

Zeroing in on Emissions

Canada's clean power
pathways – A review



Reimagine our communities

“At the heart of the city lies an opportunity, as urban density presents a greener way of living. Urban density can create the possibility for a better quality of life and a lower carbon footprint through more efficient infrastructure and improved urban planning.” – C40

With over 80 per cent of Canadians living in urban areas,¹³¹ municipal governments have an important role to play in getting to zero emissions. City design and land-use planning affect the feasibility of transit, the proportion of residents able to use active transportation modes like walking and cycling and the length of the average commute.¹³² A smart growth strategy to urban planning would concentrate growth in compact, complete, walkable urban centres. This approach favours diverse housing options and encourages a mix of building types, uses and tenures. As a result, workplaces, shops and households are found in close proximity to each other, reducing travel distances and encouraging active transportation and transit over personal vehicles. For older cities and neighbourhoods, where many of the key land-use and infrastructure decisions have already been made, a smart growth approach can still assist with increasing population density by encouraging infill housing and multi-storey housing developments.¹³³





Photo by Dylan Passmore

Scenario analysis demonstrates that smart land-use planning by municipalities can reduce the overall cost of decarbonization. Scenario 4 in the TEPF was built with consideration for how smart city planning can increase demand for high-occupancy transit, decrease passenger kilometres travelled by 47 per cent, and cut energy use by 14 per cent.¹³⁴ These measures help reduce the marginal abatement cost of the Scenario 4 decarbonization pathway by \$100 per tonne CO₂e (TEPF, p. 206).

A smart growth strategy for urban planning is desirable quite apart from GHG reduction. Walkable cities enhance quality of life and health.¹³⁵ Mixed-use neighbourhoods encourage social cohesion and community. The co-benefits of smart city design mean that decarbonization can go hand in hand with improved human well-being.

In the absence of a strong urban agenda, deep emission reductions will be onerous if not physically impossible.¹³⁶

Apart from a smart growth strategy of urban planning, municipalities have other policy tools that can be used to reduce GHG emissions. Provincial and municipal building codes, as well as official plans and zoning designations, can encourage energy-efficient construction and net-zero-ready buildings. Municipalities can also specify that new condominiums and apartment buildings come with EV charging infrastructure. Property Assessed Clean Energy (PACE) programs or on-bill utility financing can provide low-cost financing for energy efficiency upgrades, installation of solar photovoltaic panels and electric heat pumps. Municipal electric vehicle charging stations and preferred parking for EVs can encourage zero-emissions vehicle adoption.¹³⁷