

Policy Paths for the Green Transition in Saskatchewan

KEY MESSAGES

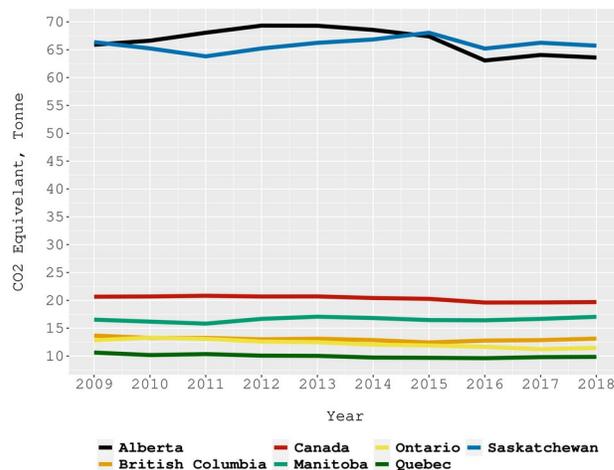
- Saskatchewan leads Canada in per capita emissions of greenhouse gases
 - More needs to be done to achieve energy targets
- A green transition can help the economy through incentive based policies

What is the issue?

In 1990, the Intergovernmental Panel on Climate Change released an assessment report highlighting the effects of greenhouse gases on climate change. Subsequently, the IPCC has released four additional reports and will release the sixth assessment report in 2022. These reports have illustrated the impacts of greenhouse gas emissions, which have far reaching implications for all regions including Saskatchewan. For example, in the most recent assessment, the authors noted with high confidence that negative impacts of climate change on crop yields are more common than positive impacts. Other impacts can include but are not limited to extreme weather events and the loss of terrestrial and inland water ecosystems.

Since the initial IPCC report, Saskatchewan's greenhouse gas emissions have increased by over 72%. While emissions have been stagnant over the previous decades, the province continues to emit more greenhouse gases on a per capita basis than any other province in Canada. Emissions per capita exceed the national average by over 300% and are only rivaled by Alberta in terms of magnitude. For reference, Saskatchewan's per capita emissions exceed the world average by 1000%. If Saskatchewan were a country, it would rank first in the world in emissions per capita. Currently, 83% of the provincial energy mix comes from non-renewable sources, and despite the provinces' natural geographical advantages, wind and solar energy remain underutilized.

GHG Emissions Per Capita



Data from Statistics Canada Tables 38-10-0097-01 & 17-10-0009-01

What should policy makers do?

In order to effectively reduce emissions in the province, policy makers need to aggressively pursue a plan to transition towards green energy within the next 10 to 15 years. Fortunately, Saskatchewan has a wide variety of natural advantages that will facilitate this process.

Utilize the provincial landscape

Saskatchewan receives more sunlight than any other province in Canada. Of the 50 municipalities with the highest photovoltaic potential in Canada, 48 are located in the province. Positioned correctly, solar panels can be effectively installed anywhere in the province, which bodes

well for both small and large producers of solar power. Additionally, the province has a high potential for wind energy. While wind farms cover large areas, land between individual turbines can continue to be used for productive purposes, such as farming and grazing.

Create incentives to reduce emissions

Given the aforementioned natural advantages to Saskatchewan's landscape, the most effective policy to pursue is an incentive based approach that opens the energy market to individuals, farmers, and corporations alike. One such system is feed-in-tariffs, which will allow micro-power producers to sell energy to the province at a rate determined by the percentage of energy adopters. The stability promised by a feed-in-tariff system would remove barriers to entry for those wishing to participate in the green transition. For wind power in particular, a feed-in-tariff system will allow farmers to maximize the productive use of their land beyond their normal means.

Energy inputs can be managed through virtual power plants and allow energy to be efficiently distributed throughout the province during peak hours ergo alleviating the impacts created by using variable energy sources. Furthermore, as can be seen in the case of European energy markets, merit order ranking of energy sources can be effectively used to keep energy prices down or even lower energy prices for consumers.

Recognize the economic opportunity

Investment in research and development at Saskatchewan's universities can help the province create novel sources of intellectual property and find solutions to green transition problems that the province faces. Such research and

development can benefit the economy while helping to create green solutions globally.

Moreover, the province can leverage the fact that over half the canola production in Canada takes place here. Manitoba has recently increased the bio-diesel content required in diesel and expect that the increased requirement will eventually lead to a reduction of 222 Kt of greenhouse gas emissions on an annual basis. A similar increase in Saskatchewan creates economic opportunities for canola producers wishing to enter into the canola-based bio-diesel market while promoting a low-impact strategy of reducing greenhouse gas emissions in the province.

Sources

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