

Honourable Dustin Duncan,

Minister of the Environment & Minister Responsible for SaskPower

Transmitted electronically to: env.minister@gov.sk.ca and prairie.resilience@gov.sk.ca

March 16, 2018

Dear Mr Duncan,

RE: The Role of Solar Electricity in Saskatchewan's Climate Change Strategy

The Canadian Solar Industries Association (CanSIA) is the national trade association that represents the solar energy industry throughout Canada. CanSIA lauds the efforts undertaken by Saskatchewan to date to contribute to Canada's national climate change mitigation and adaptation efforts including SaskPower's commitment made in 2015 to double the percentage of electricity generation capacity from renewable energy sources by 2030 and signing the Vancouver Declaration on Clean Growth and Climate Change in 2016.

This letter presents CanSIA's feedback on "Prairie Resilience: A Made-in-Saskatchewan Climate Change Strategy". In brief, CanSIA's recommendations focus on enabling solar electricity generation to play an important role supporting people and businesses in rural communities to prosper while adapting to the impacts of climate change. We look forward to continuing to support the Government of Saskatchewan in the design and implementation of the province's resultant policies and regulations and would welcome the opportunity to participate in future stakeholder engagement sessions.

Recommendations are presented under the following headings:

- i) Climate Change Adaptation:
 - a. Water Security.
 - b. Rural Economic Resilience.
 - c. Bio-Diversity.
- ii) Climate Change Mitigation:
 - a. 50% Renewable Capacity by 2030.
 - b. Leading By Example.
 - c. Customer-Sited Solar Production.
 - d. Solar Production for Large Electricity Customers.

i) Climate Change Adaptation:

- a. **Water Security:** Solar electricity generation consumes a negligible amount of water to produce electricity (i.e. limited to infrequent module washing). According to Environment & Climate Change Canada¹: thermal power generation is the sector that withdraws the largest amount of water in Canada for cooling and to produce steam (significantly more than any other sector); while the agriculture sector in Saskatchewan (and British Columbia, Alberta) is the sector that consumes the largest amount of water in Canada. Due to the increasing frequency and duration of drought due to climate change, and the resultant increasing reliance on irrigation systems to improve crop yields in the province, ***CanSIA recommends that the Government of Saskatchewan continue to study and assess the impact of various future electricity supply-mixes on water security. The purpose of these studies would be to ensure that agriculture is not in competition with electricity generation for scarce water supplies and to develop guidance for supply-mix planning, and the siting of new electricity generation facilities in the province (whether water-intensive or otherwise).***

¹ Environment and Climate Change Canada (2016) “Canadian Environmental Sustainability Indicators: Water Withdrawal and Consumption by Sector”

- b. Rural Economic Resilience:** Due to the water security issues mentioned above, the annual crop yield from many Saskatchewan farms is diminishing. Becoming a solar electricity producer, or leasing land to solar electricity producers, presents a significant opportunity for the diversification of the rural economy and job creation, for supporting rural communities to become more self-reliant and for economic hedging against future climatic uncertainty. *Recommendations for enhancements to the policy and regulatory framework to enable solar electricity generation to support rural economic resilience in Saskatchewan are presented under “Mitigation”.*
- c. Bio-Diversity:** Another serious impact from climate change that will be increasingly experienced in Saskatchewan is changes in the number, abundance and distribution of flora and fauna. Studies have shown that solar electricity generation facilities sited on arable agricultural land can increase bio-diversity (especially amongst pollinators and other species of importance to agriculture) when best land management practices are employed. *CanSIA recommends that the Government of Saskatchewan support CanSIA to develop a best practices guide to the development, design and operation of solar electricity generation facilities, in collaboration with government officials and local biologists, so that as new solar facilities come online in the province, so too do pockets of enhanced natural ecosystems.*
- ii) Mitigation:**
- α. 50% Renewable Capacity by 2030:** CanSIA lauds the Government of Saskatchewan’s commitment to 50% renewable electricity generation capacity by 2030 and supports the proposal for the province’s climate change strategy to “meet the province’s commitment of up to 50 per cent electricity capacity from renewables, through: increasing renewable energy sources, including wind and solar”. Since the announcement of the 50% by 2030

target in November 2015, the cost of solar electricity generation has continued to decline rapidly. SaskPower's Renewables Roadmap was developed when the cost-competitiveness of solar electricity in Saskatchewan was not yet fully understood. As a result, there is no vision for solar energy in the province beyond 2021. ***CanSIA recommends that the Government of Saskatchewan and SaskPower work with stakeholders such as CanSIA to explore and define the role of solar electricity generation as it relates to supply-mix planning beyond 2021 to 2030. Furthermore, CanSIA supports tracking and reporting the average annual emissions intensity of electricity generation (i.e. t/MWh) in the Model of Saskatchewan Resilience Measure.***

