

To: CAO for the Regional and Corporate Services Committee
From: Micha Gutmanis, Environmental Services Coordinator

Date: 2019-01-09
File No: 9010-20-28501

Subject: Solar Panel Grant for Fraser Valley Regional District head office building

RECOMMENDATION

THAT the Fraser Valley Regional District Board accept a \$25,000 grant from Solar Now and proceed with the installation of a rooftop solar panel system at the Cheam Avenue office building.

STRATEGIC AREA(S) OF FOCUS

Support Environmental Stewardship
Support Healthy & Sustainable Community

PRIORITIES

Priority #2 Air & Water Quality

BACKGROUND

As a signatory to the Climate Action Charter, the Fraser Valley Regional District (FVRD) has demonstrated a commitment to take action on climate change and to reduce greenhouse gas emissions from corporate operations. In the 2018 reporting year, the FVRD was awarded Level 3 recognition: 'Accelerating Progress on Charter Commitments'. Maintaining this level and ensuring the FVRD can continue receiving provincial carbon tax rebates, the FVRD needs to demonstrate continued improvements that moves the FVRD toward carbon neutrality. Installing solar panels on the roof of the FVRD's main office building would keep the FVRD within the Level 3 recognition and would help gain energy efficiency and cost savings.

The FVRD's head office building is situated in Chilliwack, where elected officials, staff, local businesses and members of the public go to for meetings, permits and license renewals. It is a great location to bring visibility and to demonstrate to the region that renewable energy is a viable option while offsetting corporate carbon emissions.

In 2016-2017 a feasibility study of the FVRD's office building was conducted and confirmed the solar panel potential for the building. The study analyzed the building's shading, wind and height characteristics, as well as the potential energy production and estimated costs and savings. It was determined that a solar energy system of approximately 23 kW would be appropriate for the building, with the potential for expansion to up to 40 kW.

DISCUSSION

An opportunity arose in mid-2018 when staff was made aware that Solar Now was accepting funding applications. Solar Now is a partnership between Clean Energy Canada, the Community Energy Association, and the North Growth Foundation to support solar installations on prominent public sites in BC communities. The goal of Solar Now is to demonstrate to BC communities that solar is a viable way to produce energy and take action on climate change. In November 2018, the FVRD was successful in obtaining a \$25,000 grant from Solar Now to carry out the FVRD's solar panel project.

An open procurement process has been conducted and a preferred proponent has been identified for the supply and installation of a 22.7 kW solar panel array. The project (Figure 1) is designed to allow a future expansion to a 40 kW system. A structural engineering report was obtained verifying the project is compatible with the building's roofing and load capacity, and the project has been reviewed and supported by the FVRD's electrical contractor. The Strata that is responsible for the FVRD main office building has also provided their support for the project.



Figure 1: Footprint of the 22.7 kW Solar Panel Array on FVRD office roof.

All appropriate building or electrical permits will be obtained prior to commencement of the installation. Installation is expected to occur in the first quarter of 2019 to meet the conditions of the Solar Now grant.

The installed solar panel array system will tie into the electrical grid, offsetting a portion of the power the building would otherwise require to operate. When the solar panels are fully operational, the system is expected to offset 7.25% of the building's energy needs. Although the solar panels may not be

publicly visible on the roof, the live energy production data and educational information will be displayed in the lobby or other public gathering area in the office for public viewing.

COST

The total cost of the solar panel supply and installation is \$55,798. Solar Now will contribute \$25,000 and the FVRD will contribute \$30,798 from money set aside from the FVRD's annual carbon tax rebate which is intended to be used for offsetting carbon emissions and improving air quality.

The estimated payback for the solar array system is approximately 9 years based on: a) the assumption that future increases in electricity rates will follow historical increases and b) acknowledging that the \$30,798 required today would have a higher value in 9 years if invested. The financial model estimates an annual energy savings of \$3,100 in year 1, growing at a rate of 4% per year to \$4,400 in year 9.

CONCLUSION

To commemorate the 50th anniversary of regional districts in the Province of British Columbia which occurred in 2017, the FVRD has been carrying out a series of activities to showcase the region's history and establish a legacy for our future. As a signatory of the BC Climate Action Charter, the FVRD is committed to becoming carbon neutral in all of its operations. The Solar Now \$25,000 grant that the FVRD has obtained will help offset a portion of the cost for a solar panel system to make it a more economical investment.

A solar panel system will not only provide power to our building, it would also help diversify our energy options, especially in times of power outages. This project will be a positive demonstration for the region, a legacy, and a key part of the region's future in promoting renewable energy.

COMMENTS BY:

Barclay Pitkethly, Director of Regional Programs

Reviewed and supported.

Mike Veenbaas, Director of Financial Services

Reviewed and supported. With the grant funding support, the project payback has been greatly shortened, making it a financially viable for FVRD to pursue.

Paul Gipps, Chief Administrative Officer

Reviewed and supported.