



Residential Solar Feasibility Study

May 15, 20224

John Kenney, Urban Systems

Background

- Over the past two years, LNIB has been working to install solar photovoltaic (PV) systems throughout the community.
- For example, there are systems on the Lands and Resources Building, the Arena, the Band Office, Health Office, etc.
- There is now an interest in exploring the installation of solar PV systems on all homes in LNIB.

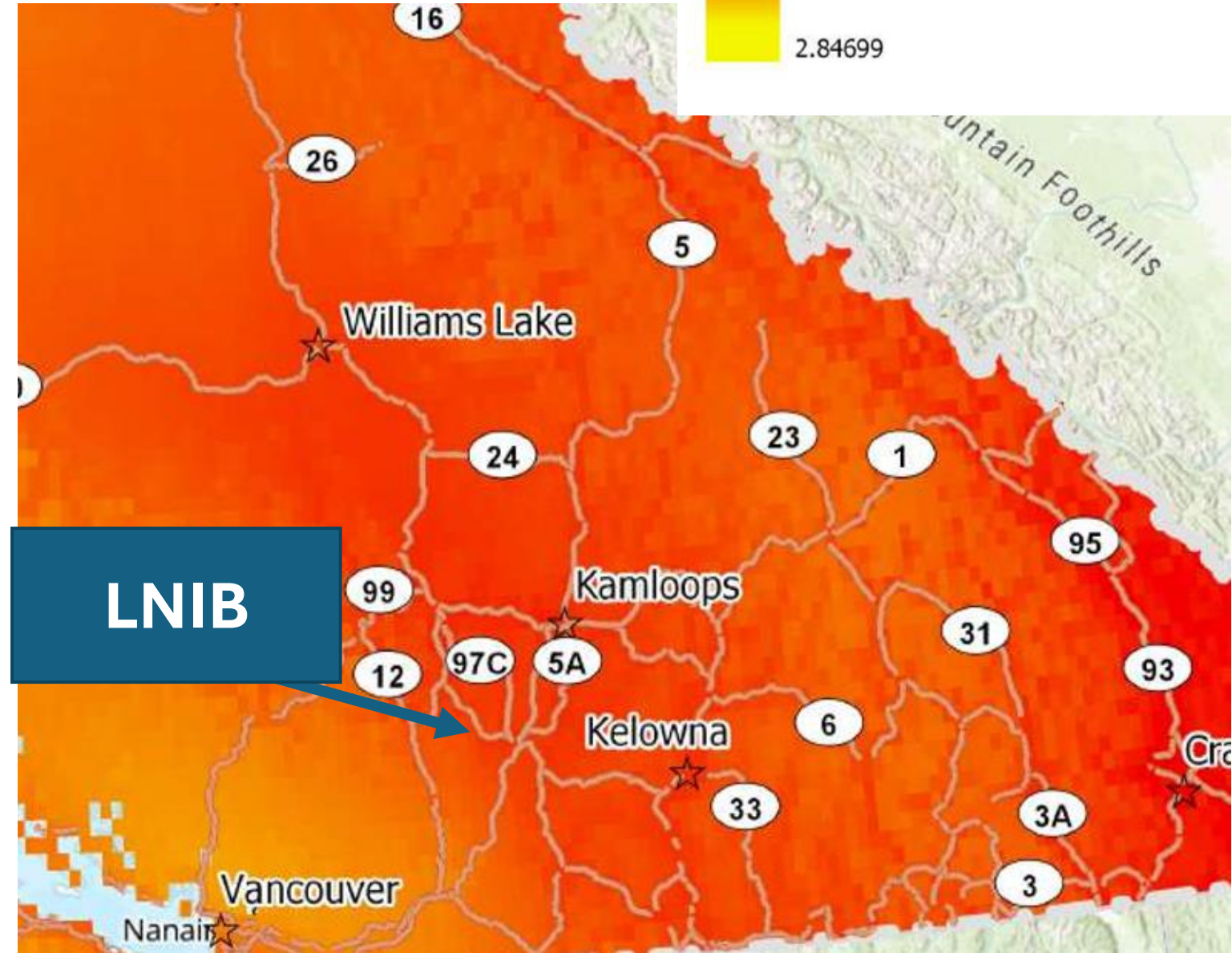
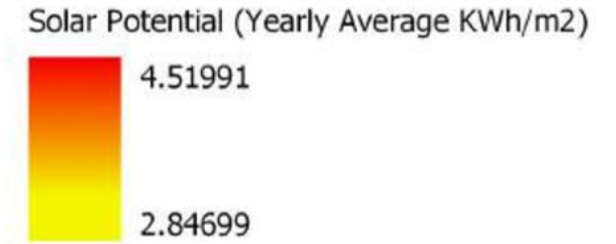


Solar PV in LNIB

Solar project potential in Lower Nicola is promising given:

- Strong solar resource available in comparison to other areas in BC
- The business case for solar PV is increasingly improving
- BC policy is favourable for communities looking to displace energy costs via Net Metering
- Innovative financing and funding models can make a project economical

Legend





Proposed Approach

1. Begin discussions with the community about the residential solar feasibility study
2. Sign up homes to confirm interest in potentially having solar PV systems installed on the roof of your homes
3. Apply for funding to support the installation of solar panels
4. Complete initial EnerGuide assessments and a solar PV review for each home
 - This will help us determine the size, scale and potential performance of a solar PV system on your home
5. Complete installations at participating homes
6. Complete final EnerGuide assessments
7. Reporting and final celebration

EnerGuide Assessments

- **What is an EnerGuide Assessment? There are two parts:**
 - **Pre-retrofit audit:** Helps you understand how your home uses energy now – and identifies retrofits to help improve energy efficiency (i.e. reduce energy costs)
 - **Post-retrofit audit:** Confirms the energy performance (savings) of any completed retrofits (e.g. solar panels)
- **Who completes the Assessments?**
 - These are carried out by a qualified energy advisor (certified by NRCan)



EnerGuide Assessments

- **What do they look at?**

- The advisor often begins with the exterior of your home and then evaluates the interior.

