High-level Analysis of Investments Required, Economic Value and Jobs Created as a Result of OCP GHG Emissions Reduction Actions

Analysis conducted by Sustainable Solutions Group

The financial implications of achieving the OCP's energy efficiency and emissions reduction targets were modelled. The investment required from across the community as well as the avoided operations and maintenance costs, avoided energy costs, avoided carbon pricing costs, and electricity generation revenues were determined (Figure 1-1). Financial information here is presented as the incremental additional expenditures required, and costs and savings resultant from achieving the OCP targets over those that are expected to be incurred in the business as usual (BAU) scenario. The financial elements used in the modelling are listed in The OCP Background Research Report available online at **www.courtenay.ca/OCPupdate.**

Investments reach over $10M/year by 2026 and more than $20M/year by 2035. Investments wane after 2040 as retrofit and energy system installation efforts conclude. **The local government contribution amounts to approximately 11% of the total investment, which is leveraged to support the community-wide investment.**

Building mechanical systems and electric vehicles operations and maintenance (O&M) savings grow over the next thirty years as systems become more efficient and electricity powered, requiring less servicing and replacement. Energy cost savings grow substantially as energy savings are realized from more efficient buildings and vehicles, as well as increased transit use and active transportation (more affordable trips than those made by car). **Total avoided costs and savings reach $10M/year by 2030 and $30M/year by 2040.**

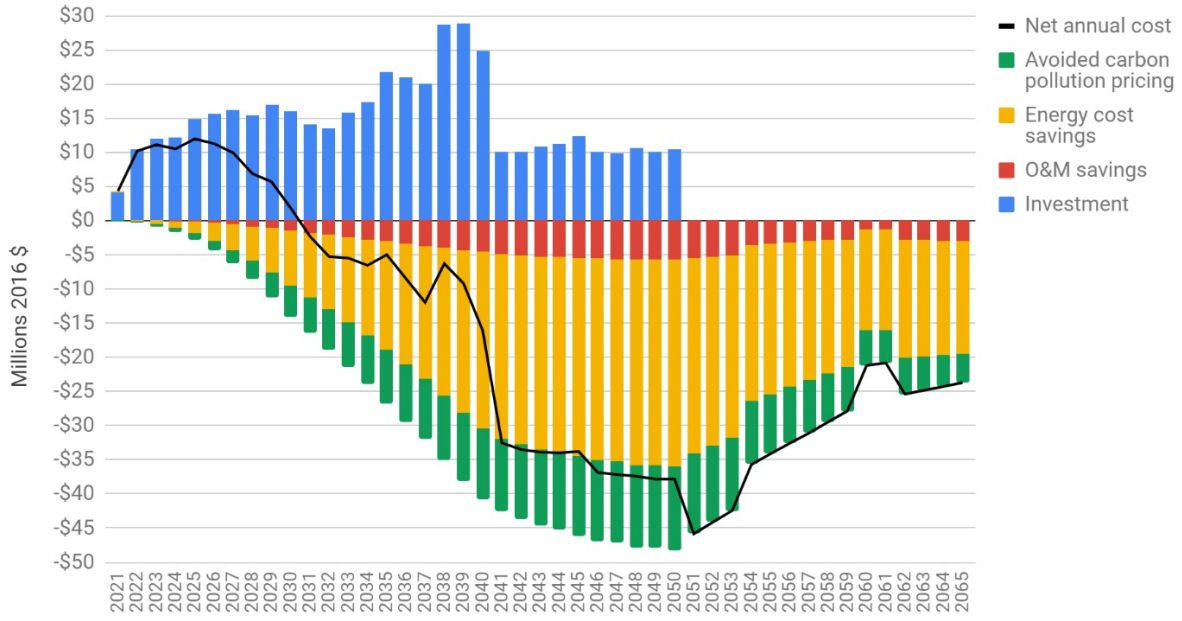

Figure 1–1 Total investments, savings, and avoided costs

Year-over-year total investments, savings, and avoided costs of OCP emissions reduction policies and actions. Costs and savings shown in the year they are incurred.

Carbon pricing increases the value of fuel savings, modestly at first but more significantly in later years as the price increases. Federal carbon pricing is currently valued at $30 per tonne. It will increase by $15/tonne each year until 2030, at which point it will reach $170/tonne.

Although many investments are required across the community, savings and avoided costs start to outpace investment by 2032. The investment program ends in 2050 but the savings and avoided costs continue to 2065 and beyond. Total investments and savings of emissions reduction actions are summarized in "Table 1-1 Summary of emissions reduction actions investment and savings" and "Figure 1-3 Cumulative investments and savings" on page 3.

"Figure 1-2 Amortized investments, savings, and avoided costs" on page 2 shows the same financial modelling information on an amortized schedule of borrowing, investment, and repayment. As large investments are usually made by borrowing money and paying it back over time, this representation provides a look at a more gradual financing schedule. **Under an amortization rate of 3%, savings and avoided costs outpace investments by 2026.** The interest paid under the amortization program is $8.5M.

