



AGENDA ITEM

Solar Project Update

January 31, 2022

BACKGROUND

In June 2021, SkyFire Energy completed the installation of a 115 kWDC solar PV system on the roof of the Lacombe County shop building. This system includes 288 solar modules, two inverters, and 144 optimizers. The system is conservatively estimated to produce 122,100 kWh/year of electricity in year one. An open house to provide the public with information on the system and solar energy was planned for October 2021, unfortunately it had to be rescheduled for the spring of 2022.

ANALYSIS

The following table shows the estimated production of solar energy versus the actual system production from October to November. Each month the actual production either exceeded or was on par with the estimated production.

Month	Estimated Production (kWh)	Actual Production (kWh)
October	8,201	8,690
November	4,323	4,070
December	1,611	1,190

The following table shows the average monthly electricity usage of the shop before the installation of the solar system, the actual monthly electricity usage after the installation, and the percent difference between the two. The decreased electricity usage is a direct reflection of the solar energy produced by the system.

Month	Average Monthly Usage before Solar Installation (kWh)	2021 Actual Usage with Solar Installation (kWh)	Increase in Electricity Usage
October	18,717	22,507	20.25%
November	31,464	32,345	2.80%
December	44,199	49,457	11.90%



To date, the system has produced 83,920 kWh, which equates to a CO² emission reduction of 32.90 T or the planting of 982 trees.

BUDGET IMPLICATIONS

A \$4,430.98 cost savings have been seen based on the rate of 0.0528 per produced kWh. Micro-generation credits from May-October are \$1,491.63. 12 months of data is required to analyze distribution savings.

LEGISLATIVE RESPONSIBILITIES

Section 3 of the Municipal Government Act (MGA) states the purposes of a municipality are:

- a) to provide good government,
- b) to provide services, facilities or other things that, in the opinion of council, are necessary or desirable for all or part of the municipality, and
- c) to develop and maintain safe and viable communities

RECOMMENDATION

That Council received this Solar Update as information.

PREPARED BY: Jennifer Berry, Environmental Coordinator
REVIEWED BY: Dion Burlock, Director of Community Services
REVIEWED BY: Tim Timmons, County Manager

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