

Priorities Committee Meeting_Jan24_2017

STRATEGIC INITIATIVE AND UPDATE**Alternative Power at Strathcona County Facilities****Report Purpose**

To update Council on the use of alternative energy systems for Strathcona County owned facilities.

Strategic Plan Priority Areas

Economy: Adoption of alternative energy systems helps diversify the local energy industry while offering future cost avoidance in the procurement of energy.

Governance: Alternative energy investments are strategic investments in addressing climate change.

Social: N/A

Culture: N/A

Environment: Alternative energy systems have the potential to reduce the environmental impacts of routine facility operations on the environment.

Other Impacts

Policy: Sustainable Building Policy SER-004-006

Legislative/Legal: N/A

Interdepartmental: N/A

Summary

Historically, Facility Services has invested in energy efficient systems for Strathcona County owned facilities. Reducing the energy use has been the primary focus over installing alternative energy systems.

Past alternative energy system installations include the biomass pilot project at the Community Energy Centre, solar panels installed at the North Parks Compound facility and solar hot water heating panels installed at Fire Station 6.

Energy reduction investments have also been occurring as part of the Annual Facility Lifecycle Program, where equipment being replaced is typically upgraded to a higher efficiency product that reduces our overall energy use.

Facility Services is reviewing our energy use for Strathcona County facilities to identify priority areas for energy management investments. From this review, options for alternative energy will be identified where the benefits align with Strathcona County's corporate priorities.

Currently, the cost of solar is still fairly expensive with larger solar installations taking approximately 20 years or longer to achieve a pay back on the financial investment.

In discussions with the Municipal Climate Change Action Centre (MCCAC), the current costs for solar systems are approximately \$2.50 per watt of installed solar power. Based on a 50KW system the installed price would be approximately \$125,000.

Sherwood Park has a photovoltaic potential of 1200 to 1300 KWh/KW per year of installed capacity. This photovoltaic potential is used to calculate the amount of energy that the

system can generate annually. Using an estimated cost of \$0.10 KWh of delivered electricity to a building, the financial benefit would be as follows;

$$\begin{aligned} 50\text{KW} \times 1300 \text{ KWh/KW} &= 65,000\text{KWh} \\ 65,000 \text{ KWh} \times \$0.10/\text{KWh} &= \$6,500/\text{year in electricity cost avoidance.} \end{aligned}$$

The Province announced alternative energy funding through the Alberta Municipal Solar Program (AMSP) released in February 2016, where rebate funding provided by the Municipal Climate Change Action Centre is provided based on a \$/watt of installed capacity, up to 20% of the eligible expenses to a maximum of \$300,000 per application.

Based on the above 50 KW solar system example, Strathcona County would qualify for a rebate of \$25,000.

With more interest in solar energy systems, the cost to install solar energy systems is coming down. The local solar market will continue to develop as more solar systems are installed in Alberta. The cost for solar energy systems are becoming more affordable with the provincial rebates, and are worth exploring. However, the benefits for solar power are not just energy cost avoidance alone. The environmental benefits of a solar system investment must be considered when making a decision to invest or not into an alternative energy system.

The Glen Allan Recreation Complex is currently in the early stages of being reviewed as a candidate for a solar system installation. Upon a final assessment for the Glen Allan Recreation Complex, further projects can be reviewed on their merit for energy cost avoidance and environmental benefit.

All potential projects that require capital funding will be brought before Council for formal approval through the 2018 budget process.

Communication Plan

N/A

Enclosure

N/A