

Changes to Net Metering and Small Power Producer Programs

ISSUE

SaskPower has made substantial changes to its Customer-Based Generation Programs (i.e. Net Metering and Small Power Producer programs). Saskatoon Light & Power (SL&P) typically mirrors the Customer-Based Generation Programs offered by SaskPower and is therefore seeking City Council direction to make corresponding changes to SL&P's programs.

BACKGROUND

2.1 History

City Council, at its meeting held on October 9, 2007, considered the Small Power Producers Program, and adopted the Power Producer Policy.

City Council, at its meeting held on June 22, 2015, considered the Net Metering Program for Saskatoon Light & Power and resolved, in part:

- “1. That Saskatoon Light & Power revise the Power Producer's Policy to add a Net Metering Program to align with SaskPower's Net Metering Program”.

City Council, at its meeting held on May 23, 2017, considered a rate increase for the Small Power Producer Program to match SaskPower's rate and resolved, in part:

- “1. That the proposed Small Power Producer Program rate be approved for Saskatoon Light & Power as outlined within this report”.

2.2 Current Status

SL&P offers two customer-based power generation programs – the Net Metering and Small Power Producer programs.

The Net Metering program is designed for residential and commercial customers who want to generate some of their own electricity. The Net Metering program allows customers to generate and consume electricity and 'bank' any excess electricity as a credit to offset future usage within a fixed period. Bi-directional electricity meters are installed in order to measure the amount of electricity provided to the customer from the grid and the amount of electricity provided by the customer back onto the grid. SL&P issues an energy credit for electricity provided by the customer to the grid.

The energy credit rate is equal to the electricity rate for service, which in 2019 for a typical residential service is \$0.14228 per kilowatt-hour (kWh) (not including the

federal carbon charge or municipal surcharge). Currently, SL&P has 133 customers participating in this program with a total generation capacity of 950 kilowatts (kW). The program has been popular and has seen 50% annual growth over the past five years.

In October 2019, SaskPower announced a revised Net Metering Program with an energy credit established at \$0.075 / kWh (not including the federal carbon charge or municipal surcharge). This is approximately 50% of the previous energy credit rate. This rate will remain constant for the next two years until the end of 2021. At that point, the credit will be set to match the average power purchase rate over a two-year period.

The Small Power Producer program is designed for residents or businesses that want to generate some of their own electricity, and earn money by producing some electricity back onto the grid. The Small Power Producer program allows customers to generate electricity and sell excess electricity at a special rate to SL&P, which in 2019 is \$0.112594 / kWh, and has been increasing by 2% each year. Currently, nine customers participate in this program amounting to a total generation capacity of 109 kW. This program has not attracted any new customers in the past three years since the Net Metering rate is more favourable.

In Fall 2018, SaskPower replaced their Small Power Producer program with the current Power Generation Partner program, which is intended for larger-scale renewable or carbon-neutral energy projects between 100 kW and 1 Megawatt (MW) in size. This new program has a competitive bidding process, offers lower energy purchase rates, and allows SaskPower to be more selective over which renewable energy projects are approved.

2.3 Public Engagement

As the City of Saskatoon (City) typically mirrors the programs offered by SaskPower, no separate public engagement has been conducted.

2.4 City's Current Approach

SL&P's current Customer-Based Generation programs have matched the rates offered by SaskPower to ensure there are no inequities for customers regardless of where they reside (i.e. within the SL&P or SaskPower electrical franchise areas).

2.5 Approaches in Other Jurisdictions

Customer-Based Generation programs are offered by many electrical utilities across Canada. However, the energy credit or purchase rate offered to customers through these programs vary by jurisdiction and can loosely be generalized to match either the retail energy rate (e.g. Hydro Quebec) or the energy purchase rate (e.g. Saint John Energy and SaskPower) applicable to the jurisdiction. Several Canadian utilities are establishing the energy credit rate based on the cost of generating power for the utility in order to ensure financial

sustainability for the utility and rate fairness for all customers. There is also a growing trend among utilities to competitively source large-scale renewable energy in partnership with the private sector using long-term Power Purchase Agreements, which offers cost effective penetration of renewable energy into the power grid.

