

REDUCING GHG EMISSIONS IN THE ELECTRICITY GENERATION SECTOR: RECOMMENDATIONS FOR THE GOVERNMENT OF SASKATCHEWAN

The electricity sector currently accounts for **19%** of annual provincial greenhouse gas emissions.

- 1. Phase out all conventional coal-fired power stations** over the next 12 years. Saskatchewan's publicly owned utility, SaskPower, owns all existing coal-fired units in the province, several of which would need costly retrofits if their life were to be extended beyond 2030. Coal-fired generating capacity currently sits at 1,530 megawatts. If Saskatchewan pursued this policy direction, it could benefit from the experience of Ontario, which was heavily reliant on coal 15 years ago, but has now phased out all coal-fired power plants.
- 2. Invest heavily in electricity efficiency**, as a complement to the phasing out of coal-fired plants. Efficiency is a less expensive choice than building any new form of power generation. SaskPower achieved just over 100 megawatts of efficiency savings in the last decade. This was done with only a modest electricity efficiency program. Ramping that program up and targeting to save 300 megawatts of avoided generating capacity over the next 12 years is a realistic goal.
- 3. Import more hydro from Manitoba.** Saskatchewan currently imports 25 megawatts of hydro from Manitoba under an agreement that lasts until 2022. In October 2018, SaskPower signed a term sheet with Manitoba Hydro that lays the groundwork for Saskatchewan to purchase an additional 190 megawatts of hydroelectricity from Manitoba starting in 2022. The time has now come to extend this approach even further: Saskatchewan should negotiate long term contracts that would increase hydro imports from Manitoba to 1,000 megawatts. This will allow hydro imports to replace a significant portion of coal-fired electricity generation.
- 4. Expand co-generation of electricity** in Saskatchewan, particularly at potash mines. Experience at the 260-megawatt co-generation facility at the Cory Potash mine near Saskatoon has proven co-generation to be successful and reliable. Instead of burning natural gas for only industrial heat purposes, as is done at most potash mines, the Cory facility simultaneously uses natural gas for electrical generation. Targeting at least 500 megawatts of additional co-generation capacity in Saskatchewan by 2030 could help replace the base-load electricity that coal currently provides.
- 5. Expand renewable power** beyond the levels now being planned, and use it in concert with battery storage or other energy storage technologies. Operating the Lake Diefenbaker reservoir with complementary wind and solar sources of electricity would increase the reliability of renewables. SaskPower's plans to increase wind power capacity in Saskatchewan are positive; however, its plans for solar power lack ambition. Saskatchewan should add at least 500 MW of solar power to the grid by 2030.

Source: "Prairie Resilience" is Not Enough, Peter Prebble, Margret Asmuss, Ann Coxworth and Bob Halliday, Saskatchewan Environmental Society, December 2018.

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