

➤ Purpose/objectives of the project activity

HI Beauty Creek is located in the Jasper National Park, a UNESCO World Heritage site, in the heart of the Canadian Rocky Mountains. This small hostel is situated on the iconic Ice Fields Parkway, some 85 kilometres south of the Jasper Townsite. A solar power installation at this hostel will provide, for the first time, electrical power to the hostel and, thereby, accomplish four objectives:

1. Reduce CO_{2e} emissions by reducing propane consumption and replacing propane fuelled lighting system with an electric LED system
2. Provide a safer means for lighting the hostel (current system requires matches and flammable (and expensive) lantern mantles.
3. Provide a safer overall environment by improved access to communication
4. Provide a more effective customer service, in the summer months, with solar electricity for Employee/ Office Computer, Satellite modem, Router, and Credit card terminal
5. Offer an educational opportunity and experience for guests as they gain an understanding of using power generated through a natural renewable energy source

➤ The Sustainable Development Goals that the project addresses and how



Goal 7: Affordable and clean energy

"Energy is central to nearly every major challenge and opportunity the world faces today." (UN SDG 7). This project addresses SDG 7 (Affordable & Clean Energy). The data collection system will provide a platform to inform guests and employees, as well as neighbouring organizations, of the impacts and benefits of an off-grid solar power installation.

[Click here to vote now](#)



Goal 13: Climate Change

"Climate change, however, is a global challenge that does not respect national borders. It is an issue that requires solutions that need to be coordinated at the international level to help developing countries move toward a low-carbon economy." ([UN SDG 13](#)).

➤ Methodology (how)

HI Beauty Creek is one of ten wilderness hostels in the Canadian Rockies and the only one of our off grid hostels without a renewable energy source. This project will allow us to build on our current in-house expertise and expand our capacity in maintaining these small solar projects in remote locations. To do this, as much of the installation as possible will be done by the supervising hostel manager.

A professional engineer has already provided the system design.

The installation will include a solar array of eight 305 W photovoltaic panels with low-voltage 4-string controller. The battery bank and other solar equipment will be located in an insulated, heated and ventilated room inside the Roadhouse Dorm. The plan is for storage capacity to provide 5 days autonomy. The solar panels to be pole mounted with some trees to be selectively thinned or removed to prevent shading.

Details of Work:

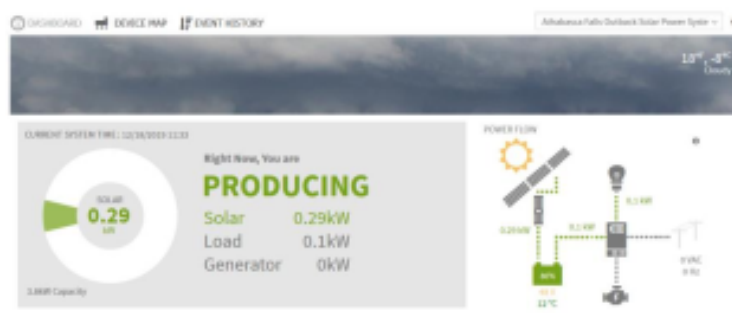
- Call for quotes from local contractors/suppliers, review of quotes and selection of contractor/supplier
- Secure required building permits
- Confirm final budget
- Place order for solar installation components and installation
- Certified electrician to review installation to maximize effectiveness and set up monitoring system/protocol
- Begin monitoring program.
- Initiate communication strategy to inform guests and community of the amount of electricity

➤ Monitoring plan

The success of the project will be monitored through the collection of two data sets.

The first will be the data generated by the monitoring software installed with the system. This will provide daily, monthly and yearly numbers relating to the amount of electricity generated. See below for a screen shot of the information dashboard.


[Click here to vote now](#)



The second data set will be continually available through our ongoing collection propane consumption data (taking into account any fluctuations in overnight occupancy). Comparisons with previous years' records are important elements of our Strategic Energy Management Plan framework and, as such, critical to tracking performance.


➤ **Contribution of the project activity to the ten areas**

Our Hostels
Achieving carbon neutrality



This project makes a direct contribution to the goals under the **Our Hostels** area. The installation of this solar panel project would displace approximately **240 litres** of propane consumption avoiding more than **370 kilograms CO_{2e}** emissions every year.