OPTIONS

Option 1 Match SaskPower's Net Metering Program and Suspend Small Power Producer Program

SL&P would grandfather existing Net Metering and Small Power Producer customers under current program rates until December 31, 2028, following which they would receive the new energy credit rate applicable on January 1, 2029. For new customers, SL&P would match SaskPower's revised Net Metering program with excess energy credits at a rate of \$0.075 / kWh (not including the federal carbon charge or municipal surcharge). The credits will remain indefinitely on the customer's account and will not be paid out on account closure. The energy credit rate will be adjusted periodically to match SaskPower's rate.

With this option, SL&P would no longer offer the Small Power Producer program, which has not seen any new customer participation in recent years and is no longer offered by SaskPower. Administration will review alternate options to replace the Small Power Producer and report back in 2020 with recommendations.

Implementation:

Subject to City Council approval, the revised program changes would be implemented immediately.

Implications:

1) Financial

Since the energy credit rate of \$0.075 / kWh is still higher than the bulk power rate used to purchase electricity from SaskPower, there will remain a reduced financial implication for SL&P.

For the average Net Metering customer, this would provide an estimated annual energy credit of \$231 (a decrease from \$438 under the existing program).

For SL&P, based on the current number of Net Metering customers, this decrease in energy credit results in an estimated reduced cost to the utility of \$27,500 annually (a decrease from \$58,300 under the existing program to \$30,800 under the revised program).

2) Legal

Existing Customer-Based Generation agreements do not have a term length and can be discontinued with a 60-day notice to customers. However, to be consistent with SaskPower in the transition to the new programs, SL&P would

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grandfather existing Net Metering and Small Power Producer customers under current program rates until December 31, 2028, following which they would receive the new energy credit rate applicable on January 1, 2029.

3) Social

There would be no inequities in Net Metering programs between customers regardless of where they reside (i.e. within the SL&P or SaskPower electrical franchise areas). Customers grandfathered under the existing program will receive higher energy credits until the transition period expires on December 31, 2028.

4) Environmental

Customers would still have the ability to participate in the renewable energy marketplace and personally contribute toward lowering greenhouse gas (GHG) emissions from their homes and businesses.

Advantages:

- 1) A reduced energy credit rate would be more financially sustainable for the electrical utility and its rate payers.
- 2) This option will ensure that Net Metering customers will be contributing closer to the amount that other customers pay for the maintenance of the electrical grid.

Disadvantages:

- 1) The pay-back period for new Net Metering projects will increase before a positive return on investment is realized.
- 2) Customer participation rates may reduce and lower community participation in the City's Low Emissions Community strategy and GHG reduction targets.

Option 2 Maintain Existing Customer-Based Generation Programs – Status Quo

SL&P would continue with the existing Net Metering and Small Power Producer Programs and energy credit rates.

Implementation:

No changes to existing programs would be made.

Implications:

1) Financial

There would be no financial impact to Net Metering customers if the program remains unchanged. The financial impact to SL&P would stay at the existing cost of \$58,300 annually based on the existing number of customers. As the number of participating customers increases over time, the financial implication to the utility will continue to grow. This would reduce the utility's ability to fund electrical grid renewal projects and provide the current level of return on investment.

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- 2) **Social**
There would be inequities in Net Metering programs between customers depending on where they reside (i.e. within the SL&P or SaskPower electrical franchise areas).
- 3) **Environmental**
Customers would still have the ability to participate in the renewable energy marketplace and personally contribute towards lowering GHG emissions from their homes and businesses.

Advantages:

- 1) Net Metering customers would continue to see an excellent return on solar investment.
- 2) The annual growth rate of customers participating in the program would likely increase, supporting community participation in the City's Low Emissions Community strategy and GHG reduction targets.

Disadvantages:

- 1) There would be inequities in Net Metering programs between customers depending on where they reside (i.e. within the SL&P or SaskPower electrical franchise areas).
- 2) The existing energy credit rate is not financially sustainable for the utility as more Net Metering customers joined the program.
- 3) Net Metering customers would contribute less financially to the maintenance of the electrical grid than other customers.