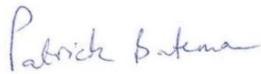
- b. Leading By Example:** Commitments to powering 100% of operations with renewable electricity is becoming the gold standard for corporate social responsibility in corporations and all levels of government. For example, the Government of Alberta has been powered from 100% renewable electricity since 2007 and the Government of Canada has committed to achieving that by 2025. ***CanSIA recommends that the Government of Saskatchewan commit to powering 100% of their operations from renewable electricity by 2025 to create demand for new renewable electricity generation in the province and to lead-by-example. Furthermore, CanSIA recommends that the Government of Saskatchewan set a reduction target for the annual emissions associated with their operations and report that annually in the same way as would be done in the Model of Saskatchewan Resilience Measure.***
- c. Customer-Sited Solar Production:** In addition to climate change mitigation, customer-sited solar production enables electricity consumers to reduce and manage their electricity costs and become more self-reliant for their electricity supply. SaskPower's

“Solar Conversations” in early 2017 explored what changes are required to Saskatchewan’s policy and regulatory framework to enable more individuals, homes, farms and businesses to become solar electricity producers to meet their own needs. SaskPower’s Net-Metering Program has been one of Canada’s most successful customer-sited generation programs to date and should continue to play an important role enabling more electricity customers to produce solar electricity to meet their own needs. **CanSIA recommends that a target is set for customer-sited renewable electricity generation and progress tracked and reported in the Model of Saskatchewan Resilience Measure.** In order to continue to meet ambitious goals in this area, CanSIA notes that changes to SaskPower’s current Net-Metering Program are required for customer-sited solar production to be encouraged. A selection of recommendations are included as an Appendix for reference.

- d. **Solar Production for Large Electricity Customers:** Large electricity customers in Saskatchewan currently have limited options to consume renewable electricity. For example, the Federal Government who consumes approximately 36,000 MWh per year in Saskatchewan would be unable to achieve their 100% renewable electricity by 2025 commitment in Saskatchewan under the current policy and regulatory framework. **CanSIA recommends that the Government of Saskatchewan engage with CanSIA and other stakeholders to explore enhancements to the policy and regulatory framework to enable new options for large electricity customers such as the Federal Government to purchase large volumes of renewable electricity in the province to meet their supply and to generate offsets as a pathway for compliance for Saskatchewan’s Large Emitters.**

Thank you for your consideration and please do not hesitate to contact me know if you have any comments or queries.

Sincerely,



Patrick Bateman

Director of Policy & Market Development

Canadian Solar Industries Association (CanSIA)

Appendix: Recommendations for Enhancements to the SaskPower Net-Metering Program

- ***CanSIA recommends that SaskPower enhance the Net-Metering Program including: compensate export at a rate equal to or greater than the retail rate; ensure non-energy charges are a minimal proportion of total cost to incent efficiency; increase the maximum system size limit from 100 kW to 5 MW (as is the case in Alberta) or remove it entirely (as is the case in Ontario); and permit facilities to be sited in the same distribution zone as their load (as is the case in Nova Scotia).***
- The value of emissions displaced form an important revenue stream for solar producers and/or a path to compliance for large emitters. ***CanSIA recommends that the Government of Saskatchewan ensure that customer-sited generation can realize the value of its environmental attributes through the offset framework and methodology as a path to compliance for Large Emitters and/or through payments from the Technology Fund.***
- Furthermore, SaskPower is well positioned to offer Pay-As-You-Save (PAYS) loans to customers, where repayments are made on utility bills and are in principle “secured” against displaced future energy costs, for investment in customer-sited solar electricity generation and other energy efficiency measures. ***CanSIA recommends that SaskPower introduce PAYS loans at a low annual percentage rate with terms of ten to fifteen years.***
- In addition to a single large electricity customer contracting directly with a single generation facility, “Community Solar” is the practice where multiple electricity customers contract directly with a single solar electricity generation facility. ***CanSIA recommends that the Government of Saskatchewan engage with CanSIA and other stakeholders to explore enhancements to the policy and regulatory framework – including “Virtual Net-Metering – to enable electricity customers to purchase a proportion of the electricity generated at a fixed long-term rate from a specific solar facility owned and operated by SaskPower or third parties (i.e. communities, private sector etc).***
- Finally, CanSIA recommends that SaskPower reinstate the Small Power Producers program or an equivalent generation option as soon as possible.