- The data collected includes:

- The level of your home's airtightness, using a blower door test
- The insulation levels of your walls, ceilings and basement
- The number, type and location of all windows and exterior doors
- The size and efficiency ratings of your space heating, space cooling and water heating equipment
- Information about any ventilation equipment

- **What's the end result?**

- You qualify for funding to complete retrofits (like solar)
- Secure a report that shows the energy performance of your home



Example Home with Solar

- Depending on the total funding secured, we hope to install systems that range in size between 3 – 5 kilowatts
 - Approximately 10-16 solar panels per home
- These will connect the system to BC Hydro's grid via the Net Metering program
- The resulting BC Hydro cost savings will be approximately \$500-\$850 per year**

**depends on a number of variables. Consider approximate.





Next Steps...

- **If you are interested in potentially getting solar panels on your home and having an EnerGuide assessment completed, please sign up!**
- Look for a newsletter / Facebook post in the coming week for more details and to help spread the word.
- We will begin desktop feasibility work on homes to evaluate energy potential.
- While doing the study, we will work to secure funding to support the installation of solar on homes.

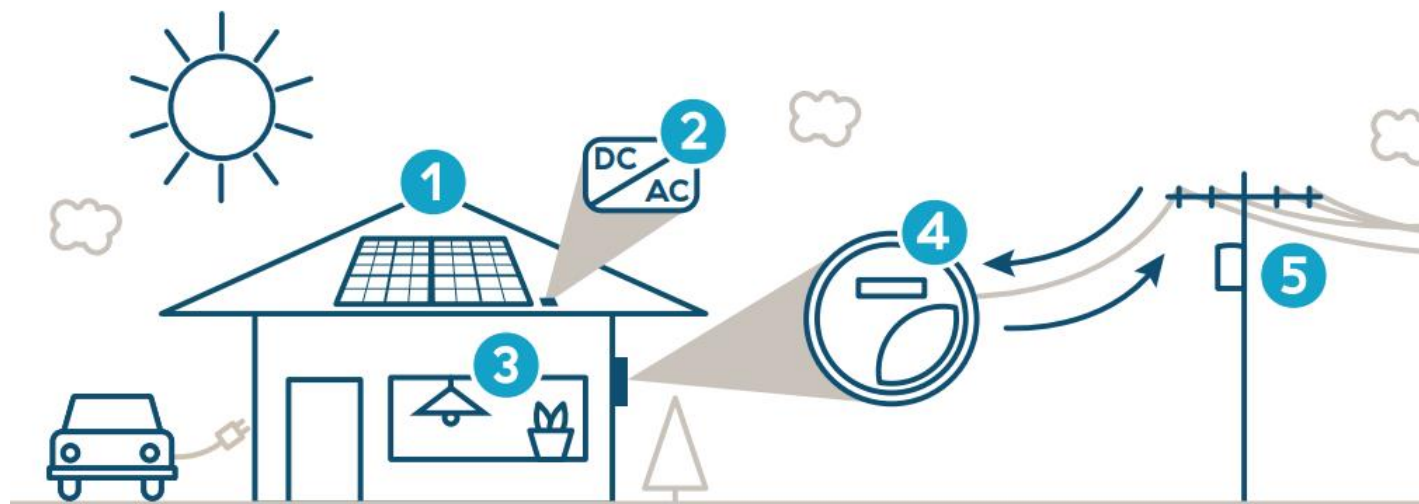


Thank you!

How Net Metering Works in BC

Net metering—how it works

BC Hydro
Power smart



1

Solar panels* convert energy from the sun into direct current (DC) electricity.

2

The inverters convert the DC electricity into alternating current (AC) electricity, which is what your home or business and our distribution system use. It also ensures that the electricity you generate meets our power quality and reliability standards. Most inverters are web-enabled allowing you to monitor your full electricity generation.

3

The electricity your system generates powers your home or business first, and excess is sent to the distribution grid.

4

Your smart meter measures how much of the electricity supplied by BC Hydro you've used, and how much excess you've sent to the grid.

5

Your excess generation is credited to you on your next bill. Any generation credits that remain on your anniversary date are paid out at the market price.

*Our net metering program is open to all sources of clean or renewable energy generation as identified in the Clean Energy Act. This includes solar, wind, hydro, etc.



**LOWER NICOLA
INDIAN BAND**

Frequently Asked Questions

- **Will solar panels provide electricity during a power outage?**
 - No, without battery backup, solar panels will not provide electricity during a power outage.
 - This is to ensure the safety of anyone who is working to fix power lines during an outage.
- **For this project, would there be any cost to me or my household?**
 - We are working to secure grant funding for the project, but the objective is for the **installations to be done at no cost to you.**
 - In other words, we are hoping that the panels can be installed for free – but we still need to secure a grant to make this happen!
- **I received solar training as part of the previous solar project in LNIB. Will there be an opportunity for me to work on this project?**
 - Yes, providing work and training opportunities for LNIB members will be a priority for this project.