RECOMMENDATION

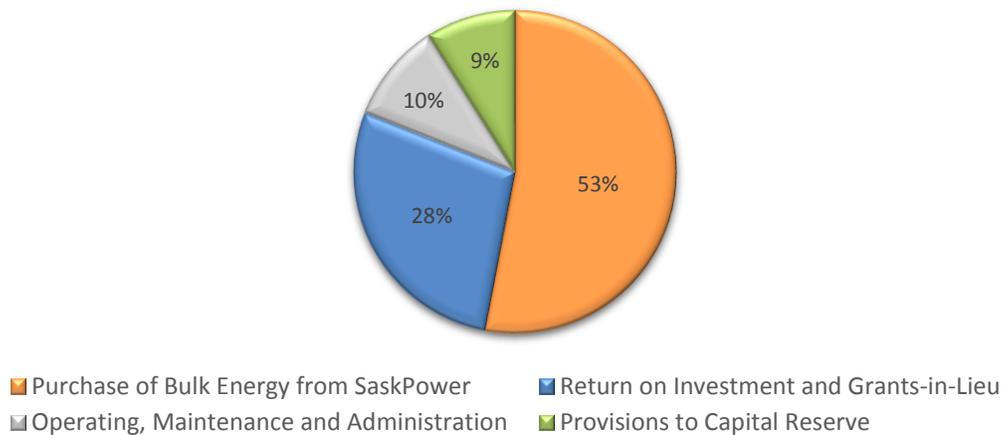
That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council;

1. That Option 1, Match SaskPower's Net Metering Program and Suspend Small Power Producer Program, be approved to revise SL&P's customer-based generation programs; and
2. That Solicitors be requested to update Bylaw 2685 – Electric Light and Power Bylaw to reflect the revised Net Metering Program and suspend the Small Power Producer program as outlined in this report.

RATIONALE

SL&P purchases bulk electricity from SaskPower and provides distribution services to customers within SL&P's franchise area. One of the main expenses incurred by SL&P is the cost of purchasing the bulk power (53% of total revenue). The expense of operating and maintaining the distribution grid is funded from the sale of electricity (10% of revenue for operating expenses and 9% of revenue for capital expenses). The balance of the revenue is provided to the City as a Return on Investment and Grant-in-Lieu of taxes (28%).

Summary of Expenses



The bulk electricity rate from SaskPower in 2019 is \$0.04567 / kWh (not including the federal carbon charge). SL&P also pays a demand charge which is based on the peak power used each month. Since the majority of solar power is produced in the afternoon and the peak demand for electricity experienced by the utility occurs later in the day, the solar power purchased from Net Metering customers does not significantly offset the demand cost charges from SaskPower. It is estimated that the solar power offsets 10% of SL&P's demand charges. Therefore, SL&P's estimated break-even scenario for purchasing solar power from customers would be \$0.04968 / kWh.

The break-even scenario for SL&P would therefore be to offer this energy credit rate to Net Metering customers. If the energy credit rate for Net Metering customers is higher than this amount, SL&P is paying a premium to purchase the electricity, leaving less funding within the utility available for operating and capital expenses.

Therefore, SL&P's existing Net Metering program is not financially sustainable and could result in substantial utility financial impacts if not corrected. Matching SaskPower's new Net Metering program energy credit rate will allow customers to continue generating solar-powered electricity while paying an amount closer to the break-even cost.

Based on the current number of customers using these programs (142), the total financial implication of Net Metering, from both lost revenue as well as the premium rate for the energy credit rate, amounts to approximately \$100,000 annually for SL&P. With a growth rate of 50% in customers joining the program each year, this total implication could grow to \$3.5 million within 10 years.

SL&P also recommends suspension of the Small Power Producer program, which has seen no new customer participation in the past three years, and warrants a thorough program review for suitability for an urban utility customer base. SaskPower's replacement Power Generation Partner Program is tailored to larger commercial

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facilities, which may not be best suited for urban regions such as SL&P's franchise boundary, and requires further review by Administration.

ADDITIONAL IMPLICATIONS/CONSIDERATIONS

Bylaw 2685 - Electric Light and Power Bylaw, and Administrative Policy A07-022 – Power Producer Policy, require amendments to reflect the changes in this report.

There are no privacy or CPTED implications or considerations.

COMMUNICATION ACTIVITIES

The information will be made available to the public via the City's website and through direct communications to SL&P customers currently participating in Customer-Based Generation Programs.

REPORT APPROVAL

Written by: Jose Cheruvallath, Metering & Sustainable Electricity Manager
Reviewed by: Trevor Bell, Director of Saskatoon Light & Power
Approved by: Angela Gardiner, General Manager, Utilities & Environment

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