

Community Energy Leadership Program (CELP) Final Project Report 2015/16:



Ministry of
Energy and Mines

Name of Community: Gold Bridge

Community Project Name: Gold Bridge Solar Photovoltaic (PV) Renewable Energy Initiative

Contribution Agreement (CA) #: CA16MAN0012

Summary of Project: The Gold Bridge Solar Photovoltaic (PV) Renewable Energy Initiative is an innovative solar energy project encompassing three small-scale, grid-tied PV arrays in the small community of Gold Bridge in Electoral Area A, also known as the Bridge River Valley.

Total Project Cost: \$90,889

Total CELP funding support: \$24,743

Percentage of Total Project Cost supported by CELP funding: 27.2%

Project Start date: October 8, 2015

Project Completion date: March 31, 2016

Partners / Collaborators / Technology Providers / Contractors:

Squamish-Lillooet Regional District (SLRD): Responsible for managing the project and operating the transfer station and Community Building sites.

Bridge River Valley Community Association (BRVCA): Community partner responsible for managing the Haylmore Heritage Site and promoting tourism and economic development in the Bridge River Valley.

Novo Solar Systems: Contractor responsible for installing the PV system and developing/delivering the inaugural tour.

Minto Communications Society: Community partner donating internet service at the Haylmore Heritage Site and contracted to connect the Community Building system to the internet.

Background:

The small community of Gold Bridge is located in Electoral Area A of the SLRD, also known as the Bridge River Valley. Gold Bridge is the primary service hub for about 224 full-time and 1,780 part-time residents living throughout

Area A, as well as the nearly 25,000 people who visit the region each year.

The project was initiated after discussions between SLRD Area A Director, Debbie Demare, and the BRVCA revealed a desire to develop a renewable energy project to help the area achieve its goal of building "a sustainable community in the wilderness." Funds were allocated by the Area Director to conduct a solar feasibility study, which revealed several promising sites to consider for solar PV.

In April 2015 the SLRD was notified of the CELP funding opportunity, and the SLRD Board directed staff to submit an expression of interest regarding the Gold Bridge project. Subsequently, the SLRD was invited to submit an application to the CELP program. Given the program requirements, SLRD staff proposed a project comprising three small-scale arrays and requested 33% (\$24,743) from CELP. With this, the SLRD Board approved staff's request that the balance of the project cost would be allocated from Area A's portion of Community Works Funds (Gas Tax Agreement).

The PV systems enable the SLRD to generate electricity at three of its service areas, leading to modest cost savings, providing a hedge

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against rising electricity prices, and helping the SLRD achieve several objectives of its Integrated Sustainability Plan and meet its obligations under the BC Climate Action Charter.

Innovation:

Developing renewable energy projects to power local government infrastructure is a relatively new concept. This project enables the SLRD and BRVCA to demonstrate the viability of PV systems as a means of enhancing the sustainability and resiliency of rural and remote communities. It helps the SLRD take a leadership role; through this project we hope to offer practical experience to other rural and remote communities to help them launch their own renewable energy initiatives.

Outcomes:

Environmental benefits: The projected greenhouse gas emissions reduced are expected to be between 0.173-0.202 tCO₂e/year, as calculated in the "Energy&GHG Calculator" provided with the 2015/2016 CELP Application package.

Social benefits: Developing the project brought government, the BRVCA and local citizens together and has become an inspiring source of pride for the Bridge River Valley community. It also enables the SLRD to demonstrate leadership in renewable energy and provides a practical opportunity for the SLRD and other small local governments to learn about the many benefits, opportunities and challenges of developing small-scale solar projects.

Economic benefits: The project should result in the three facilities meeting or exceeding net-zero operation; it is expected to reduce grid energy dependence by about 23% per year which should generate about \$2,050 in energy savings and/or exported energy revenue per year (at today's rates). The project will also provide a hedge against rising electricity prices.

Over time, the project has the potential to generate broader economic benefits as well. By

raising the profile of the SLRD, and in particular Area A, the project will increase awareness of the Bridge River Valley as an attractive place to live, visit and do business.

