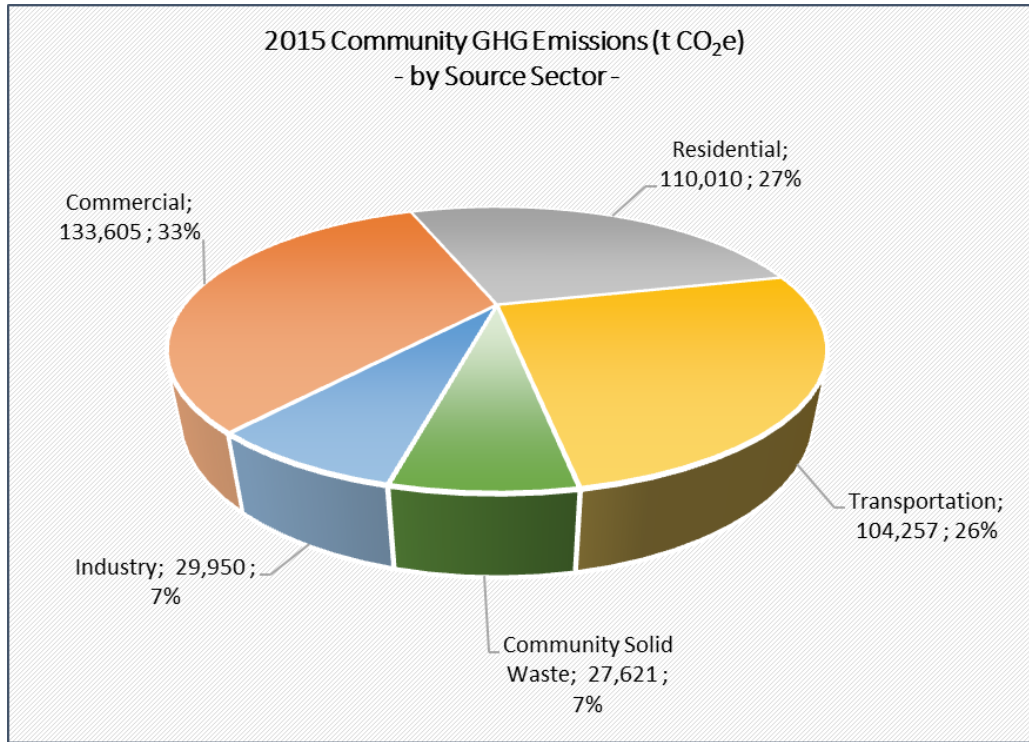
Exhibit 3 2015 Corporate GHG Emissions, by Source Sector



1.3 Community GHG Emissions

Total community GHG emissions in the City of Leduc in 2015 were approximately **405,400 t CO₂e**. Just over one-third of total GHG emissions are sourced from energy consumption by commercial buildings (33 per cent, in Exhibit 4). Energy use by residential dwellings and transportation represent the next largest sources of total GHG emissions, accounting for 27 per cent and 26 per cent of the total, respectively.

Exhibit 4: 2015 Total Community GHG Emissions, by Source Sector



1.4 Community and Corporate GHG Emissions Forecast

By 2035, total community emissions are projected to rise to **491,101 t CO₂e**; equivalent to an annual average compound growth rate of +0.9 per cent (see Exhibit 5 below).

Between 2015 and 2035 the population of the City of Leduc is projected to increase from about 29,300 to 49,120. That is equivalent to an annual average compound growth rate of +2.6 per cent. However, over the same period total community energy consumption is projected to grow by an average of +2.2 per cent per annum. Hence, total community energy use is projected to grow at a slower rate than the population - somewhat decoupling from growth in energy use. This decoupling is partly the result of reductions in the GHG intensity of the provincial electricity grid.

Our assumption is corporate emissions will increase at the same rate as community emissions at a moderate rate of 0.9 per cent. Based on this assumption, business-as-usual corporate emissions will grow to over **60 ktCO₂e** by 2035.

Exhibit 5: Projected Community GHG Emissions: 2015-2035