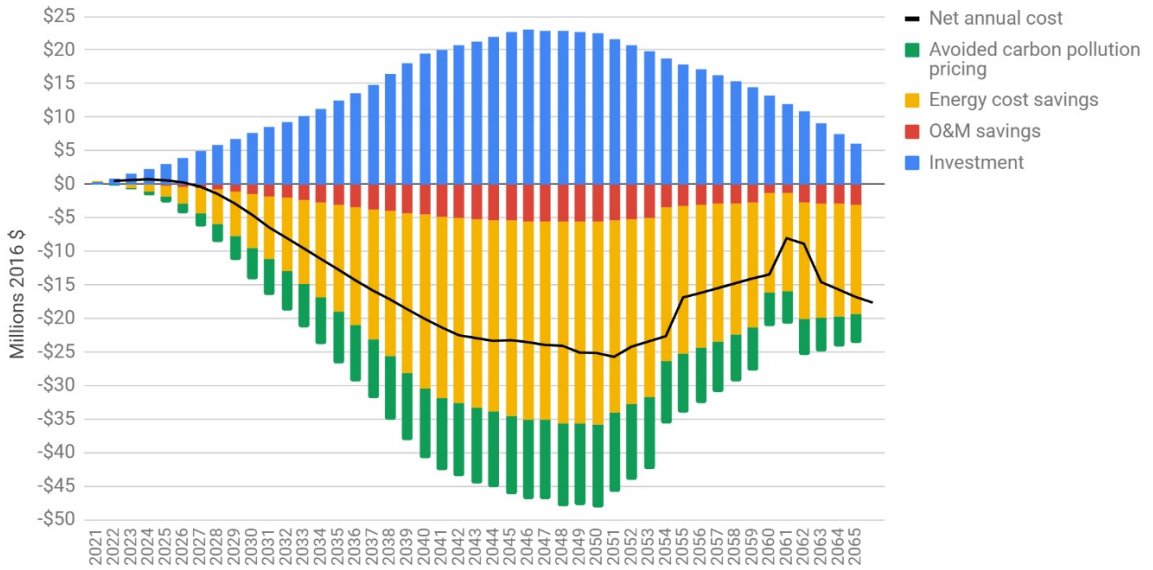

Figure 1–2 Amortized investments, savings, and avoided costs

Year-over-year amortized investments (3% discount rate), savings, and avoided costs of OCP emissions reduction policies and actions.

	Cumulative Investments and Savings, 2021-2050	Amortized Investments and Savings, 2021-2050
Total investment	$281.3M	$289.7M
Total avoided O&M costs	-$66.4M	-$66.4M
Total avoided energy costs	-$387.2M	-$387.2M
Total avoided carbon pollution pricing	-$158.2M	-$158.2M
Net savings	-$330.5M	-$322.0M

Table 1–1 Summary of emissions reduction actions investment and savings.

Figure 1–3 Cumulative investments and savings.

Cumulative investments (positive) and savings (negative) of OCP emissions reduction actions over the next 30 years.

The OCP's Green Jobs

Emissions reduction action investments also increase employment. Achieving each sector target requires a workforce to retrofit buildings, build active transportation infrastructure, install heat pumps, and more. Some jobs will be lost, too: automotive repair jobs decline as electric vehicles require less maintenance. Overall, OCP emissions reduction actions are estimated to generate net 3,300 person-years of employment over the next 30 years– an average of about 110 annually – compared to the "business as usual" (BAU) scenario, in which there is limited shift toward green jobs.

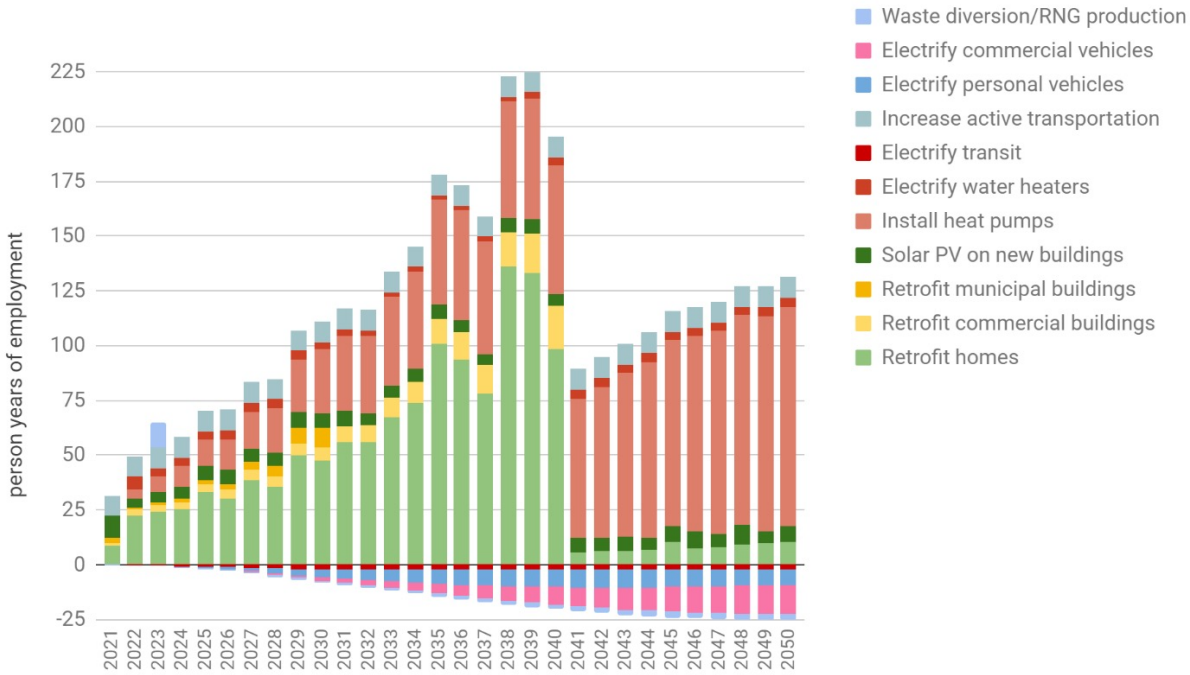

Figure 1–4 Person-years of employment generated.

Year-over-year person-years of employment generated by OCP emission reduction actions over the next 30 years, by sector.