Our Friends
Engaging guests



The solar power installation will provide an educational opportunity for guests and employees to gain a greater understanding of operating with a feed-in solar power system. Information posters will give information relative to the system's installation, the fuel and emissions reductions and the safety features.

➤ **Environment, social and economic impacts**

Environment: HI Beauty Creek currently uses propane to supply lights and heat. Any measure that reduces the amount of propane consumed in this province makes a direct contribution to reducing CO_{2e} emissions. This project will reduce CO_{2e} emissions from lighting at this hostel to zero.

Social: The solar power installation will provide an educational opportunity for guests and employees to gain a greater understanding of operating in a wilderness environment with a solar power system. The investment will inspire pride among employees and confirm the Association's commitment to reducing CO_{2e} emissions by 30% by 2030

Economic: The solar power installation is expected to annually displace **240 litres** of propane, resulting in an annual savings of \$110. Over a 25-year life time, this would total to \$2750.

NOTE: Savings for this project should not be evaluated using standard methods. The value of improving the safety of the environment for our guests, where they are no longer required to light lantern mantles with matches, is incalculable.

[Click here to vote now](#)

- **Estimation of emission reductions (CO_{2e} tonnes).** *Provide calculations and an estimate of how it will reduce the carbon footprint of the hostel*

HI Beauty Creek is most active in the summer months, which is ideal for solar power generation. This hostel consumes an average of 3,300 litres of propane every year, emitting approximately five tonnes of CO_{2e}. Our estimation is that, with propane only required for cooking, annual consumption will be reduced by ~240 litres, resulting in an annual CO_{2e} emission reduction of about 370 kilograms.

- **Saved funds and return of investment (ROI).** *How much do you anticipate saving on bills after completion of the project? Provide calculations and where savings will be invested*

The remote location of this hostel makes it difficult to calculate a traditional return on investment for this installation. The solar power installation will be a significant undertaking and, since there is no option of connecting “to the grid”, factors of guest comfort, safety and continued appeal are critical:

- As the lighting will be upgraded to LED fixtures and powered by the solar system, CO_{2e} emissions from lighting at Beauty Creek will be reduced to zero. We estimate that this will allow a reduction **240 litres** of propane consumption.
- Avoidance of increase safety hazards of a propane fueled lighting system by maintaining electrically powered lights.
- Maintain guest services in the summer (with little to no interruption in available power).
- Marketing appeal of a wilderness hostel environmental supported by a micro-hydro generator will increase overnight activity at this hostel.

- **Why should the project be funded ahead of others?**

At HI Beauty Creek guests are able to enjoy the extraordinary mountain setting and many hiking trails in the Alberta wilderness, ranging from easy to challenging.

This hostel, like others in the Canadian Rockies does not generate adequate revenues to recapitalize itself, relying on the much higher capacities and activity levels of our resort and urban properties. Nevertheless, HI Beauty Creek provides a mountain hostelling experience like none other and is very popular with cyclist taking in the scenery under their own pedal-power.

It is these unique and memorable experiences that linger longest and most profoundly in the minds of those who make the journey. These are the reasons for supporting this hostel.

Given HI Beauty Creek’s location in a wilderness location of a National Park, this hostel needs this upgrade to truly reflect the values, educational and cultural experiences it is trying to reflect to its guests – that of respecting, experiencing and gently impacting the environment in which it stands.

[Click here to vote now](#)

- **Outline a sustainable communication plan for guests and stakeholders:** *how will you ensure guest and stakeholders know you have won the competition and that the project is being implemented? Provide examples.*

As hosts to hundreds of thousands of Canadian and international visitors to our hostels in western Canada since 1933, our message on this initiative can reach across the country and around the globe. With the solar power installation in place, we will track the success of this project by monitoring the electrical power generated and stored. This success will be connected to the Hostelling International Sustainability Fund by declaring this contribution to our commitment to reduce our carbon footprint in our communication strategies. These include an active presence on several social media platforms (Facebook, Twitter, Instagram and YouTube)

This will be a central story told in our promotions through our many media channels. Hostelling International Canada is active and expert in spreading the word via our existing web site and various social media channels. We will use these tools to reach guests and the community. In addition, the real-time dashboard display is to be available for viewing by visitors to our website.

[Click here to vote now](#)