Project Reflections:

Where possible, the project used local contractors and suppliers. This served to raise awareness about the project and increase community buy-in. Future projects should aim to use local resources and labour whenever feasible.

The roof-mounted system at the Community Building was installed just above the snow-stops. This allows snow to build up over the panels during winter; reducing their efficiency. Future projects should ensure roof-mounted panels are sited well above any snow-stops.

The BRVCA intends to use the project to increase tourism in the area. This may include incorporating the Halymore Site array into summer tours at the site, and offering an "energy tour" of the Bridge River Valley intended to showcase renewable energy facilities in the area.

Links:

SLRD Project webpage:
www.slrd.bc.ca/GoldBridgeSolar

Contact info:

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Photos: Attached.

Community Building Installation



Solar array at Community Building



Solar array at Transfer Station



Solar Tour



Transfer Station Installation



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Attachments:

I, Janis Netzel, certify that the information in this report is correct and accurate to the best of my knowledge, and that no information important or relevant to the execution of the Contribution Agreement with the ICE Fund has been omitted. I also permit the Province to utilize the information and photos that I have provided as part of this Final Report (excluding the attached Budget Table) in the summarized form of a CELP Community Case Study on both the ICE Fund and/or CELP public websites.

Signature _____

A handwritten signature in black ink, appearing to be "JN", written over a horizontal line.

Date: April 29, 2016

Signing Authority

(Printed Name of Signatory): Janis Netzel
(Position of Signatory): SLRD Director of Utilities and Environmental Services
(Reporting Company): Squamish-Lillooet Regional District
(Email and Phone): email: jnetzel@slrd.bc.ca telephone: (604) 894-6371 ext. 240

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2.5 Substantial Completion Inspection by SLRD staff, with Contractor in attendance (eligible costs included in 2.4)				\$552	\$552
2.6 Resolution of any deficiencies (eligible costs included in 2.4)					\$0
2.7 Contractor to demobilize from site (eligible costs included in 2.4)					\$0
Phase 2 Subtotal		\$24,743	\$55,875	\$1,406	\$82,024
Phase 3: Reporting & Monitoring	Start date: 10/08/2015			End date: 31/04/2016	
Reporting as required by the Agreement during construction				\$345	\$345
Follow-up reporting as required by the Agreement after project completion				\$276	\$276
Phase 3 Subtotal		\$0	\$0	\$621	\$621
Phase 4: Project Follow-up	Start date: 01/01/2016			End date: 31/03/2016	
Assist the Bridge River Community Association in setting up the Haylmore site as an interpretive site for tourists interested in solar power, including the development and production of appropriate signage			\$1,792	\$1,807	\$3,599
Phase 4 Subtotal			\$1,792	\$1,807	\$3,599
Total Costs		\$24,743	\$57,667	\$8,479	\$90,889

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ACTUAL PROJECT COSTS

Phases			CELP Funding (not incl. tax)	SLRD Construction Funding (not incl. tax)	SLRD Staff Time Funding (not incl. in CELP application)	Total Cost (\$)
Phase 1: Contractor Selection	Start date:	10/08/2015			End date:	18/09/2015
1.1 Develop the Terms of Reference for the RFP					\$2,295	\$2,295
1.2 Create and post a Request for Proposals					\$1,028	\$1,028
1.3 Choose Proponent and sign contract					\$1,322	\$1,322
Phase 1 Subtotal			\$0	\$0	\$4,645	\$4,645
Phase 2: Construction	Start date:	18/09/2015			End date:	27/11/2015
2.1 Meeting onsite with Contractor to discuss project and to hand over all relevant plans and schematics for the Gold Bridge Transfer Station, Gold Bride Community Complex and the Haymore Heritage site.					\$379	\$379
2.2 Contractor to procure appropriate building/electrical permits as needed (eligible costs included in 2.4)					\$138	\$138
2.3 Contractor to mobilize to site - this includes all labourers, solar components, building materials and heavy equipment such as excavators, hiabs, crane trucks, water trucks, concrete drum mixers, specialty installation equipment as detailed in the RFP. (eligible costs included in 2.4)						\$0
2.4 Contractor to install the solar components and top trees as detailed in the RFP documents			\$24,743	\$55,875	\$337	\$80,955